

Empowering pro-environmental potential among hotel employees: insights from self-determination theory

Ataul Karim Patwary

College of Tourism and Hospitality, University of Tabuk, Alwajh, Saudi Arabia

S. Mostafa Rasoolimanesh

School of Business and Law, Edith Cowan University, Joondalup, Australia

Mohd Hafiz Hanafiah

Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Puncak Alam, Malaysia

Roslizawati Che Aziz

Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan, Pengkalan Chepa, Malaysia

Ahmad Edwin Mohamed

School of Tourism, Hospitality and Event Management, Universiti Utara Malaysia, Sintok, Malaysia

Muhammad Umair Ashraf

Department of Sociology, Government College Women University, Sialkot, Pakistan, and

Nor Rabiatul Adawiyah Nor Azam

College of Tourism and Hospitality, University of Tabuk, Alwajh, Saudi Arabia

Abstract

Purpose – This research examines the role of green, inclusive leadership, corporate social responsibility, and pro-environmental attitudes on proactive pro-environmental behaviour among hotel employees. It further examines the indirect effects of pro-environmental attitudes between green inclusive leadership, corporate social responsibility, and proactive pro-environmental behaviour, as well as the moderating role of psychological contract breach between pro-environmental attitudes and proactive pro-environmental behaviour.

Design/methodology/approach – The participants of this cross-sectional study were employees in the Malaysian hotel industry, and 374 usable questionnaires were used for data analysis. The data were analysed using Partial Least Squares – Structural Equation Modelling.

Findings – This study found that green, inclusive leadership, corporate social responsibility, and pro-environmental attitudes significantly influence proactive pro-environmental behaviour. For mediating effects, pro-environmental attitudes have been found to mediate the relationship between corporate social responsibility, green inclusive leadership and proactive pro-environmental behaviour.

Research limitations/implications – The research proposes actionable measures to encourage environmentally friendly practices in the hotel sector. For companies to succeed, they must integrate green initiatives with their societal objectives. Pro-environmental mindsets are essential for implementing effective environmental policies, which in turn impact recruitment approaches. The advantages of fostering



pro-environmental conduct encompass financial savings, enhanced standing, adherence to regulations, increased innovative thinking and improved workplace well-being.

Originality/value – Over time, environmental degradation has been contributed by individual behaviours and the combined actions of businesses and organisations. This study significantly contributed to a new model underpinned by the Self-determination Theory by including new constructs influencing proactive pro-environmental behaviour.

Keywords Proactive pro-environmental behaviour, Pro-environmental attitudes, Green inclusive leadership, Corporate social responsibility, Psychological contract breach, Hotel employees, Malaysia

Paper type Research paper

1. Introduction

The tourism industry contributes significantly to international economic development. It is worth over a trillion dollars, makes up 10.4% of the GDP, and employs 1/10 of the global workforce (United Nations World Tourism Organization, 2018). The hotel business uses many resources, including energy and water (Nowacki *et al.*, 2021). From 2009 to 2013, the hotel sector contributed roughly 8% to the global increase in greenhouse gas emissions, producing 4.5 billion tonnes of CO₂ equivalents (Sovacool *et al.*, 2021). As a consequence, global warming will have severe effects on the competitiveness of this sector (Li *et al.*, 2021). The ability of the tourism industry to address environmental sustainability issues is, therefore, crucial to the industry's long-term success (Patwary *et al.*, 2022a, b). In the Malaysian context, there has been rapid growth in the tourism and hotel industry for the last 2 decades. Unfortunately, it has become one of Malaysia's highest contributors to environmental pollution (Li *et al.*, 2021). As such, environmental management has become increasingly popular among hoteliers over the past few decades (Kabirifar *et al.*, 2020; Merli *et al.*, 2019; Patwary *et al.*, 2022a, b).

Regarding environmental management in the organisation, employees' efforts and dedication are considered vital to success (Sovacool *et al.*, 2021). However, there needs to be more research on pro-environmental behaviours among employees in the hotel industry. Encouraging employees in the hospitality industry to engage in pro-environmental behaviours has been one of the emerging research topics in recent days (Peng *et al.*, 2020). As such, an effective way to reduce environmental problems at the organisational level is through employees' pro-environmental behaviour (PEBs) (Rezapouraghdam *et al.*, 2018). PEBs refer to a wide range of environmentally beneficial actions taken by employees, such as raising awareness of environmental issues, brainstorming and implementing solutions to reduce the hotel's negative impact on the natural world, creating environmentally friendly goods and services, and reducing waste (Lange and Dewitte, 2019).

The hotel and the surrounding environment are the primary beneficiaries of such pro-environmental behaviour. Introducing incentives for employees to engage in PEBs, such as remuneration and internalisation, could also help reduce environmental problems (Peng *et al.*, 2020). Despite the potential benefits of PEBs, researchers urge to do more research on PEBs, especially in the context of employees and the hotel industry (Foroughi *et al.*, 2022). Most research has focused on environmental initiatives and performance at the organisational level rather than individual pro-environmental behaviours (Lin *et al.*, 2021). Previous studies also emphasised that encouraging pro-environmental behaviours among hospitality employees is cost-effective (Zientara and Zamojska, 2018). By considering hotels as a low-profit margin industry, hoteliers seek to encourage pro-environmental behaviours to save costs through environmental programs rather than prioritise the environment (Kim *et al.*, 2017), which lacks the primary purpose of reducing environmental degradation.

In addition, previous studies should have offered more attention to the positive outcomes of environmental behaviours amongst employees and how the behaviours impact employees' skill development and ultimately benefit the industry and employees' personal development

(Peng *et al.*, 2020). PEBs not only aid in the greening of hospitality businesses, but they also have the potential to moderate climate change and slow the further deterioration of the environment (Mzembe *et al.*, 2019). Therefore, it is crucial to understand the factors that encourage PEB stimulation among hospitality workers. In addition, more research is needed to understand the determinant factors that trigger employees' pro-environmental behaviours and elements related to sustainability initiatives (Gilal *et al.*, 2019). Therefore, to fill this gap, this study aims to investigate the effects of potential drivers of employees' PEB and the mechanism of these effects.

The importance of investigating employees' pro-environmental conduct in the hotel business is underlined due to the tourist sector's significant global economic impact and environmental footprint. Malaysia's growing tourist industry and environmental problems highlight the need for focused study. The study fills a gap in the literature by focusing on the pro-environmental actions of hospitality employees, which is essential to the industry's success. Encouraging such behaviours requires more investigation in an industry with poor profit margins. The research presents the concept of breaching psychological agreements and suggests a customised theoretical structure specifically for the travel and hotel industry. The expected results hold importance for sustainable development and can provide valuable insights for Malaysian scholars, industry practitioners and policymakers.

2. Literature review

2.1 Self-determination theory

For theoretical setup, this study underpinned The Self-Determination Theory by Ryan and Deci (2000), which can be applied to analyse the factors driving hotel industry workers to participate in PEBs. Social psychologists have successfully utilised the Self-determination Theory to explain PEBs in the general population and hospitality settings (Varela-Candamio *et al.*, 2018). This research is essential because reports of positive emotional experiences are significantly associated with feelings of activity. Additionally, the Self-Determination Theory has been extensively employed to study the motivation and behaviour of employees (Vasconcellos *et al.*, 2020).

The self-determination theory has been utilised more than any other research tool to explore the intricate behavioural mechanisms that move people from their intentions to their actions (Wu *et al.*, 2022). In the same vein as the more generalised theory of human development known as the "environmental approach," the "self-determination theory" concentrates on the dynamic relationship between the social context and individuals' behaviour (Ryan and Deci, 2000). A substantial influence comes from employees' perception of the organisation's expectations and supports and their colleagues' favourable attitudes and actions toward environmental protection. Past researchers state that pro-environmental behaviours can be split into task-related and proactive. Employees should be inspired and motivated to engage in environmentally friendly practices based on psychological motivation (Morrison and Robinson, 1997). Human resource strategies like career advancement, work-life balance, and training and social support are examples of human resource practices that have produced positive employee outcomes (Kim *et al.*, 2020).

