

# Eco-friendly behavior as a moderator: How responsible leadership shapes environmental performance through organizational green culture in the hospitality industry?

Murat Ak<sup>a</sup>, Mehmet Ali Turkmenoglu<sup>b</sup>, Hany Elbardan<sup>c,d,e,\*</sup>, Hüseyin Yüce<sup>f</sup>

<sup>a</sup> Karamanoğlu Mehmetbey University, Faculty of Economics and Administrative Sciences, Department of International Trade and Business, Karaman, Türkiye

<sup>b</sup> Mus Alparslan University Faculty of Economics and Administrative Sciences Diyarbakir Yolu, Muş 49025, Türkiye

<sup>c</sup> Bournemouth University Business School, Bournemouth University, Poole, UK

<sup>d</sup> Faculty of Business, Alexandria University, Alexandria, Egypt

<sup>e</sup> Gulf Financial Center, Gulf University for Science and Technology, Kuwait

<sup>f</sup> The Scientific and Technological Research Council of Türkiye (TÜBİTAK), Ankara, Türkiye

## ARTICLE INFO

### Keywords:

Responsible Leadership

Environmental Performance

Green Culture

Eco-Friendly Behavior, Sustainability

## ABSTRACT

This research examines the influence of responsible leadership on environmental performance and organizational green culture within the hospitality sector. In light of increasing environmental challenges, responsible leadership—defined by its stakeholder-oriented approach—has emerged as a critical driver of sustainable practices. The research tests a conceptual model using data from 572 employees and managers in four- and five-star hotels in Antalya, Türkiye. Key hypotheses include the positive effects of responsible leadership on both environmental performance and organizational green culture. Additionally, this study investigates the mediating role of green culture and the moderating effect of employees' eco-friendly behavior. Results confirm that responsible leadership positively impacts environmental performance and green culture, with green culture partially mediating this relationship. Furthermore, eco-friendly behavior amplifies the influence of green culture on environmental outcomes. The findings emphasize the importance of integrating responsible leadership and cultivating a green organizational culture to enhance sustainability efforts. Practical implications for hospitality management include prioritizing sustainability-oriented leadership and fostering eco-conscious behaviors among employees. Future research may explore longitudinal data and expand the model to different cultural contexts.

## 1. Introduction

Over the last two decades, global warming, climate change, pollution, and water scarcity have emerged as major challenges for businesses to cope (Wright and Nyberg, 2017). These challenges made sustainability an increasingly prominent focus of businesses, with efforts spanning various sectors and industries (Aslaksen et al., 2021). In the face of escalating environmental challenges and growing conscious consumerism, the imperative for organizations to embrace sustainability has never been more urgent (Domańska et al., 2024; Ahmad et al., 2024). This heightened awareness has catalyzed a paradigmatic transformation in how businesses perceive their role in society. Studies show that businesses are now part of driving efforts to build a more sustainable future for coming generations (Cvejić et al., 2024).

Environmentally friendly practices of business operations lie at the heart of this transformative journey.

Recent research demonstrates that the hospitality industry must be included in sustainable business practices as consumers increasingly consider sustainability factors in the tourism sector (Waris et al., 2024). In acknowledgement of sustainability efforts, many hoteliers have embraced sustainable routines, including saving energy and water and reducing waste (Vatankhah et al., 2023; Aboramadan et al., 2022). Considering the growing popularity of green hotels and hotels' sustainability initiatives (Akram et al., 2024; Shehawy et al., 2024; Wihler et al., 2024), academics and professionals in the hospitality context are eager to learn more about green management practices and provide novel insights to enhance sustainability (Tourais and Videira, 2024; Khan et al., 2024).

\* Corresponding author at: Bournemouth University Business School, Bournemouth University, Poole, UK.

E-mail addresses: [muratak@kmu.edu.tr](mailto:muratak@kmu.edu.tr) (M. Ak), [m.turkmenoglu@alparslan.edu.tr](mailto:m.turkmenoglu@alparslan.edu.tr) (M.A. Turkmenoglu), [hany.elbardan@gmail.com](mailto:hany.elbardan@gmail.com) (H. Elbardan), [hyuce@msn.com](mailto:hyuce@msn.com) (H. Yüce).

