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https://doi.org/10.1108/JHTI-10-2023-0713
This is an Authors Accepted Manuscript version of an article published by Emerald in Journal of Hospitality and Tourism Insights. The publihsed version is available at https://doi.org/10.1108/JHTI-10-2023-0713
Patwary, A. K., Rasoolimanesh, S. M., Hanafiah, M. H., Aziz, R. C., Mohamed, A. E., Ashraf, M. U., & Azam, N. R. A. N. (2024). Empowering pro-environmental potential among hotel employees: insights from self-determination theory. Journal of Hospitality and Tourism Insights. Advance online publication. https://doi.org/10.1108/JHTI-10-2023-0713
This Journal Article is posted at Research Online.
https://ro.ecu.edu.au/ecuworks2022-2026/3800

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This journal article is available at Research Online: https://ro.ecu.edu.au/ecuworks2022-2026/3800

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# Empowering Pro-Environmental Potential among Hotel Employees: Insights from Self-Determination Theory

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Word count: 8890

**Keywords:**
Proactive Pro-environmental behaviour,
Pro-environmental attitudes,
Green Inclusive Leadership,
Corporate Social Responsibility,
Psychological Contract Breach,
Hotel Employees,
Malaysia

## 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.

**Methodology:** 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 Modeling.

**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.

**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:** 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.

## 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 per cent to the global increase in greenhouse gas emissions, producing 4.5 billion tonnes of $CO_2$ equivalents (Sovacool et al., 2021). As a consequence, global warming will have severe effects on the competitiveness of this sector (Li et al., 2022). The ability of the tourism industry to address environmental sustainability issues is, therefore, crucial to the industry's long-term success (Patwary et al., 2022). In the Malaysian context, there has been rapid growth in the tourism and hotel industry for the last two decades. Unfortunately, it has become one of Malaysia's highest contributors to environmental pollution (Li et al., 2022). As such, environmental management has become increasingly popular among hoteliers over the past few decades (Kabirifar et al., 2020; Merli et al., 2019; Filimonau, 2020; Tulsi & Ji, 2020; Patwary et al., 2022).

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 & Lee, 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 & 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 & Lee, 2019). 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 & 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, 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 (Wang et al., 2021). 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 & 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 & 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 (Deci & Ryan, 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 Behavior*

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 et al., 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 Behavior*

Leaders may foster pro-environmental thinking by creating an environment that encourages it and setting an example that others will follow (Bass, 1960; Ouariachi & Elving, 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.

Tourism and hospitality 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 a 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 Behavior*

Existing literature includes empirical research on pro-environmental attitudes and their potential implications (Jyoti, 2019). 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 a 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:

***H3 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 and Bhandarker (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 & Rudloph, 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 (Gilani et al., 2021).

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 a behavior 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 justifies 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).