2.2 Corporate social responsibility and pro-environmental attitudes

Corporate social responsibility (CSR) focuses on an organisation's economic, social, and environmental well-being (Kramar, 2014). Pro-environmental attitude is more narrowly focused on environmental outcomes that emerge from company operations and can be achieved through the correct practices of attitudes management. Nevertheless, Sarvaiya *et al.* (2021) argue that a reverse link exists between attitudes and CSR, where CSR is seen as a notion contributing to attitudes. Corporate Social Responsibility (CSR) can attract people with specialised

environmental concerns, inspire employees to undertake environmental activities and help define the organisation's long-term sustainability goals (Malik *et al.*, 2021). Based on these recommendations, CSR will impact how organisations handle pro-environmental attitudes (Martínez-Martínez *et al.*, 2019). Self-determination theory suggests that individuals have a need to feel competent in their actions. CSR initiatives focusing on environmental sustainability can provide individuals with information, resources, and support to engage in environmentally responsible behaviours. This research is grounded in self-determination theory, which suggests that a person's level of autonomy over their activities significantly predicts that person's behaviour (Ryan and Deci, 2000). By providing opportunities for skill development and fostering a sense of mastery over pro-environmental actions, CSR initiatives can enhance individuals' competence, leading to more positive attitudes towards the environment.

H1. Corporate social responsibility is positively related to pro-environmental attitudes.

2.3 Corporate social responsibility and proactive pro-environmental behaviour

Given that environmental behaviour shares several similarities, analysing the pertinent literature on the connection between CSR and related factors is one way to comprehend the underlying cause of CSR and pro-environmental behaviours (Hameed *et al.*, 2020). Modern academics have thoroughly recognised the significance of CSR in influencing people's attitudes toward the environment (Jilani *et al.*, 2021). Dai *et al.* (2021) researched employees, finance, and pharmacy sectors and demonstrated the positive correlation between CSR and employees' behaviour. CSR initiatives can encourage employees' environmentally friendly conduct in the current environment (Han *et al.*, 2016). Zhou *et al.* (2018) also found that CSR practices were positively related to pro-environmental behaviour among employees in a manufacturing company in China. Overall, Self-Determination Theory provides a framework for understanding how CSR initiatives can motivate employees to engage in proactive pro-environmental behaviour, and empirical research supports the idea that there is a positive relationship between CSR and pro-environmental behaviour.

Thus, the hypothesis can be posed as follows:

H2. Corporate social responsibility is positively related to proactive pro-environmental behaviour.

2.4 Green inclusive leadership and pro-environmental attitudes

Scholars have maintained a strong connection between organisational leadership and pro-environmental attitudes because leaders motivate employees and improve their working engagement by helping their superiors (Gim *et al.*, 2021). Previous research has linked leadership's positive influence on pro-environmental attitudes, such as transformational, ethical, authentic, and inclusive leadership (Leroy *et al.*, 2018). Leaders who appear open, accessible, and available can motivate others to reciprocate by improving work engagement by dedicating emotional, cognitive, and physical resources (Karatepe *et al.*, 2022). The positive impact of inclusive leadership on pro-environmental attitudes may also be seen in the environmental field, where an engaged workforce is essential for achieving sustainability targets (Fang *et al.*, 2021). Green inclusive leadership (GIL) will inspire more interest among hospitality workers in environmental sustainability practices (Aboramadan, 2020). Green inclusive leadership may also support internal motivation for pro-environmental attitudes, consistent with the principles of self-determination theory. Suppose employees feel that their leader is genuinely committed to protecting the environment and values their contribution. In that case, they may be more likely to adopt pro-environmental attitudes and engage in proactive pro-environmental behaviour out of intrinsic motivation.

H3. Green inclusive leadership is positively related to pro-environmental attitudes.

2.5 Green inclusive leadership and proactive pro-environmental behaviour

Leaders may foster pro-environmental thinking by creating an environment that encourages it and setting an example that others will follow (Bass, 1960; Ouariachi *et al.*, 2020). The investigation on leadership corroborates the effect of leadership type on the workplace environment and finds that this effect is amplified when considering the green context (Anguelovski *et al.*, 2019). Similarly, ethical leadership promoted a more environmentally friendly atmosphere in academic institutions.

Hotel employees who demonstrate green Inclusive Leadership are likelier to propose alternative approaches to environmental goals (Liu *et al.*, 2021). It offers and encourages green-oriented concepts that can improve the company's environmental performance, reevaluate innovative green ideas, and explore unique responses to environmental problems, a proxy for ecology-oriented innovation in environmental concerns. Besides, its foundations can be found in green innovation strategy, green role identity, green leadership, green resources, and the ability to transform teams through servant leadership in an ecological context. Tuan (2020) provides evidence that an organisation's leadership's unique qualities shape how its followers think and feel about the environment. It is reasonable to assume that leaders who convert approaches into regulations and train staff on the desired green and creative outcomes impact employees' perceptions and interpretations of corporate rules and procedures. Therefore, it is reasonable to assume that leaders who value diversity and inclusion will shape favourable opinions of their organisations' green climate by adopting environmentally friendly policies and practices, providing latitude in the workplace, and interpreting relevant green objectives. Self-determination theory proposes that individuals are more likely to engage in behaviour when they feel a sense of internal motivation rather than external pressure. Green, inclusive leadership practices may support internal motivation by fostering employees' intrinsic motivation to engage in pro-environmental behaviour. Hence, we hypothesise:

H4. Green inclusive leadership is positively related to proactive pro-environmental behaviour.

2.6 Pro-environmental attitudes and proactive pro-environmental behaviour

Existing literature includes empirical research on pro-environmental attitudes and their potential implications (Patwary *et al.*, 2024). In the literature on environmental sustainability and hospitality and tourism, the factor that determines the connection between pro-environmental attitude and multiple pro-environmental behaviours. This is a significant gap since businesses in the service, hotel, and tourism industries require energetic staff members to effectively apply a pro-environmental attitude to engage in significantly more environmentally friendly actions. Huo *et al.* (2019) researched Chinese coal businesses and found that pro-environmental attitudes significantly influence environmentally conscious innovation. Yong *et al.* (2020) found that numerous components of pro-environmental attitudes, including recruitment, selection, and rewards, were positively associated with sustainability. According to Self-determination theory, individuals are more likely to engage in behaviour when they feel a sense of autonomy, competence, and relatedness. In the context of pro-environmental behaviour, individuals who hold pro-environmental attitudes are likely to feel a sense of autonomy and relatedness by aligning their behaviour with their values and community values. Thus, it can be hypothesised as:

H5. Pro-environmental attitudes positively related to proactive pro-environmental behaviour.

2.7 Pro-environmental attitudes as the mediating role

Research in attitudes suggests that linkages between attitudes and outcomes are preceded by leadership (Sanders *et al.*, 2021), and attitude factors mediate the predictors (Cooke *et al.*, 2021). However, leadership portrays a critical role as an antecedent rather than a mediator or moderator in the relationships between attitudes, innovation, and performance since leadership can affect attitudes and practices. Zhao and Zhou's (2021) studies in highly polluting industries indicated that pro-environmental attitudes mediated the relationship between an aggressive environmental approach and environmental reputation. Chang *et al.* (2021) evidenced how inclusive leadership encourages creative problem-solving by fostering the growth of essential abilities and competencies through collaborative problem-solving and goal-setting (Fawehinmi *et al.*, 2020).

Employees who design eco-friendly products with fewer assets and reduce pollution benefit from top-management encouragement and mainly supervisory support (Singh *et al.*, 2020; Zhou *et al.*, 2018). In addition to significantly influencing the firm's pro-environmental attitudes processes, it perfectly depicts the top-management's views, attitudes, values, and behaviours. As a result, leadership will play a considerable part in formulating pro-environmental attitudes, policies and practises (Singh *et al.*, 2020). A further suggestion by Foroughi *et al.* (2022) is that pro-environmental attitudes mediate the effects of transformative leadership on green organisational outcomes.

The study contends that pro-environmental attitudes transmit a pro-environmental image and improve the firm's reputation in all its essential stakeholders' eyes. Thus, pro-environmental attitudes can also mediate the relationship between green, inclusive leadership and proactive pro-environmental behaviour. For example, Zhang *et al.* (2019) found that the effect of green leadership on employees' pro-environmental behaviour was mediated by employees' pro-environmental attitudes in the Chinese context. Singh *et al.* (2021) found that pro-environmental attitudes partially mediated the relationship between green leadership practices and pro-environmental behaviour in the Indian context. Self-determination theory supports the hypothesis that pro-environmental attitudes mediate the relationship between CSR and proactive pro-environmental behaviour and green, inclusive leadership and proactive pro-environmental behaviour. Therefore, this study proposed to develop the mediating hypotheses by following the instructions of Rasoolimanesh *et al.* (2021).

- H6. Pro-environmental attitudes mediate the relationship between corporate social responsibility and proactive pro-environmental behaviour.
- H7. Pro-environmental attitudes mediate the relationship between green, inclusive leadership and proactive pro-environmental behaviour.

