# Green Leadership, Motivation, Commitment and Performance in the Operational Teams of the Portuguese Hospitality Industry

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**Abstract**: This study examines the relationships between green transformational leadership, green motivation, green commitment, and green performance in the Portuguese hospitality sector. Using a quantitative approach, data were collected from 127 operational hotel employees through a structured questionnaire with 28 closed-ended questions across four dimensions. Statistical analysis, including Pearson correlations and multiple linear regression, confirmed significant positive correlations between the variables. The results showed that green commitment plays a crucial mediating role, acting as the main predictor of green performance. However, contrary to previous studies, green transformational leadership and green motivation did not directly influence performance. These findings underscore the need for companies to enhance green commitment training, incentives and employee alignment with sustainable practices. Future research should explore additional factors that influence green performance, such as corporate social responsibility and alternative leadership styles.

**Keywords:** Green transformational leadership, Green motivation, Green commitment, Green performance, Hospitality

## 1. Introduction

Sun et al. (2022) state that the industrial revolution has contributed significantly to environmental degradation and that it can be divided into three phases: the first, with mechanization; the second, with mass production; and the third, with automation. The same authors add a fourth phase, marked by digital progress, in which sustainability is a central feature.

While sustainability is not a new issue, it has become an urgent issue due to the rapid degradation of ecosystems and the imminent threat to humanity and companies. This issue has gained a place on global agendas as a central challenge (Naz et al., 2021; Wiredu et al., 2023). According to Robertson and Barling (2017), companies are co-responsible for climate change as they continue to emit harmful substances such as chemicals and carbon dioxide, damaging the environment. Given this scenario, society, regulatory bodies, and stakeholders are putting pressure on businesses to adopt sustainable practices (Abbas, 2020; Gunarathne et al., 2021). In this sense, sustainability has become a priority for companies to consider in their strategic plans. In general, the implementation of sustainable practices in organizations also depends on the motivation and commitment of their leaders and employees. Leaders have a responsibility to make decisions that consider the environmental and social impacts, thus contributing to the company's "green footprint" (Zhao & Huang, 2022). According to Bhatti et al. (2022), the adoption of sustainable practices helps to reduce absenteeism and increase employee engagement and satisfaction. Chan et al. (2020) found that more than 70% of TripAdvisor users prefer hotels that adopt environmental practices.

The general aim of this study is to understand how leadership and motivation in the hospitality sector in Portugal promote sustainable practices by improving employees' green performance. Therefore, the starting question is: What is the impact of transformational leadership and green motivation on employee commitment and green performance?

## 2. Theoretical Background

### 2.1 Green Transformational Leadership

Yukl (2013, p. 2) defines leadership as "the process of influencing others to understand and agree on what needs to be done and how to do it effectively, and the process of facilitating individual and collective efforts to achieve shared goals.". In this sense, leaders are defined as people who shape the behaviors and attitudes of their employees by providing all the support and resources necessary to perform tasks well (Xu et al., 2022).

According to Bass and Avolio (1993), transformational leadership has a strong impact on the success of companies, surpassing the level of success of their market competitors who use a different style. Ababneh et al (2021) found that this leadership style can align employees with the mission, values and vision of the organization. Transformational leadership has four dimensions that, when perceived, contribute to employee behavior (Bass, 1985). These are individualized consideration, inspirational motivation, intellectual stimulation, and idealized influence (Bass, 1985). Faced with the climate issues of recent years and the pressures already identified, business leaders have been forced to develop a pro-environmental spirit. Suliman et al. (2023) found that leaders with a green transformational leadership style enable their organizations to respond more effectively to these pressures.

Green transformational leadership is based on the theory of transformational leadership when Robertson and Barling (2013, p. 2) applied it to the environmental context and defined it as "the manifestation of transformational leadership whose content is focused on promoting pro-environmental initiatives.". Chen and Chang (2013) characterize green transformational leadership by the fact that the leader has the ability to motivate their employees to achieve sustainable goals that go beyond what is expected of them, with an environmental focus. Omarova and Jo (2022) state that this type of leadership occurs when the leader focuses on influencing companies' environmental obligations. The focus on the green agenda and the full support of strategic management, coupled with the practices coming from Human Resources, are factors that may lead leaders to express this type of leadership (Mansoor et al., 2021). In addition, green transformational leaders inspire and motivate their team members to understand and articulate the company's vision (Omarova & Jo, 2022) and not to be so self-centered that they work only to achieve their personal goals, but rather to achieve sustainable organizational goals (Li et al., 2020; Suliman et al., 2023).