<https://doi.org/10.1016/j.ijhm.2025.104346>

Received 11 November 2024; Received in revised form 4 June 2025; Accepted 10 June 2025

Available online 13 June 2025

0278-4319/© 2025 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

It is admitted that leaders have a pivotal role in influencing organizational values, norms, and practices, exerting influence not only through formal directives but also through their actions, decisions, and ethical compasses (Martins, 2020). Achieving environmentally friendly management habits in the hospitality industry requires effective leadership behaviors (Zheng et al., 2021). When talking about the ways to promote sustainability, researchers suggest that one of the enablers of sustainable development is responsible leadership (Rafiq et al., 2024; James and Priyadarshini, 2021). Responsible leaders have an essential role in ensuring sustainability by considering wider stakeholders' interests in their decisions, including future generations, thereby supporting environmental initiatives (Miska and Mendenhall, 2018). Additionally, responsible leadership merges concepts of social responsibility with specific leadership approaches (Maak and Pless, 2006), highlighting the need to balance economic, social, and environmental priorities. These leaders demonstrate ethical behavior, guiding their teams toward ethical practices. Their actions foster sustainable organizational growth, emphasizing environmental, social, and governance (ESG) performance (Miska et al., 2014; Székely and Knirsch, 2005).

While previous research links responsible leadership to firm performance, its impact on environmental performance has received limited empirical attention (Afsar et al., 2020). We argue that responsible leadership is crucial for fostering pro-environmental behavior among employees in the hospitality sector. It serves as a key driver of such behavior by prioritizing environmental concerns (Miska et al., 2014; Székely and Knirsch, 2005), potentially influencing staff through the cultivation of environmental organizational culture.

In this study, we examine responsible leadership as an independent antecedent to both environmental performance and organizational green culture within the hospitality industry. In the hotel sector, different leadership styles were treated as independent variables, exploring their contribution to organizational sustainable performance (Piwowar-Sulej and Iqbal, 2023). Prior research investigated the effects of green leadership constructs e.g. green inclusive leadership (Aboramadan et al., 2022), green servant leadership (Faraz et al., 2021) on sustainable outcomes such as green human resources management (Patwary et al., 2023; Darvishmotevali and Altinay, 2022) and green creativity (Arici and Uysal, 2022) in the hotel industry, however, the effects of responsible leadership on green organizational performance is still lacking. Only, a few studies investigated responsible leadership as a core antecedent that promotes eco-friendly work outcomes within the hospitality sector (Wang et al., 2024; Freire and Gonçalves, 2021). Prior studies have largely neglected the effects of responsible leadership on environmental performance, concentrating instead on other leadership styles such as transformational and agile leadership (Parker et al., 2015). Hence, there is a need to understand how responsible leadership affects environmental behavior in the hospitality setting.

Given the limited indication of the impacts of responsible leadership on green outcomes of organizations, we expand the current knowledge on one of the least noticed leadership styles i.e. responsible leadership on environmentally friendly management practices in the hotel sector. Accordingly, we build and validate a conceptual research model in which we employ responsible leadership as an independent variable examining its effects on environmental performance and organizational green culture. We also investigate the mediating effect of organizational green culture on the relationship between responsible leadership and environmental performance. In our model, we test whether the employees' eco-friendly behavior moderates the mediation effect on environmental performance and organizational green culture. Hence, this research aims to respond to the question of to what extent responsible leadership affects green organizational outcomes within the hotel sector.

Utilizing a novel research model (See Fig. 1 below) to address the research question, this paper begins with an introduction and five literature-derived hypotheses. We then provide methods and findings of our study. We discuss the findings and demonstrate the implications of our research. We conclude the present study after suggesting the research limitations and providing future directions for researchers.

## 2. Reviewing the literature and hypotheses development

### 2.1. Responsible leadership

Leaders navigate a dynamic, rapidly changing, intricate, and competitive business landscape, demanding not only financial success but also a commitment to corporate social responsibility (CSR) (Maak and Pless, 2006; Voegtlin et al., 2012). To address these challenges, Maak and Pless (2006) introduced the concept of responsible leadership, integrating leadership and CSR literature. While traditional leadership theories focus on leaders' relationships with internal followers, such as ethical, transformational, and servant leadership, responsible leadership extends its reach to cultivate trustworthy and sustainable connections with various stakeholders and the environment (Miska and Mendenhall, 2018; Pless and Maak, 2011).