2.8 Psychological contract breach as moderating variable

Psychological contract breach (PCB) appears to be a stressor that reduces positive employee behaviour outcomes (Zacher and Rudolph, 2021). Despite this, a literature survey on organisational and environmental sustainability reveals a gap between PCB and environmentally positive employee actions (Ye *et al.*, 2022). An organisation's commitment to environmental responsibility can only be supported if workers believe the organisation will follow through on its promises and commitments. Even worse, they could engage in environmentally harmful actions because they are not environmentally responsible (Patwary *et al.*, 2023).

Low levels of PCB were linked to low levels of pro-environmental behaviours independent of job happiness, according to research by Griep and Bankins (2022) on Canadian workers in non-green industries. Based on the discussion, workers do not engage in task-related and

proactive pro-environmental behaviours due to the company’s inability to follow through on its previous and current promises. Self-determination theory proposes that individuals’ motivation to engage in behaviour is influenced by their sense of autonomy, competence, and relatedness. A psychological contract breach can negatively impact all three of these elements, potentially leading to reduced motivation to engage in pro-environmental behaviour. Suppose workers believe their employer has failed to meet their expectations regarding environmental sustainability. In that case, they may feel a sense of decreased autonomy and relatedness to the environment, and their perceived competence in engaging in pro-environmental behaviour may be reduced.

The novel application of psychological contract breach in the literature on environmental sustainability and the unique context of the tourist and hospitality business justify its inclusion as a moderating variable in our study. This variable represents the hidden expectations that exist between corporations and their employees. These expectations can erode trust and affect employees’ willingness to take environmentally beneficial actions when these expectations are not satisfied. Our study intends to contribute to a deeper understanding of the relationship between psychological contract breach, the factors contributing to pro-environmental behaviour, and the challenges faced by the tourism and hospitality sector since this aspect has yet to be thoroughly explored in previous research.

For this reason, it is hypothesised that:

H8. Psychological contract breach moderates the relationship between pro-environmental attitudes and proactive pro-environmental behaviour

Based on the above hypotheses and literature support, this study has proposed the following research framework (Figure 1).

3. Research method

3.1 Sample and data collection

As of the middle of 2022, 223 registered hotels (95 five-star and 128 four-star) are scattered over the 13 states and Kuala Lumpur’s federal territory (MOTAC, 2022). Seventy-five of these hotels (74.46%) are spread throughout six areas: Kuala Lumpur (51), Penang (29), Selangor (26), Malacca (23), Pahang (20), and Kedah (16). This study focused solely on five- and four-star hotels, considering that these hotel categories are more representative of the Malaysian hotel industry across the country (Patwary *et al.*, 2022a, b).

The data was collected from July to December 2022. Nulty (2008) recommended that a 50% response rate be considered enough for a pen-and-paper survey. According to

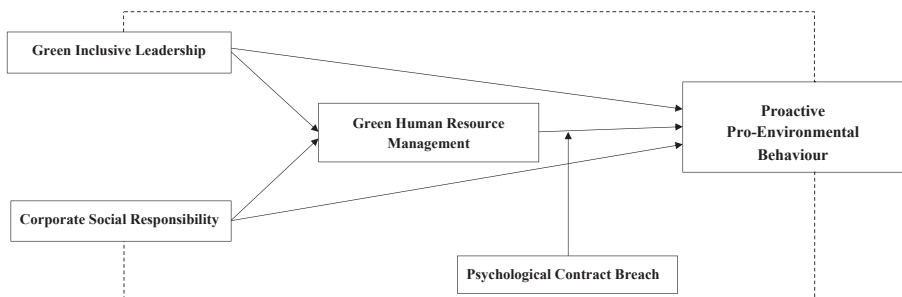


Figure 1.
Conceptual framework

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

Source(s): Author’s own creation

Thompson (2012), a sample size of 384 is sufficient for validly testing a hypothesis about a hypothetical population. As such, our intended sample size was at least 384. Therefore, we randomly contacted human resource managers at hotels in those regions. Forty managers responded positively to the invitation to participate in the study. We distributed 15 questionnaires from each hotel's employees. As a result, we had a response rate of 63.33% from the $(40 * 15) = 600$ surveys we sent out. After excluding the outliers and missing, 374 responses were considered valid for inferential analysis.

3.2 Measurement

Malaysian hotel employees rated their opinions based on study variables on a seven-point Likert scale. Nine items were used to assess green inclusive leadership adopted by Carmeli *et al.* (2010). Three items were adapted from Kim (2013) to measure pro-environmental attitudes. The sample items include "I feel personally responsible for promoting environmentally friendly practices in the hotel". The measurement was further validated by Sadiq *et al.* (2022). Next, proactive pro-environmental behaviour was measured using three items adapted from Bissing-Olson *et al.* (2013), the construct was further validated by Zacher and Bissing-Olson (2018). The sample item included "The employees take initiative to act in environmentally friendly ways at work".

On the other hand, corporate social responsibility was measured using five items adapted from Su and Swanson (2019). The sample items include "The hotel seems to give back to the local community". Lastly, psychological contract breach was measured using five items from Robinson and Wolfe Morrison, (2000) and modified by Karatepe *et al.* (2021).

3.3 Data analysis

We opted for PLS-SEM since it is deemed the best method for testing theories and conducting causal-chain analysis, especially in hospitality and tourism (Rasoolimanesh *et al.*, 2021). In addition, observed variables can be measured and accommodated by SEM. In contrast, any ambiguity in the construct of latent variables can be represented, and the casual interactions between latent and observed variables can be explained simultaneously (Cheah *et al.*, 2018). Furthermore, PLS-SEM with several latent variables might help rectify measurement errors commonly seen in tourism-related resources (Dijkstra and Henseler, 2015).

4. Results

4.1 Outliers, multicollinearity, and normality

In addition, Harman's single-factor test was performed, and the results showed that a single factor could account for only 17.21% of the variance (63.23%). When the number is below 50%, it is clear that the data does not share a variance with other samples (Min *et al.*, 2016). Table 1 also shows the collinearity statistics for all constructs, which shows that the tolerance and Variance Inflation Factors (VIFs) values are in the acceptable range, and there are no issues with collinearity among the constructs.

In the study, skewness and kurtosis were less than 3.0 (see Table 1), indicating that the data is mildly normal, except for cases of psychological contract breach (Matore and Khairani, 2020).

4.2 Assessment of measurement model

Convergent validity requires an item loading of 0.60 or higher, a CR of 0.70 or higher, and an AVE of 0.50 or higher from all items (Dijkstra and Henseler, 2015). As shown in Table 2, all construct components have loadings between 0.674 and 0.942, which is acceptable (Hair *et al.*, 2019).

Table 1.
Bivariate Pearson
correlation among
variables, mean,
skewness, kurtosis,
and standard deviation
(std. dev)

Variables	Mean	Median	Min	Max	Standard deviation	Excess kurtosis	Skewness	Number of observations used	Collinearity statistics Tolerance	VIF
Corporate Social Responsibility	0.000	0.049	-3.133	1.798	1.000	1.493	-0.845	373,000	0.984	1.023
Green Human Resource Management	0.000	-0.031	-3.337	2.066	1.000	-0.159	-0.239	373,000	0.613	1.017
Green Inclusive Leadership	0.000	0.067	-2.654	2.012	1.000	-0.387	-0.071	373,000	0.502	1.630
Proactive Pro-Environmental Behaviour	0.000	-0.039	-3.200	1.542	1.000	0.644	-0.723	373,000	0.595	1.990
Psychological Contract Breach	0.000	0.323	-3.939	1.478	1.000	3.216	-1.409	373,000	0.639	1.681

Source(s): Author's own creation

Variables	Items	Tolerance	VIF	Empowering potential among hotel employees
Corporate social responsibility	CSR1	0.875	2.855	
	CSR2	0.864	2.626	
	CSR3	0.891	2.578	
	CSR4	0.684	2.340	
	CSR5	0.740	2.622	
Green human resource management	HMR4	0.841	2.442	
	HRM1	0.875	2.079	
	HRM2	0.827	2.590	
	HRM3	0.847	2.606	
	HRM5	0.850	2.832	
	HRM6	0.807	2.315	
Green inclusive leadership	GIL1	0.832	2.718	
	GIL2	0.819	2.376	
	GIL3	0.843	2.802	
	GIL4	0.772	2.184	
	GIL5	0.813	2.522	
	GIL6	0.773	2.223	
	GIL7	0.752	2.571	
	GIL8	0.816	2.386	
Psychological contract breach	PCB1	0.918	2.329	
	PCB2	0.942	2.386	
	PCB3	0.931	2.928	
	PCB4	0.674	1.578	
Proactive pro-environmental behaviour	PPB1	0.905	2.370	
	PPB2	0.835	1.763	
	PPB3	0.857	1.951	

Source(s): Author's own creation

1079

Table 2.
Outer loadings and multicollinearity diagnosis

AVE readings were also over the recommended threshold of 0.50. Corporate social responsibility scored 0.665, pro-environmental attitudes scored 0.708, green inclusive leadership scored 0.645, proactive pro-environmental behaviour scored 0.750, and psychological contract breach scored 0.763. Constructs satisfy convergent validity criteria across the board (Cheah *et al.*, 2018).