In addition to the characteristics already mentioned, the green leader, by having a high commitment to the "green" cause, hopes to inspire and increase the commitment of their employees and get them to commit to developing environmentally friendly behavior or making choices that do not harm the environment (Omarova & Jo, 2022). Donmez-Turan and Kiliclar (2021) point out that green behaviors are all those aimed at respecting and protecting nature and ecosystems. This type of leadership has been recommended by some authors as an important factor in increasing green motivation, which leads employees to higher sustainable performance (Lin et al., 2022; Kusi et al., 2021). Akram et al. (2022), Elshaer et al. (2022), Omarova and Jo (2022), Peng et al. (2021), Rizvi and Garg (2020), Rustiarini et al. (2023); Sobaih et al. (2022), and Sun et al. (2022) state that green transformational leadership fosters sustainable behavior in employees and in turn increases their environmental performance. The study by Singh et al. (2020) concluded that green transformational leadership makes hotel employees feel more inspired and receptive to sustainable practices.

### 2.2 Green Motivation

Pinder (2008) defined motivation as a set of energetic forces, both internal and external to the individual, that determine the initiation, duration and intensity of behaviour in the performance of tasks. The way in which employees carry out their tasks depends on their managers and how they manage to meet their needs and expectations (Davis et al., 2009). For Al Shammre et al. (2023), Li et al. (2020) and Lin (2023), green motivation is divided into two types, namely: extrinsic, which occurs when the individual exerts extra effort through external factors, such as salary promotion, prizes or prestige for themselves, or to avoid punishment from others; intrinsic, which occurs when the individuals feel that their motivation comes from passion, internal satisfaction and pride in achieving sustainable goals and objectives. However, Ali et al. (2020) point out that either of these two types of green motivation will increase employees' environmental performance.

According to Nguyen (2019), hotel companies that include sustainability issues in their strategic guidelines show higher levels of employee motivation. Other consequences include greater employee interest in participating in environmental activities (Shafaei et al., 2020). Malik et al. (2021) report that employees with more pro-environmental behaviors have higher levels of motivation to achieve the hotel's environmental objectives. Karatepe et al. (2022) argue that employees who feel enthusiastic and motivated by green practices and initiatives created within the organization tend to have higher levels of commitment to their work and perform better at their tasks. Green motivation also increases an organization's environmental citizenship behaviors and makes employees take initiative and volunteer on behalf of the company, their co-workers and the community (Anwar, 2020). In addition, Karatepe et al. (2022) found that employees who show greater green commitment tend to acquire more environmental skills and knowledge through environmental training. Investing in the sustainable part of human resources, such as giving out green awards, selecting green-inspired workers, and providing opportunities for career progression, makes employees feel more motivated to reward the company

through higher levels of environmental commitment and performance (Ari et al., 2020). According to Susanto et al. (2024), companies with low levels of green motivation have higher turnover and greater difficulties with employee retention.

*Hypothesis 1: There are significant positive correlations between green transformational leadership and green motivation.*

### 2.3 Green Commitment

The term "commitment to work" refers to the spontaneous sense of responsibility that employees have for organizational goals based on their appreciation and internalization of these goals, as well as the company's values (Huang et al., 2021). Such commitment, from an environmental perspective, is called "green commitment at work" and is an adaptation of the term described above (Aboramadan, 2022). Green environmentalism is defined as the spontaneity, enthusiasm, and dedication felt by employees when they make extra efforts to carry out tasks of a sustainable nature (Karatepe et al., 2022).

Several authors have linked employees' green commitment to a reduction in burnout, characterized by emotional exhaustion caused by high levels of stress and work demands, highlighting the importance of employees' psychological well-being and satisfaction (Çop et al., 2021). Zhu et al. (2022) concluded that employees with higher levels of commitment to sustainable work are more likely to work harder and prioritize solving problems related to the environment. Employees who are committed to the green environment act beyond their own interests (Zhu et al., 2022) and have higher levels of energy, resilience, connectedness, and effectiveness towards their work (Robjin et al., 2020). Çop et al. (2021) also add that aspects such as higher levels of motivation, enthusiasm, and involvement in carrying out daily tasks are noticeable when it comes to employees committed to green work. Purba and Tikurura (2022) defend the same position by concluding that high levels of green commitment on the part of employees will result in increased satisfaction and greater productivity, which helps companies to prevent future problems.