Responsible leaders exemplify ethical conduct, guiding their followers to adopt the right approach. Their ethical actions contribute to the sustainable development of organizations, emphasizing ESG performance (Miska et al., 2014; Székely and Knirsch, 2005). While previous research links responsible leadership to firm performance, its impact on pro-environmental behavior has received limited empirical attention (Afsar et al., 2020). We argue that responsible leadership is crucial for fostering pro-environmental behavior among employees. It serves as a key driver of such behavior by prioritizing environmental concerns (Miska et al., 2014; Székely and Knirsch, 2005), potentially influencing employees through the cultivation of environmental

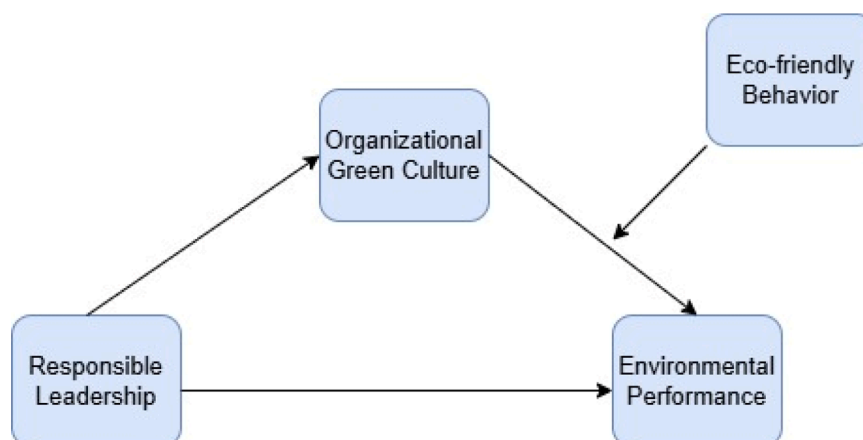


Fig. 1. Research model.

organizational culture.

According to Voegtlin (2011), responsible leadership, emphasizing accountability, includes moral decision-making, fostering trust, promoting sustainable development, and making environmentally aware choices. Responsible leadership represents a leadership style where leaders weave stakeholder relationships, addressing gaps in theory and practical leadership challenges (Maak and Pless, 2006). Consequently, responsible leadership has gained significant research attention, evolving into a necessary and extensively studied leadership style. Numerous studies have explored its effectiveness, particularly concerning employee behaviors. For example, Miska et al. (2014) suggested that employee perceptions of CSR and their commitment to citizenship behaviors are influenced by responsible leadership.

Following stakeholder theory, leaders exhibiting a strong commitment to responsible leadership have the potential to reinforce a company's engagement in various social responsibility practices, including environmental protection and community service. This, in turn, can elevate corporate reputation and enhance organizational legitimacy (Javed et al., 2020). Internally, when a leader proves a highly responsible leadership level, employees perceive that their needs are acknowledged and met. Consequently, they align their personal development with the organization's long-term growth, gaining a more precise and profound understanding of the organization's environmental practices. This heightened understanding contributes to improved recognition of the organization, thereby further bolstering organizational legitimacy (Voegtlin et al., 2012).

Stakeholder theory emphasizes that, while prioritizing the interests of shareholders, companies must also cultivate positive relationships with various stakeholders, including suppliers, employees, customers, industry competitors, government entities, and social institutions (Tantalo and Priem, 2016). Sustainable development resources from stakeholders are only accessible when companies address the needs of these stakeholders (Lee and Raschke, 2020). Consequently, businesses are required to address a broader range of concerns raised by stakeholders alongside meeting economic interests. This approach ensures that the expectations of stakeholders are fulfilled to the maximum extent possible.