In addition, the Heterotrait-Monotrait (HTMT) ratio needs to be lower than 0.85 or 0.90 to establish discriminant validity (Cheah *et al.*, 2018; Rasoolimanesh, 2022). Based on the analysis, the ratios of this study HTMT were lower than the optimal value of 0.85 (see Table 2). Therefore, all the constructs pass the discriminant validation (see Table 3).

For a successful PLS model, the SRMR must be less than 0.08 (Rasoolimanesh *et al.*, 2021). To some extent, an R^2 of 0.10 implies contentment; nevertheless, values of 0.081 and 0.234 show only modest and moderate influence, respectively (Cheah *et al.*, 2018). Table 4 provides

	1	2	3	4	5
1. Corporate Social Responsibility					
2. Green Human Resource Management	0.252				
3. Green Inclusive Leadership	0.140	0.197			
4. Proactive Pro-Environmental Behaviour	0.341	0.355	0.250		
5. Psychological Contract Breach	0.416	0.100	0.064	0.379	

Source(s): Author's own creation

Table 3.
HTMT (heterotrait and monotrait) ratio criterion for discriminant validity

an in-depth analysis of the SRMR and R^2 values, indicating that the model is good, with moderate effects and predictive relevance (Cheah *et al.*, 2018).

4.3 Hypothesis testing

To evaluate our hypotheses, we used structural equation modelling in PLS and bootstrapping with 5,000 resamples on our sample of 393. A total of 8 hypotheses were confirmed as significant and positive. As shown in Table 5, this study confirms the direct effects of Corporate Social Responsibility on Pro-environmental attitudes ($\beta = 0.219; t = 4.288, p = 0.000$) (H1). This study also confirms that green inclusive leadership ($\beta = 0.166; t = 2.952, p = 0.003$) is significantly related to pro-environmental attitudes (H3). This suggests that when organisations engage in CSR activities, it positively influences individuals' attitudes toward environmental issues. This result underscores the importance of CSR in shaping employees' environmental attitudes, which may lead to more environmentally responsible behaviour. Besides, this implies that leadership styles prioritising inclusivity in environmental decision-making and actions positively impact employees' attitudes toward the environment.

Besides, corporate social responsibility (H2) ($\beta = 0.143; t = 3.513, p = 0.012$), pro-environmental attitudes (H5) ($\beta = 0.235; t = 4.552, p = 0.000$), and green inclusive leadership (H4) ($\beta = 0.141; t = 2.990, p = 0.013$) positively impact on proactive pro-environmental behaviour. This suggests that organisations that actively engage in CSR practices will likely encourage and support proactive environmental behaviour among their employees. Besides, this confirms that individuals with more positive environmental attitudes are more likely to engage in proactive environmental behaviours. It underscores the importance of shaping attitudes as a precursor to fostering environmentally responsible actions. Besides, leadership styles that promote inclusivity in environmental decision-making and actions directly impact employees' proactive environmental behaviour.

For indirect effect, Table 5 shows that corporate social responsibility ($\beta = 0.052; t \text{ value} = 2.942; p\text{-value} = 0.003$) (H6) and green inclusive leadership ($\beta = 0.039; t \text{ value} = 3.328; p\text{-value} = 0.020$) (H7) are significantly related to proactive pro-environmental behaviour. This suggests that employees may respond by engaging in more proactive environmental behaviour when they perceive a breach in their psychological contract with the organisation. Notably, CSR initiatives not only directly influence proactive environmental behaviour but also do so indirectly through their impact on employees' environmental attitudes. It underscores the importance of CSR as a driver of both attitudes and behaviours.

Regarding the moderating effect (H8), psychological contract breach of hotel employees does not moderate the relationship between pro-environmental attitudes and proactive pro-environmental behaviour ($\beta = -0.078; t \text{ value} = 1.735; p\text{-value} = 0.083$). This indicates that inclusive leadership not only directly affects proactive environmental behaviour but also does so indirectly by shaping employees' environmental attitudes. It highlights the role of leadership in both attitude formation and behaviour promotion. Therefore, all eight hypotheses were supported.

Variables	Adjusted R^2 (coefficient of determination)	SRMR (standardised root mean residual)
Pro-environmental attitudes	0.081	
Proactive Pro-Environmental Behaviour	0.234	0.057 (good)

Table 4. Quality of the model

Source(s): Author's own creation

Direct hypotheses								
No	Hypothesis	β	Std. dev.	<i>t</i> -values	<i>p</i> -values	Confidence interval bias corrected		Supported
						2.5%	97.5%	
H1	Corporate Social Responsibility → Pro-environmental attitudes	0.219	0.051	4.288	0.000	0.101	0.307	Yes
H2	Corporate Social Responsibility → Proactive Pro-Environmental Behaviour	0.143	0.057	3.513	0.012	0.037	0.268	Yes
H3	Green Inclusive Leadership → Pro-environmental attitudes	0.166	0.056	2.952	0.003	0.058	0.278	Yes
H4	Green Inclusive Leadership → Proactive Pro-Environmental Behaviour	0.141	0.057	2.990	0.013	0.025	0.248	Yes
H5	Pro-environmental attitudes → Proactive Pro-Environmental Behaviour	0.235	0.052	4.552	0.000	0.119	0.325	Yes
						<i>Indirect hypotheses</i>		
H6	Corporate Social Responsibility → Pro-environmental attitudes → Proactive Pro-Environmental Behaviour	0.052	0.018	2.942	0.003	0.018	0.088	Yes
H7	Green Inclusive Leadership → Pro-environmental attitudes → Proactive Pro-Environmental Behaviour	0.039	0.017	3.328	0.020	0.013	0.075	Yes
						<i>Moderating effects</i>		
H8	Pro-environmental attitudes * Psychological Contract Breach ← Proactive Pro-Environmental Behaviour	-0.078	0.045	1.735	0.083	-0.165	0.012	no

Source(s): Author's own creation

Table 5. Hypotheses testing

5. Discussion and conclusions

The findings broaden executives' understanding of CSR's critical role in improving pro-environmental attitudes and environmental outcomes, directly and indirectly promoting employees' environmental behaviour. As such, organisations involved in social responsibility activities would encourage positive attitudes among their employees and consequently lead to environmentally friendly behaviour. Leaders must include environmental considerations and obligations in their human resource management frameworks. It makes employees proud of their company's contribution to environmental conservation. It also becomes crucial for hotel enterprises to implement relevant pro-environmental attitudes. This not only strengthens the loyalty of these workers to their companies but also enables them to achieve practical environmental outcomes. This could

be accomplished by implementing the techniques examined in this study to develop opportunities, abilities, and motivation, such as luring and hiring candidates interested in environmental issues. CSR toward employees involves initiatives and practices that go beyond legal requirements to ensure the workforce's well-being, development, and satisfaction. By offering green training programmes, firms should also prioritise keeping, enhancing, and upgrading the skills and knowledge of their workforce. To increase employee interest, dedication, and participation in environmental issues, developing and linking green goals and objectives to a reward and assessment system that includes green indicators that offer monetary and non-monetary rewards is necessary.

5.1 Theoretical implications

This study makes significant theoretical contributions by applying the Self-Determination Theory (SDT) to investigate the relationships between green, inclusive leadership, corporate social responsibility (CSR), pro-environmental attitudes, and pro-environmental behaviours (PEBs) among hotel employees. It introduces the concept of green, inclusive leadership and highlights its role in fostering sustainable practices. The study also emphasises the influence of CSR on employee engagement in pro-environmental behaviours while exploring the link between pro-environmental attitudes and PEBs. Furthermore, it examines the indirect effects of attitudes and considers the moderating role of psychological contract breaches in these relationships. Overall, this research deepens our understanding of motivation, leadership, CSR, attitudes, and behaviours within the context of sustainability, contributing to the broader literature on organisational sustainability initiatives. Organisational leadership can influence subordinates' thinking and acting (Bass, 1960; Ouariachi *et al.*, 2020). In this context, the leadership can promote positive environmental attitudes and behaviour by setting good examples and creating a conducive work environment that nurtures such behaviours.