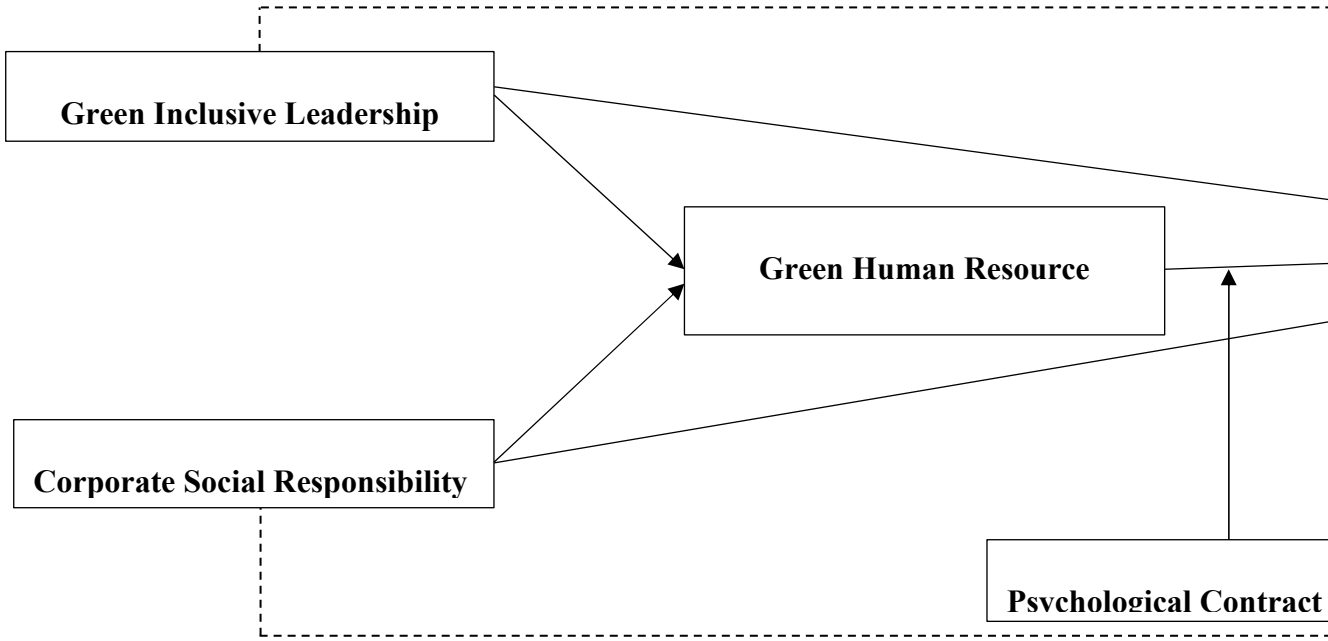



Figure 1: Conceptual framework

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

Figure 1: Conceptual framework

Source: Author's own creation

## 3. Research Method

### *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., 2022).

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 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 percent from the (40 * 15) = 600 surveys we sent out. After excluding the outliers and missing, 374 responses were considered valid for inferential analysis.

### *3.3 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 and Han (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 Morrison (2000) and modified by Karatepe et al. (2021).

### *3.4 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 & 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 percent 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 (VIF) values are in the acceptable range, and there are no issues with collinearity among the constructs.

**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 | .984 | 1.023 |
| Green Human Resource Management | 0.000 | -0.031 | -3.337 | 2.066 | 1.000 | -0.159 | -0.239 | 373.000 | .613 | 1.017 |
| Green Inclusive Leadership | 0.000 | 0.067 | -2.654 | 2.012 | 1.000 | -0.387 | -0.071 | 373.000 | .502 | 1.630 |
| Proactive Pro-Environmental Behaviour | 0.000 | -0.039 | -3.200 | 1.542 | 1.000 | 0.644 | -0.723 | 373.000 | .595 | 1.990 |
| Psychological Contract Breach | 0.000 | 0.323 | -3.939 | 1.478 | 1.000 | 3.216 | -1.409 | 373.000 | .639 | 1.681 |

Source: Author's own creation

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 & 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 & 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).

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.

**Table 2**

**Outer Loadings and multicollinearity diagnosis**

| Variables | Items | Tolerance | VIF |
|---|---|---|---|
| **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: Author's own creation

Table-3

HTMT (Heterotrait & Monotrait) ratio criterion for discriminant validity

| | 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: Author's own creation

For a successful PLS model, the SRMR must be less than 0.08 (Rasolimanesh et al., 2021). To some extent, an R2 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 an in-depth analysis of the SRMR and R2 values, indicating that the model is good, with moderate effects and predictive relevance (Cheah et al., 2018).

**Table 4**

**Quality of the model**

| 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) |

Source: Author's own creation

### 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 (β=0.219; t= 4.288, p=0.000) (H1). This study also confirms that green inclusive leadership (β=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.

Table 5
Hypotheses Testing

| Direct hypotheses | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **No** | **Hypothesis** | **β** | **Std. Dev.** | **t-values** | **p-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 |
| | | | | | | **Indirect hypotheses** | | |
| 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 |
| | | | | | | **Moderating Effects** | | |
| 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: Author's own creation

Besides, corporate social responsibility (H2) (β=0.143; t= 3.513, p=0.012), pro-environmental attitudes (H5) ((β=0.235; t= 4.552, p=0.000), and green inclusive leadership (H4) ((β=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 (β=0.052; t value = 2.942; p-value = 0.003) (H6) and green inclusive leadership (β=0.039; t value = 3.328; p-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 (β=-0.078; t value = 1.735; p-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.

## 5. Discussion and Conclusions

### 5.1 Discussion

### 5.2. 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.

### 5.3. 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 & Elving, 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., 2022). 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, 2022). 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.

### 5.3. 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 & 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 & 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.

### 5.4. 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.

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