## 2.2. Responsible leadership and environmental performance

Responsible leadership happens when a leader makes sustainable business decisions which consider wider stakeholder engagement and balance the interests of the various stakeholders (Maak et al., 2016). Responsible leadership transcends the conventional dualistic leadership dynamic between leaders and subordinates, extending to include relationships between leaders and all stakeholders of the organization. Its objective is to establish and cultivate a sustainable trust relationship with these stakeholders and coordinate efforts toward the objective of sustainable development (Maak and Pless, 2006). Responsible leadership has emerged as a key factor in organizational success, not only financially but also for broader societal and environmental concerns (Javed et al., 2020). As organizations increasingly recognize their role in shaping the world beyond profit margins, responsible leadership has gained prominence. Responsible leadership is stakeholder-oriented and intends to achieve a broader scope of sustainable development (Liao and Zhang, 2020). The strategy-maker attitude towards environmental issues is a key factor affecting companies' environmental performance. In this context, environmental performance, characterized by a commitment to sustainable practices, has become a focal point for businesses aiming to align their operations with ecological considerations. While executing environmental initiatives, responsible leadership practice not only secures employees' acknowledgement but also facilitates their effective adoption (Pless, 2007).

A very limited number of studies have taken responsible leadership as an independent variable (Piwowar-Sulej and Iqbal, 2023). Less research has explored the link between responsible leadership and

organizational outcomes, including environmental performance (e.g., Ur Rehman et al., 2023, Liao and Zhang, 2020). Responsible leadership encompasses behaviors and decision-making that prioritize ethical, social, and environmental considerations. Leaders who exhibit responsibility are expected to guide their organizations towards sustainable practices, reducing negative impacts on the environment and contributing positively to society (Knirsch, (2005))

Several theoretical frameworks support the notion that responsible leadership positively influences environmental performance. Following upper-echelon theory, for example, corporate strategic decision-making reflects leaders' perceptions and experiences who inspire and motivate their teams towards a shared vision (Hambrick and Mason, 1984). Such a culture is likely to extend to environmental practices, as organizations under responsible leaders may be more inclined to adopt sustainable processes. Similarly, the stewardship theory (Davis et al., 1997) indicates that leaders acting as stewards of their organizations and the environment will prioritize long-term sustainability over short-term gains. This stewardship orientation is expected to lead to better environmental practices and, consequently, enhanced environmental performance. Building upon the existing literature, we hypothesize that responsible leadership positively affects environmental performance within organizations. Specifically, we propose that organizations led by individuals who exhibit responsible leadership behaviors will prove a higher level of commitment to environmentally sustainable practices.

**H1. Responsible leadership has a positive effect on environmental performance.**

## 2.3. Responsible leadership and organizational Green culture

Responsible leadership has become a central focus in organizational studies, emphasizing the need for leaders to extend their responsibilities beyond traditional business metrics to encompass social and environmental concerns (Miska and Mendenhall, 2018). One critical aspect of this expanded responsibility is the cultivation of an organizational green culture within organizations. Organizational green culture refers to the shared values, beliefs, and practices that prioritize environmental sustainability and stewardship. Ur Rehman et al. (2023) confirm that responsible leadership positively affects environmental management practices. Leaders who prioritize social and environmental responsibility will shape organizational cultures that foster eco-friendly practices. This may include initiatives such as reducing carbon footprint, waste reduction, and integrating sustainable practices into daily operations. Responsible leaders create a culture within organizations that values environmental stewardship, leading to improved environmental performance. Responsible leaders recognize the true capabilities of their team members and inspire them to assume responsibility as valuable contributors to the organization (Zhao and Zhou, 2019).

The upper-echelon theory argues that leaders who inspire and motivate their followers can influence the shared values and norms of the organization (Hambrick and Mason, 1984). In the context of responsible leadership, this influence is expected to extend to environmental values and practices. We anticipate that responsible leaders will implement policies, procedures, and initiatives to create an organizational green culture that contributes to a reduction in environmental impact, ultimately leading to improved environmental performance metrics.