Green, inclusive leadership is essential in influencing pro-environmental attitudes and proactive pro-environmental behaviour. Interactions between green inclusive leaders and their teams embody the principles of environmental responsibility, conservation, and long-term viability. When employees face situations that call for decision-making and follow-up action related to environmental protection and sustainability, they will refer to the knowledge they have stored in their heads. When employees are given such information, they will remember it and use it in the future. Employees will engage in pro-environmental behaviours and create environmental initiatives if they believe their leadership fully supports those actions (Patwary *et al.*, 2022a, b). These actions influence employees' psyches, giving them the drive to take ecologically responsible measures on their own accord.

Leaders who practise inclusive management inspire their teams by showing them how to work together productively despite their differences in background, viewpoint, and experience (Javed *et al.*, 2019). Employees in this mental state are more open to sharing their ideas and are more invested in helping the company succeed. Employees' pro-environmental attitudes and proactive pro-environmental behaviour can be boosted by supporting and encouraging green behaviours in the workplace. Employees who have trust in their employers will likely accept the organisation's policy and endeavour (Carmeli *et al.*, 2010).

On the other hand, the research showed that environmental attitudes substantially impact proactive behaviour (Cooke *et al.*, 2021). This is partly necessary because workers believe their employer meets its social responsibility by encouraging environmentally friendly practices. So, they feel obligated to do their part in furthering the company's social and environmental goals through their own environmentally conscious actions. Pro-environmental attitudes were found to have a positive correlation with pro-environmental

behaviour, and the current study enriched the importance of these two factors. In addition, workers who have a positive pro-environmental attitude will participate in sustainable activities and follow the organisation's requirements for sustainable behaviour. Environmental values enhance people's environmental actions, including philosophical beliefs, environmental consciousness, emotion, and a sense of agency. Several studies have found a correlation between location and eco-friendly habits (Li *et al.*, 2021). Another significant theoretical contribution of this study is associated with the mediating role of pro-environmental attitudes. In particular, this study proved the mediating role of pro-environmental attitudes in the relationship between corporate social responsibility, green inclusive leadership and proactive pro-environmental behaviour. Employees who feel a personal responsibility to protect the environment are likelier to take actions that benefit the environment. This can be shown by demonstrating the moderating effect of pro-environmental attitudes. An organisation's pro-environmental actions and attitudes increase when its members have a strong sense of environmental self-identity. This research contributes to the literature by establishing a link between pro-environmental attitudes, green inclusive leadership, and pro-environmental, proactive behaviour.

Psychological contract research has shown that when agreements are broken, it can have significant effects on how people feel and act (Patwary *et al.*, 2022a, b). In the current study, we found that employees and employers develop specific aspirations and obligations that go beyond the mentioned obligations, influencing their workplace behaviour. An intriguing finding is that a psychological contract breach tempers the connection between pro-environmental beliefs and actions.

5.2 Practical implications

The research posits various practical recommendations for enhancing green activities in the hotel industry. Green activities must first be integrated into the firm's stated social aims for manageable long-term development. A growing number of researchers, such as (Hameed *et al.*, 2020), have demonstrated that pro-environmental attitudes should be implemented for enterprises to efficiently and successfully execute green policies. This will also help HR supervisors/head trackers find and attract potential helpful environmental personnel. Corporate Social Responsibility (CSR) is essential in forming pro-environmental attitudes and motivating employees to take proactive actions. In the same way, green, inclusive leadership highlights the influence of leadership styles on employee perspectives while promoting healthy environmental attitudes.

Furthermore, once individuals feel a strategic alignment between what they are and the company's characteristics, they are much more likely to work hard to achieve their goals (Soares and Mosquera, 2019). Environmentally friendly job descriptions and designs must be incorporated into companies' recruitment and selection procedures. Environmental questions can be included in interviews to assess candidates' environmental awareness, concern, understanding, and dedication. Finally, businesses should effectively assess their employees' green behaviour (Gulzar *et al.*, 2021). Firms, for example, can promote such activities to employees via formal reports, official websites, emails, seminars, TV advertising, or magazines. Furthermore, through successful approaches, businesses can incorporate such ideals into their culture.

Employees typically evaluate the ability of their employer to match their expectations. Our findings show that an employer's failure to meet earlier pledges should be considered an internal obstacle that will undermine employees' enthusiasm to participate in PEBs. In the realm of ecological sustainability, the effects of a data breach on an employee can be catastrophic. Workers know their companies cannot meet their obligations due to external factors. Employers should be aware that good management techniques may assist employees

in overcoming frustrations associated with their impression of a PC breach. Employers can send a favourable signal to employees by taking helpful actions that demonstrate their dedication to preserving high-quality employment relationships. Employers may avoid their sense of dissatisfaction as a result of a perceived PC infraction by doing so.

Leaders should exemplify PEB and use argumentation to convince staff of the personal, professional, and societal benefits of adopting a PEB mindset. Physically, leaders can encourage PEB and pro-environmental attitudes in their domains of influence by selecting and hiring team members who share these values, factoring PEB into performance evaluation and management, and rewarding employees based on their PEB. Finally, leaders could utilise psychological influence strategies, including presenting comparative information and performance evaluation, to increase PEB and assist employees in minimising detrimental sustainability behaviours (Pham and Paillé, 2019).

Finally, a firm can achieve several strategic benefits once the employees establish pro-environmental attitudes and pro-environmental behaviour. Firstly, a company can reduce energy consumption and waste generation during business operations with the commitment of all employees. Secondly, firms that practice pro-environmental behaviour may also improve their image and reputation, eventually attracting environmentally conscious customers and making the products more attractive in the eyes of investors and shareholders. Thirdly, it is much easier to follow today's strict environmental regulations when leaders and all the employees are already accustomed to pro-environmental standards. Fourthly, firms with green leadership often encourage employees to find solutions to environmental problems, stimulating employee creativity. Last but not least, firms with green leadership and CSR practices most likely put on measures that improve workplace health and well-being.

5.3 Limitations and future research

The limits of the current research will be beneficial to researchers in the future. To begin, the focus of the current study was restricted to investigating only the apparent internal status and the outward reputation of the organisation. Individuals' green views could moderate the link between pro-environmental attitudes and green behaviour, organisations' green cultures, and employees' satisfaction levels with their organisations' environmental engagement (Hameed *et al.*, 2020). Future research can investigate psychological and social elements to improve present studies and understand their relationships. Second, internal and external pro-environmental attitudes should be seen similarly to CSR. No academic researchers have investigated these two variables, which could affect pro-environmental attitudes investigations. Future studies can focus on designing a multi-dimensional pro-environmental attitude for improving consistency. Lastly, this study used company samples. Due to diverse cultural origins in the East and West, employees' roles and green behaviour may differ. Therefore, this study cannot completely represent global environmental behaviours and pro-environmental attitudes. Future investigations could expand the research sample.

References

- Aboramadan, M. (2020), "The effect of green HRM on employee green behaviours in higher education: the mediating mechanism of green work engagement", *International Journal of Organizational Analysis*, Vol. 30 No. 1, pp. 7-23, doi: [10.1108/ijoa-05-2020-2190](https://doi.org/10.1108/ijoa-05-2020-2190).
- Anguelovski, I., Connolly, J.J.T., Pearsall, H., Shokry, G., Checker, M., Maantay, J., Gould, K., Lewis, T., Maroko, A. and Roberts, J.T. (2019), "Why green 'climate gentrification' threatens poor and vulnerable populations", *Proceedings of the National Academy of Sciences*, Vol. 116 No. 52, pp. 26139-26143, doi: [10.1073/pnas.1920490117](https://doi.org/10.1073/pnas.1920490117).