According to Raineri and Paillé (2016), employees with greater environmental commitment have a clearer vision and more deeply rooted environmental values. The same authors state that environmental commitment promotes higher levels of intrinsic (internal) motivation, which will make them more willing to make extra efforts for environmental protection. Zhang et al. (2020) state that employees committed to sustainable measures in the company have a direct and positive relationship with increases in employee performance. Aboramadan et al. (2020) and Suliman et al. (2023) state that environmental commitment acts as a predictor of employees' green performance.

*Hypothesis 2: There are significant positive correlations between green transformational leadership and green employee commitment.*

*Hypothesis 3: There are significant positive correlations between green motivation and green employee commitment.*

### 2.4 Green Performance

For Kim et al. (2019) and Singh et al. (2020), the term "green performance" is significantly related to the green behavior of employees, as well as green innovation (also called green effects), which arises for management to create green initiatives by management to eliminate negative environmental effects and is strongly dependent on employee motivation (Kim & Phillips, 2013).

To ensure that a company's environmental purpose is achieved, and sustainable actions are practiced, it is necessary for the leader to pay attention to the various processes integrated into sustainable human resource management practices, such as recruitment, selection, training and development, as well as compensation and talent management (Pham et al., 2020). By adapting or correcting HRM practices, leaders can influence their employees to adopt sustainable attitudes and behaviors, as well as develop knowledge in the area, thus motivating them to deepen their knowledge on the subject and contribute to individual and organizational sustainable development through conscious behavior (Younis & Hussain, 2023).

Green recruitment, which is an integral part of sustainable human resource management, is based on the idea that management should select candidates who demonstrate that they have the same environmental values as the company, i.e. that they have preferences that are in line with sustainability policies, thus creating a link between employer and employee (Younis & Hussain, 2023). Environmental training for employees is in line with the thesis that employees can work on skills that are important for the creation of environmentally friendly

products and practices and that ultimately increase their commitment to the "green" cause (Aggarwal et al., 2022). Finally, bonuses and compensation are incentives not to be discarded by management.

In the case of hotels and similar to other sectors, in order for hotel employees to show high green performance in their actions and activities, they need to be committed to the hotel's environmental strategy and aware of the environmental problems, which are already quite complex; they need to be committed and attentive to the initiatives that the hotel develops (Ababneh et al., 2021). This is because, once they are interested in such initiatives, career progression, change, and adaptation and have behaviors that are seen as innovative, they are also motivated to perform their duties, adhering to job requirements and company policies (Presbitero, 2017, cited by Ababneh et al., 2021).

*Hypothesis 4: There are significant positive correlations between green transformational leadership and green employee performance.*

*Hypothesis 5: There are significant positive correlations between green motivation and green employee performance.*

*Hypothesis 6: Employees' green commitment is a predictor of their green performance.*

After reviewing the literature and establishing the relationship between the variables under study, the conceptual model was drawn up, as shown in Figure 1.

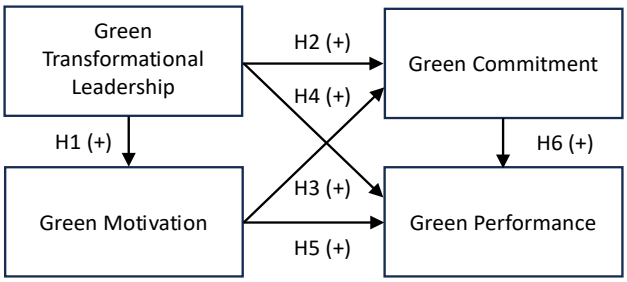


**Figure 1: Conceptual model**

## 3. Methodology

In order to verify the hypotheses presented above, we used a quantitative method, applying a questionnaire with closed questions. The questionnaire consists of 2 parts: The first part has 3 sociodemographic questions, with a nominal scale. The second part of the questionnaire consists of 25 items divided into the following 4 dimensions: green transformational leadership, green motivation, green commitment, and green performance. The first dimension "green transformational leadership", with 6 items, was taken from the "green transformational leadership" questionnaire by Zhang et al. (2020). The second dimension, "green motivation", with 3 items was taken from the "green motivation" questionnaire by Úbeda-García et al. (2022). The third dimension is "green commitment" with 6 items taken from the "green work engagement" questionnaire by Aboramadan (2022). The fourth dimension, "green performance", with 7 items taken from the "hotel environmental performance" questionnaire by Kim et al. (2019) and Paillé and Meija-Morelos (2019). The original Likert scale of 1 to 5 for each of the dimensions was adapted to an agreement scale ranging from 1 to 7. Where 1 corresponds to "totally disagree" and 7 to "totally agree.". The internal validation values (Cronbach's alpha) for each of the dimensions under study are as follows: green transformational leadership (0.95), green motivation (0.81), green commitment (0.92), and green performance (0.88).

The questionnaire was applied to a sample of operational hotel employees (receptionist, chambermaid, head waiter, waiter, bartender, among others) and was chosen for convenience, as it was simpler and quicker to obtain. The questionnaire received 127 responses via Google Forms between April and June 2024. As for age groups, 26% (33 individuals) were between 18 and 24 years old; 22.8% (29 individuals) were between 25 and 35 years old, 32.3% (41 individuals) were between 36 and 50 years old, and 18.9% (24 individuals) were over 50 years old. As for gender, 55.1% (70) were female and 44.9% (57) were male.

In order to verify the hypotheses, namely the existence of correlations between the variables under study, the Bravais-Pearson correlation was used, and, in order to identify predictive dimensions of criterion factors, linear

regressions were carried out, which required the Shapiro-Wilk normality test (n > 30) and homogeneity tests (Levene test).

## 4. Findings and Discussion

Table 1 presents the results of the Bravais-Pearson correlations between the variables under study. From the analysis of the results, it is observed that all hypotheses were confirmed, as the correlations are significant and positive between the analyzed variables, with values ranging from 0.65 to 0.81 (p-value < 0.05). These results support the theoretical assumptions of the reviewed literature and demonstrate the significant influence of green transformational leadership and green motivation on the green commitment and performance of Portuguese hospitality employees.

**Table 1: Pearson Correlations between the variable green transformational leadership, motivation, commitment, and performance**

| Dimensions | Green transformational leadership | Green motivation | Green commitment | Green performance |
|---|---|---|---|---|
| **Green transformational leadership** | 1 | 0,81** | 0,72** | 0,65** |
| **Green motivation** | 0,81** | 1 | 0,73** | 0,65** |
| **Green commitment** | 0,72** | 0,73** | 1 | 0,79** |
| **Green performance** | 0,65** | 0,65** | 0,79** | 1 |

**. The correlation is significant at the 0.01 level (2-tailed).

According to the results in Table 1, Hypothesis 1, green transformational leadership has a strong positive correlation with green motivation ($r = 0.81$, $p < 0.05$). These results corroborate previous studies (Akram et al., 2022; Omarova & Jo, 2022), which highlight that leaders with an environmental focus encourage employees' motivation to adopt sustainable behaviors. Hypothesis 2, green transformational leadership, is positively correlated with green commitment ($r = 0.72$, $p < 0.05$), where these values are aligned with the investigations of Raineri and Paillé (2016) and Zhang et al. (2020), which indicate that employees influenced by transformational leaders develop a greater commitment to environmental practices. Hypothesis 3, green motivation, is positively correlated with green commitment ($r = 0.73$, $p < 0.05$), where these results reinforce those of Karatepe et al. (2022) and Malik et al. (2021), which highlight that employees motivated by environmental issues tend to be more committed to the company's sustainable strategy. Hypothesis 5: Green motivation and green performance are significantly correlated ($r = 0.65$, $p < 0.05$), where these results confirm the literature review (Anwar, 2020) which state that more motivated employees tend to demonstrate higher green performance.