- Bass, B.M. (1960), "Leadership, psychology, and organisational behavior", Harper & Brothers, New York, NY.
- Bissing-Olson, M.J., Iyer, A., Fielding, K.S. and Zacher, H. (2013), "Relationships between daily affect and pro-environmental behavior at work: the moderating role of pro-environmental attitude", *Journal of Organizational Behavior*, Vol. 34 No. 2, pp. 156-175, doi: [10.1002/job.1788](https://doi.org/10.1002/job.1788).
- Carmeli, A., Reiter-Palmon, R. and Ziv, E. (2010), *Inclusive Leadership and Employee Involvement in Creative Tasks in the Workplace: the Mediating Role of Psychological Safety*, University of Nebraska, Omaha, Vol. 30.
- Chang, E., Chin, H. and Lee, J.W. (2021), "Pre-crisis commitment human resource management and employees' attitudes in a global pandemic: the role of trust in the government", *Human Resource Management*, Vol. 61 No. 9, pp. 373-387.
- Cheah, J.H., Sarstedt, M., Ringle, C.M., Ramayah, T. and Ting, H. (2018), "Convergent validity assessment of formatively measured constructs in PLS-SEM: on using single-item versus multi-item measures in redundancy analyses", *International Journal of Contemporary Hospitality Management*, Vol. 30 No. 11, pp. 3192-3210, doi: [10.1108/ijchm-10-2017-0649](https://doi.org/10.1108/ijchm-10-2017-0649).
- Cooke, F.L., Xiao, M. and Chen, Y. (2021), "Still in search of strategic human resource management? A review and suggestions for future research with China as an example", *Human Resource Management*, Vol. 60 No. 1, pp. 89-118, doi: [10.1002/hrm.22029](https://doi.org/10.1002/hrm.22029).
- Dai, Y., Samad, Z., Chupradit, S., Nassani, A.A., Haffar, M. and Michel, M. (2021), "Influence of CSR and leadership style on sustainable performance: moderating impact of sustainable entrepreneurship and mediating role of organisational commitment", *Economic Research-Ekonomska Istraživanja*, Vol. 35 No. 1, pp. 3917-3939.
- Dijkstra, T.K. and Henseler, J. (2015), "Consistent and asymptotically normal PLS estimators for linear structural equations", *Computational Statistics and Data Analysis*, Vol. 81, pp. 10-23, doi: [10.1016/j.csda.2014.07.008](https://doi.org/10.1016/j.csda.2014.07.008).
- Fang, Y.C., Ren, Y.H., Chen, J.Y., Chin, T., Yuan, Q. and Lin, C.L. (2021), "Inclusive leadership and career sustainability: mediating roles of supervisor developmental feedback and thriving at work", *Frontiers in Psychology*, Vol. 12, 671663, doi: [10.3389/fpsyg.2021.671663](https://doi.org/10.3389/fpsyg.2021.671663).
- Fawehinmi, O., Yusliza, M.Y., Mohamad, Z., Faezah, J.N. and Muhammad, Z. (2020), "Assessing the green behaviour of academics: the role of pro-environmental attitudes and environmental knowledge", *International Journal of Manpower*, Vol. 41 No. 7, pp. 879-900, doi: [10.1108/ijm-07-2019-0347](https://doi.org/10.1108/ijm-07-2019-0347).
- Foroughi, B., Arjuna, N., Iranmanesh, M., Kumar, K.M., Tseng, M.L. and Leung, N. (2022), "Determinants of hotel guests' pro-environmental behaviour: past behaviour as moderator", *International Journal of Hospitality Management*, Vol. 102, 103167, doi: [10.1016/j.ijhm.2022.103167](https://doi.org/10.1016/j.ijhm.2022.103167).
- Gilal, F.G., Zhang, J., Paul, J. and Gilal, N.G. (2019), "The role of self-determination theory in marketing science: an integrative review and agenda for research", *European Management Journal*, Vol. 37 No. 1, pp. 29-44, doi: [10.1016/j.emj.2018.10.004](https://doi.org/10.1016/j.emj.2018.10.004).
- Gim, G.C., Ooi, S.K., Teoh, S.T., Lim, H.L. and Yeap, J.A. (2021), "Pro-environmental attitudes, leader-member exchange, core self-evaluations and work engagement: the mediating role of human resource management performance attributions", *International Journal of Manpower*, Vol. 43 No. 3, pp. 682-700, doi: [10.1108/ijm-05-2020-0255](https://doi.org/10.1108/ijm-05-2020-0255).
- Griep, Y. and Bankins, S. (2022), "The ebb and flow of psychological contract breach in relation to perceived organisational support: reciprocal relationships over time", *Economic and Industrial Democracy*, Vol. 43 No. 1, pp. 344-361, doi: [10.1177/0143831x19897415](https://doi.org/10.1177/0143831x19897415).
- Gulzar, S., Ayub, N. and Abbas, Z. (2021), "Examining the mediating-moderating role of psychological contract breach and abusive supervision on employee well-being in banking sector", *Cogent Business and Management*, Vol. 8 No. 1, 1959007, doi: [10.1080/23311975.2021.1959007](https://doi.org/10.1080/23311975.2021.1959007).
- Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019), "When to use and how to report the results of PLS-SEM", *European Business Review*, Vol. 31 No. 1, pp. 2-24.

- Hameed, Z., Khan, I.U., Islam, T., Sheikh, Z. and Naeem, R.M. (2020), "Do green HRM practices influence employees' environmental performance?", *International Journal of Manpower*, Vol. 41 No. 7, pp. 1061-1079, doi: [10.1108/ijm-08-2019-0407](https://doi.org/10.1108/ijm-08-2019-0407).
- Han, S.J., Bonn, M.A. and Cho, M. (2016), "The relationship between customer incivility, restaurant frontline service employee burnout and turnover intention", *International Journal of Hospitality Management*, Vol. 52, pp. 97-106, doi: [10.1016/j.ijhm.2015.10.002](https://doi.org/10.1016/j.ijhm.2015.10.002).
- Huo, X., Yu, A.T.W., Zezhou, W. and Jayantha, W.M. (2019), "Site planning and design of green residential building projects: case studies in China", *Engineering, Construction and Architectural Management*, Vol. 27 No. 2, pp. 525-543, doi: [10.1108/ecam-11-2018-0509](https://doi.org/10.1108/ecam-11-2018-0509).
- Javed, B., Naqvi, S.M.M.R., Khan, A.K., Arjoon, S. and Tayyeb, H.H. (2019), "Impact of inclusive leadership on innovative work behavior: the role of psychological safety", *Journal of Management and Organization*, Vol. 25 No. 1, pp. 117-136, doi: [10.1017/jmo.2017.3](https://doi.org/10.1017/jmo.2017.3).
- Jilani, G., Yang, G. and Siddique, I. (2021), "Corporate social responsibility and pro-environmental behavior of the individuals from the perspective of protection motivation theory", *Sustainability*, Vol. 13 No. 23, 13406.
- Kabirifar, K., Mojtahedi, M., Wang, C. and Tam, V.W. (2020), "A review of construction and demolition waste management contributing factors coupled with reduce, reuse, and recycle strategies for effective waste management", *Journal of Cleaner Production*, Vol. 263, 121265, doi: [10.1016/j.jclepro.2020.121265](https://doi.org/10.1016/j.jclepro.2020.121265).
- Karatepe, O.M., Rezapouraghdam, H. and Hassannia, R. (2021), "Does employee engagement mediate the influence of psychological contract breach on pro-environmental behaviors and intent to remain with the organisation in the hotel industry?", *Journal of Hospitality Marketing and Management*, Vol. 30 No. 3, pp. 326-353, doi: [10.1080/19368623.2020.1812142](https://doi.org/10.1080/19368623.2020.1812142).
- Karatepe, T., Ozturen, A., Karatepe, O.M., Uner, M.M. and Kim, T.T. (2022), "Management commitment to the ecological environment, green work engagement and their effects on hotel employees' green work outcomes", *International Journal of Contemporary Hospitality Management*, Vol. 34 No. 8, pp. 3084-3112, doi: [10.1108/ijchm-10-2021-1242](https://doi.org/10.1108/ijchm-10-2021-1242).
- Kim, H.Y. (2013), "Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis", *Restorative Dentistry and Endodontics*, Vol. 38 No. 1, pp. 52-54, doi: [10.5395/rde.2013.38.1.52](https://doi.org/10.5395/rde.2013.38.1.52).
- Kim, S.H., Lee, K. and Fairhurst, A. (2017), "The review of 'green' research in hospitality, 2000-2014: current trends and future research directions", *International Journal of Contemporary Hospitality Management*, Vol. 29 No. 1, pp. 226-247, doi: [10.1108/ijchm-11-2014-0562](https://doi.org/10.1108/ijchm-11-2014-0562).
- Kim, S.H., Kim, M. and Holland, S. (2020), "Effects of intrinsic motivation on organisational citizenship behaviors of hospitality employees: the mediating roles of reciprocity and organisational commitment", *Journal of Human Resources in Hospitality and Tourism*, Vol. 19 No. 2, pp. 168-195, doi: [10.1080/15332845.2020.1702866](https://doi.org/10.1080/15332845.2020.1702866).
- Kramar, R. (2014), "Beyond strategic human resource management: is sustainable human resource management the next approach?", *The International Journal of Human Resource Management*, Vol. 25 No. 8, pp. 1069-1089, doi: [10.1080/09585192.2013.816863](https://doi.org/10.1080/09585192.2013.816863).
- Lange, F. and Dewitte, S. (2019), "Measuring pro-environmental behavior: review and recommendations", *Journal of Environmental Psychology*, Vol. 63, pp. 92-100, doi: [10.1016/j.jenvp.2019.04.009](https://doi.org/10.1016/j.jenvp.2019.04.009).
- Leroy, H., Segers, J., Dierendonck, D. and Hartog, D. (2018), "Managing people in organisations: integrating the study of HRM and leadership", *Human Resource Management Review*, Vol. 28 No. 3, pp. 249-257, doi: [10.1016/j.hrmr.2018.02.002](https://doi.org/10.1016/j.hrmr.2018.02.002).
- Li, W., Chien, F., Hsu, C.-C., Zhang, Y., Nawaz, M.A., Iqbal, S. and Mohsin, M. (2021), "Nexus between energy poverty and energy efficiency: estimating the long-run dynamics", *Resources Policy*, Vol. 72, 102063, doi: [10.1016/j.resourpol.2021.102063](https://doi.org/10.1016/j.resourpol.2021.102063).