The results obtained in this study confirm and reinforce the importance of green transformational leadership in promoting sustainable practices in the hospitality sector in Portugal. The influence of leaders is fundamental to motivating and committing employees to the company's environmental goals, aligning with the results achieved by Robertson and Barling (2013) and Mansoor et al. (2021). The green motivating of employees in Portuguese hospitality plays a critical role in their adherence to sustainable practices, as stated by Nguyen (2019) and Malik et al. (2021). Also, the results indicate that green commitment acts as a critical mediator between green transformational leadership, green motivation, and green performance. Employees with high levels of green commitment are more likely to adopt sustainable behaviors, contributing to the success of the implementation of the companies' initiatives. Studies such as those by Zhu et al. (2022) and Zhang et al. (2020) had already indicated these relationships, and the results of the present study reinforce these relationships.

To verify Hypothesis 6, it is considered that the green commitment of employees is a significant predictor of green performance. To test this hypothesis, the multiple linear regression method was used, considering green performance as the dependent variable and green transformational leadership, green motivation, and green commitment as independent variables. The results obtained demonstrate the robustness of the model and the validity of the hypothesis under study. The statistical tests indicate that the regression model is significant, with an F-statistic of 72.9% and a p-value < 0.01, confirming that the independent variables explain a substantial portion of the variability in green performance. The adjusted R-squared of 64% indicates that the variance in employees' green performance can be explained by the variables considered in the model, while 36% is attributed to other unconsidered factors.

Table 2 shows that only the green commitment of Portuguese hospitality employees has a significant predictive effect on green performance (Beta = 0.64; p < 0.01), validating hypothesis 6 and corroborating previous studies, such as those by Aboramadan et al. (2020) and Suliman et al. (2023). On the other hand, green transformational leadership (p=0.21) and green motivation (p=0.41) did not present statistically significant coefficients, indicating that, in the analyzed context, these variables do not directly contribute to green performance. The model equation can be represented as follows: Green performance = 2.17 + 0.55 (Green commitment).

**Table 2: Coefficients of the dependent variable (DV) with the independent variables (green motivation, green commitment, and green transformational leadership) with a p-value<0.01**

| Model | Unstandardized coefficients | | Standardized coefficients | *t* | Sig. | Collinearity statistics | |
|---|---|---|---|---|---|---|---|
| | β | Standard Error | Beta | | | Tolerance | VIF |
| (Constant) | 2,17 | 0,27 | | 8,14 | 0,00 | | |
| Green transformational leadership | 0,09 | 0,07 | 0,13 | 1,23 | 0,21 | 0,30 | 3,31 |
| Green commitment | 0,55 | 0,07 | 0,64 | 7,70 | 0,00 | 0,42 | 2,36 |
| Green motivation | 0,05 | 0,07 | 0,08 | 0,83 | 0,41 | 0,30 | 3,36 |

Variable dependent: Green performance.

The results achieved reinforce the importance of the green commitment of Portuguese hospitality employees as an essential factor for promoting green performance. The high standardized coefficient (Beta = 0.64) indicates that committed employees are likely to adopt sustainable behaviors, corroborating studies by Zhang et al. (2020) and Raineri and Paillé (2016), which identify the positive relationship between green commitment and green performance. Although the literature suggests that green transformational leadership and green motivation can influence green performance (Kim et al., 2019; Singh et al., 2020), the results achieved in this study indicate that these factors did not have a significant impact on the proposed model. A possible explanation for this discrepancy may be related to the specific organizational context, organizational culture, or already incorporated environmental practices. Moreover, the Tolerance and VIF values indicate that there are no multicollinearity issues, although the higher VIF values for green transformational leadership and green motivation suggest some correlation between these variables.

## 5. Conclusion

This study contributes to the literature by providing quantitative evidence on the relationship between green transformational leadership, green motivation, green commitment, and green performance in Portuguese hospitality. The study confirms that the green commitment of Portuguese hospitality employees is a strong predictor of green performance.

As practical implications, it is suggested that companies in the hospitality sector in general invest in training and education on green leadership practices to enhance the commitment and green performance of employees, promoting a more sustainable and environmentally responsible sector. Furthermore, the results highlight the need for the hospitality sector to invest in strategies that promote employees' green commitment, such as implementing training programs to reinforce ecological awareness, developing a system of rewards and incentives for employees who demonstrate a high environmental commitment; greater alignment between organizational culture and sustainable practices, and promoting social responsibility initiatives that engage employees.

For future research, it is suggested to explore other variables in green performance, such as social responsibility and other leadership styles. It would also be relevant to investigate whether different sectors exhibit distinct patterns regarding the influence of leadership and green motivation on environmental performance.

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