- Lin, K., Peng, M.Y.P., Anser, M.K., Yousaf, Z. and Sharif, A. (2021), "Bright harmony of environmental management initiatives for achieving corporate social responsibility authenticity and legitimacy: glimpse of hotel and tourism industry", *Corporate Social Responsibility and Environmental Management*, Vol. 28 No. 2, pp. 640-647, doi: [10.1002/csr.2076](https://doi.org/10.1002/csr.2076).
- Liu, X., Baranchenko, Y., An, F., Lin, Z. and Ma, J. (2021), "The impact of ethical leadership on employee creative deviance: the mediating role of job autonomy", *Leadership and Organization Development Journal*, Vol. 42 No. 2, pp. 219-232, doi: [10.1108/loj-01-2020-0026](https://doi.org/10.1108/loj-01-2020-0026).
- Malik, S.Y., Hayat Mughal, Y., Azam, T., Cao, Y., Wan, Z., Zhu, H. and Thurasamy, R. (2021), "Corporate social responsibility, green human resources management, and sustainable performance: is organisational citizenship behavior towards environment the missing link?", *Sustainability*, Vol. 13 No. 3, p. 1044, doi: [10.3390/su13031044](https://doi.org/10.3390/su13031044).
- Martínez-Martínez, A., Cegarra-Navarro, J.G., Garcia-Perez, A. and Wensley, A. (2019), "Knowledge agents as drivers of environmental sustainability and business performance in the hospitality sector", *Tourism Management*, Vol. 70, pp. 381-389, doi: [10.1016/j.tourman.2018.08.030](https://doi.org/10.1016/j.tourman.2018.08.030).
- Matore, E.M. and Khairani, A.Z. (2020), "The pattern of skewness and kurtosis using mean score and logit in measuring adversity quotient (AQ) for normality testing", *International Journal of Future Generation Communication and Networking*, Vol. 13 No. 1, pp. 688-702.
- Merli, R., Preziosi, M., Acampora, A. and Ali, F. (2019), "Why should hotels go green? Insights from guests experience in green hotels", *International Journal of Hospitality Management*, Vol. 81, pp. 169-179, doi: [10.1016/j.ijhm.2019.04.022](https://doi.org/10.1016/j.ijhm.2019.04.022).
- Min, H., Park, J. and Kim, H.J. (2016), "Common method bias in hospitality research: a critical review of literature and an empirical study", *International Journal of Hospitality Management*, Vol. 56, pp. 126-135, doi: [10.1016/j.ijhm.2016.04.010](https://doi.org/10.1016/j.ijhm.2016.04.010).
- Ministry of Tourism, Arts and Culture (MoTAC) (2022), "Ghana", available at: <https://www.motac.gov.gh/2022/>
- Morrison, E.W. and Robinson, S.L. (1997), "When employees feel betrayed: a model of how psychological contract violation develops", *Academy of Management Review*, Vol. 22 No. 1, pp. 226-256, doi: [10.5465/amr.1997.9707180265](https://doi.org/10.5465/amr.1997.9707180265).
- Mzembe, A.N., Melissen, F. and Novakovic, Y. (2019), "Greening the hospitality industry in the developing world: analysis of the drivers and barriers", *Business Ethics: A European Review*, Vol. 28 No. 3, pp. 335-348, doi: [10.1111/beer.12217](https://doi.org/10.1111/beer.12217).
- Nowacki, M., Chawla, Y. and Kowalczyk-Anioł, J. (2021), "What drives the eco-friendly tourist destination choice? The Indian perspective", *Energies*, Vol. 14 No. 19, p. 6237, doi: [10.3390/en14196237](https://doi.org/10.3390/en14196237).
- Nulty, D.D. (2008), "The adequacy of response rates to online and paper surveys: what can be done?", *Assessment and Evaluation in Higher Education*, Vol. 33 No. 3, pp. 301-314, doi: [10.1080/02602930701293231](https://doi.org/10.1080/02602930701293231).
- Ouariachi, T., Li, C.Y. and Elving, W.J. (2020), "Gamification approaches for education and engagement on pro-environmental behaviors: searching for best practices", *Sustainability*, Vol. 12 No. 11, p. 4565, doi: [10.3390/su12114565](https://doi.org/10.3390/su12114565).
- Patwary, A.K., Aziz, R.C. and Hashim, N.A.A.N. (2023), "Investigating tourists' intention toward green hotels in Malaysia: a direction on tourist sustainable consumption", *Environmental Science and Pollution Research*, Vol. 30 No. 13, pp. 38500-38511.
- Patwary, A.K., Mohd Yusof, M.F., Bah Simpong, D., Ab Ghaffar, S.F. and Rahman, M.K. (2022a), "Examining proactive pro-environmental behaviour through green, inclusive leadership and green human resource management: an empirical investigation among Malaysian hotel employees", *Journal of Hospitality and Tourism Insights*, Vol. 6 No. 5, pp. 2012-2029, doi: [10.1108/jhti-06-2022-0213](https://doi.org/10.1108/jhti-06-2022-0213).
- Patwary, A.K., Rasoolimanesh, S.M., Aziz, R.C., Ashraf, M.U., Alam, M.M. and Rehman, S.U. (2024), "Assessing environmental performance through environmental management initiatives, green extrinsic and intrinsic motivation, and resource commitment in Malaysian hotels", *International Journal of Hospitality and Tourism Administration*, pp. 1-32.

- Patwary, A.K., Rasoolimanesh, S.M., Rabiul, M.K., Aziz, R.C. and Hanafiah, M.H. (2022b), "Linking environmental knowledge, environmental responsibility, altruism, and intention toward green hotels through ecocentric and anthropocentric attitudes", *International Journal of Contemporary Hospitality Management*, Vol. 34 No. 12, pp. 4653-4673, doi: [10.1108/ijchm-01-2022-0039](https://doi.org/10.1108/ijchm-01-2022-0039).
- Peng, X., Lee, S. and Lu, Z. (2020), "Employees' perceived job performance, organisational identification, and pro-environmental behaviors in the hotel industry", *International Journal of Hospitality Management*, Vol. 90, 102632, doi: [10.1016/j.ijhm.2020.102632](https://doi.org/10.1016/j.ijhm.2020.102632).
- Pham, D.D.T. and Paillé, P. (2019), "Green recruitment and selection: an insight into green patterns", *International Journal of Manpower*, Vol. 41 No. 3, pp. 258-272, doi: [10.1108/ijm-05-2018-0155](https://doi.org/10.1108/ijm-05-2018-0155).
- Rasoolimanesh, S.M. (2022), "Discriminant validity assessment in PLS-SEM: a comprehensive composite-based approach", *Data Analysis Perspectives Journal*, Vol. 3 No. 2, pp. 1-8.
- Rasoolimanesh, S.M., Wang, M., Roldán, J.L. and Kunasekaran, P. (2021), "Are we in the right path for mediation analysis? Reviewing the literature and proposing robust guidelines", *Journal of Hospitality and Tourism Management*, Vol. 48, pp. 395-405, doi: [10.1016/j.jhtm.2021.07.013](https://doi.org/10.1016/j.jhtm.2021.07.013).
- Rasoolimanesh, S.M., Wang, M., Roldán, J.L. and Kunasekaran, P. (2021), "Are we in right path for mediation analysis? Reviewing the literature and proposing robust guidelines", *Journal of Hospitality and Tourism Management*, Vol. 48, pp. 395-405.
- Rezapouraghdam, H., Alipour, H. and Darvishmotevali, M. (2018), "Employee workplace spirituality and pro-environmental behavior in the hotel industry", *Journal of Sustainable Tourism*, Vol. 26 No. 5, pp. 740-758, doi: [10.1080/09669582.2017.1409229](https://doi.org/10.1080/09669582.2017.1409229).
- Robinson, S.L. and Wolfe Morrison, E. (2000), "The development of psychological contract breach and violation: a longitudinal study", *Journal of Organizational Behavior*, Vol. 21 No. 5, pp. 525-546, doi: [10.1002/1099-1379\(200008\)21:53.0.co;2-t](https://doi.org/10.1002/1099-1379(200008)21:53.0.co;2-t).
- Ryan, R.M. and Deci, E.L. (2000), "Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being", *American Psychologist*, Vol. 55 No. 1, pp. 68-78, doi: [10.1037/0003-066X.55.1.68](https://doi.org/10.1037/0003-066X.55.1.68).
- Sadiq, M., Ou, J.P., Duong, K.D., Van, L., Ngo, T.Q. and Bui, T.X. (2022), "The influence of economic factors on the sustainable energy consumption: evidence from China", *Economic Research-Ekonomska Istraživanja*, Vol. 36, pp. 1-23, doi: [10.1080/1331677x.2022.2093244](https://doi.org/10.1080/1331677x.2022.2093244).
- Sanders, K., Guest, D. and Rodrigues, R. (2021), "The role of HR attributions in the HRM–Outcome relationship: introduction to the special issue", *Human Resource Management Journal*, Vol. 31 No. 3, pp. 694-703, doi: [10.1111/1748-8583.12358](https://doi.org/10.1111/1748-8583.12358).
- Sarvaiya, H., Arrowsmith, J. and Eweje, G. (2021), "Exploring HRM involvement in CSR: variation of Ulrich's HR roles by organisational context", *The International Journal of Human Resource Management*, Vol. 32 No. 21, pp. 4429-4462, doi: [10.1080/09585192.2019.1660698](https://doi.org/10.1080/09585192.2019.1660698).
- Singh, S.K., Del Giudice, M., Chierici, R. and Graziano, D. (2020), "Green innovation and environmental performance: the role of green transformational leadership and pro-environmental attitudes", *Technological Forecasting and Social Change*, Vol. 150, 119762, doi: [10.1016/j.techfore.2019.119762](https://doi.org/10.1016/j.techfore.2019.119762).
- Singh, P., Bhandarker, A. and Verma, S. (2021), *Role of Boards : Building Sustainable Competitive Edge*, Sage Publications, New York.
- Soares, M.E. and Mosquera, P. (2019), "Fostering work engagement: the role of the psychological contract", *Journal of Business Research*, Vol. 101, pp. 469-476, doi: [10.1016/j.jbusres.2019.01.003](https://doi.org/10.1016/j.jbusres.2019.01.003).
- Sovacool, B.K., Griffiths, S., Kim, J. and Bazilian, M. (2021), "Climate change and industrial F-gases: a critical and systematic review of developments, sociotechnical systems and policy options for reducing synthetic greenhouse gas emissions", *Renewable and Sustainable Energy Reviews*, Vol. 141, 110759, doi: [10.1016/j.rser.2021.110759](https://doi.org/10.1016/j.rser.2021.110759).
- Su, L. and Swanson, S.R. (2019), "Perceived corporate social responsibility's impact on the well-being and supportive green behaviors of hotel employees: the mediating role of the employee-corporate relationship", *Tourism Management*, Vol. 72, pp. 437-450, doi: [10.1016/j.tourman.2019.01.009](https://doi.org/10.1016/j.tourman.2019.01.009).

- Thompson, R. (2012), *Environmental Magnetism*, Springer Science & Business Media, New York.
- Tuan, L.T. (2020), "Environmentally specific servant leadership and green creativity among tourism employees: dual mediation paths", *Journal of Sustainable Tourism*, Vol. 28 No. 1, pp. 86-109, doi: [10.1080/09669582.2019.1675674](https://doi.org/10.1080/09669582.2019.1675674).
- United Nations World Tourism Organization (2018), "Transforming tourism for climate action", available at: <https://www.unwto.org/sustainable-development/climate-action> (accessed 1 January 2024).
- Varela-Candamio, L., Novo-Corti, I. and García-Álvarez, M.T. (2018), "The importance of environmental education in the determinants of green behaviour: a meta-analysis approach", *Journal of Cleaner Production*, Vol. 170, pp. 1565-1578, doi: [10.1016/j.jclepro.2017.09.214](https://doi.org/10.1016/j.jclepro.2017.09.214).
- Vasconcellos, D., Parker, P.D., Hilland, T., Cinelli, R., Owen, K.B., Kapsal, N., Lee, J., Antczak, D., Ntoumanis, N., Ryan, R.M. and Lonsdale, C. (2020), "Self-determination theory applied to physical education: a systematic review and meta-analysis", *Journal of Educational Psychology*, Vol. 112 No. 7, pp. 1444-1469, doi: [10.1037/edu0000420](https://doi.org/10.1037/edu0000420).
- Wu, S.Y., Wang, W.T. and Hsieh, Y.H. (2022), "Exploring knowledge sharing behavior in healthcare organizations: an integrated perspective of the empowerment theory and self-determination theory", *Kybernetes*, Vol. 51 No. 8, pp. 2529-2553.
- Ye, J., Zhang, X., Zhou, L., Wang, D. and Tian, F. (2022), "Psychological mechanism linking pro-environmental attitudes to green behavior", *International Journal of Manpower*, Vol. 43 No. 3, pp. 844-861, doi: [10.1108/ijm-11-2020-0508](https://doi.org/10.1108/ijm-11-2020-0508).
- Yong, J.Y., Yusliza, M.Y., Ramayah, T., Chiappetta Jabbour, C.J., Sehnem, S. and Mani, V. (2020), "Pathways towards sustainability in manufacturing organisations: empirical evidence on the role of pro-environmental attitudes", *Business Strategy and the Environment*, Vol. 29 No. 1, pp. 212-228, doi: [10.1002/bse.2359](https://doi.org/10.1002/bse.2359).
- Zacher, H. and Bissing-Olson, M.J. (2018), "Between-and within-person variability in employee pro-environmental behaviour", in *Research Handbook on Employee Pro-environmental Behaviour*, pp. 128-147.
- Zacher, H. and Rudolph, C.W. (2021), "Relationships between psychological contract breach and employee well-being and career-related behavior: the role of occupational future time perspective", *Journal of Organizational Behavior*, Vol. 42 No. 1, pp. 84-99, doi: [10.1002/job.2495](https://doi.org/10.1002/job.2495).
- Zhang, Y., Luo, Y., Zhang, X. and Zhao, J. (2019), "How pro-environmental attitudes can promote green employee behavior in China: a technology acceptance model perspective", *Sustainability*, Vol. 11 No. 19, p. 5408, doi: [10.3390/su11195408](https://doi.org/10.3390/su11195408).
- Zhao, H. and Zhou, Q. (2021), "Socially responsible human resource management and hotel employee organisational citizenship behavior for the environment: a social cognitive perspective", *International Journal of Hospitality Management*, Vol. 95, 102749, doi: [10.1016/j.ijhm.2020.102749](https://doi.org/10.1016/j.ijhm.2020.102749).
- Zhou, S., Zhang, D., Lyu, C. and Zhang, H. (2018), "Does seeing 'mind acts upon mind' affect green psychological climate and green product development performance? The role of matching between green transformational leadership and individual green values", *Sustainability*, Vol. 10 No. 9, p. 3206, doi: [10.3390/su10093206](https://doi.org/10.3390/su10093206).
- Zientara, P. and Zamojska, A. (2018), "Green organisational climates and employee pro-environmental behaviour in the hotel industry", *Journal of Sustainable Tourism*, Vol. 26 No. 7, pp. 1142-1159, doi: [10.1080/09669582.2016.1206554](https://doi.org/10.1080/09669582.2016.1206554).

Further reading

- Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), "A new criterion for assessing discriminant validity in variance-based structural equation modeling", *Journal of the Academy of Marketing Science*, Vol. 43 No. 1, pp. 115-135, doi: [10.1007/s11747-014-0403-8](https://doi.org/10.1007/s11747-014-0403-8).

- Jyoti, J. and Dimple, D. (2022), "Fun at workplace and intention to leave: role of work engagement and group cohesion", *International Journal of Contemporary Hospitality Management*, Vol. 34 No. 2, pp. 782-807, doi: [10.1108/ijchm-06-2021-0704](https://doi.org/10.1108/ijchm-06-2021-0704).
- Khan, S.A.R., Razzaq, A., Yu, Z. and Miller, S. (2021), "Industry 4.0 and circular economy practices: a new era business strategies for environmental sustainability", *Business Strategy and the Environment*, Vol. 30 No. 8, pp. 4001-4014, doi: [10.1002/bse.2853](https://doi.org/10.1002/bse.2853).
- Megheirkouni, M. (2022), "Psychological contract, leadership, and job satisfaction: an empirical investigation into the non-profit sports sector", *Annals of Leisure Research*, Vol. 25 No. 2, pp. 203-226, doi: [10.1080/11745398.2020.1769488](https://doi.org/10.1080/11745398.2020.1769488).

Corresponding author

Ataul Karim Patwary can be contacted at: raselataul@gmail.com