**H2. Responsible leadership has a positive effect on organizational green culture.**

## 2.4. The mediating role of organizational Green culture

Responsible leadership effects on organizational outcomes have posed challenges. Responsible leadership, characterized by ethical decisions, a commitment to ESG responsibility, and a focus on long-term sustainability, is expected to influence organizational outcomes and

may prioritize the strategic implementation of CSR when making decisions that affect stakeholders and their impact on society (Waldman and Siegel, 2008). Two possible influential pathways have been proposed including knowledge and psychological biases for responsible leadership to influence organizational outcomes (Doh and Quigley, 2014). These viewpoints highlight the concept of responsible leadership and emphasize the need to explore its influence on organizational environmental outcomes through various mechanisms (Ur Rehman et al., 2023).

Organizational culture, on the other hand, represents the shared values, beliefs, and behaviors within an organization. Organizational culture plays an essential role in translating leadership intentions into organizational practices. Specifically, an organizational green culture within an organization reflects a collective commitment to environmentally sustainable practices. Responsible leaders, by inspiring and motivating their followers, are posited to shape the cultural landscape of their organizations. Responsible leadership, being a form of transformational leadership, is likely to influence organizational green culture.

To elaborate on the theoretical mechanism through which organizational green culture mediates the relationship between responsible leadership and environmental performance, it is crucial to articulate its core dimensions and theoretical underpinnings. Drawing on upper-echelon theory (Hambrick and Mason, 1984) and organizational culture theory (Schein, 1990), green culture operates as a conduit through which leadership intent is embedded into organizational routines and norms. Specifically, green culture comprises two interrelated components: shared environmental values and embedded green practices (García-Machado and Martínez-Ávila, 2019; Yeşiltaş et al., 2022). The former reflects collective beliefs that prioritize ecological responsibility and reduce resistance to change (Gregory et al., 2009), while the latter translates these values into actionable routines—such as energy conservation, waste minimization, and sustainable procurement (Fernández et al., 2003; Hanna et al., 2000). For example, a culture emphasizing "green innovation" (Imran and Jingzu, 2022) encourages employees to propose eco-efficient solutions, directly improving resource management. This dual focus on values and practices ensures that responsible leadership's influence permeates daily operations, making green culture a critical mediator.

Responsible leadership fosters this cultural infrastructure by aligning strategic objectives with sustainability, modeling ethical behavior, and engaging stakeholders beyond the organization's boundaries (Maak and Pless, 2006; Voegtlin, 2011). From the upper-echelon perspective, leaders' values and cognitive schemas shape organizational priorities, including the allocation of resources toward environmental goals. Concurrently, organizational culture theory suggests leaders actively construct cultural norms through symbolic actions and policy frameworks, embedding sustainability into the organizational fabric (Schein, 1990). This dual influence ensures that responsible leadership not only promotes green values but institutionalizes them as consistent practices. For instance, cultures that emphasize green innovation empower employees to propose eco-efficient solutions (Imran and Jingzu, 2022), while training and incentive systems further reinforce sustainable behavior. In this way, green culture mediates leadership's impact by transforming ethical vision into sustained, organization-wide environmental performance (Fernández et al., 2003; García-Machado and Martínez-Ávila, 2019).

Additionally, the literature lacks studies examining organizational green culture as a crucial mechanism linking responsible leadership to environmental outcomes at the organizational level. The mediating role of organizational green culture in the relationship between responsible leadership and environmental performance is grounded in the idea that a culture that values environmental sustainability will act as a conduit through which responsible leadership practices translate into tangible outcomes. Hence, we used organizational green culture as a mechanism to hypothesis as follows:

**H3.** *The effect of responsible leadership on environmental performance is mediated by organizational green culture.*

## 2.5. Organizational green culture and environmental performance

The influence of organizational culture on outcomes has become a central theme in organizational studies (See Gregory et al., 2009 and Berson et al., 2008), but very few in the context of CSR. Schein (1990) characterized organizational culture as a set of fundamental assumptions crafted, discovered, or evolved by a specific group as it learns to address challenges related to external adaptation and internal integration. Thus, organizational culture is the shared values, beliefs, and practices, and is recognized as a key determinant of how organizations respond to and prioritize environmental issues. An organizational green culture within an organization reflects a collective commitment to sustainable practices, eco-friendly behaviors, and a heightened awareness of environmental impacts. This culture is expected to shape employees' attitudes and behaviors.

The organizational strategic vision set out by responsible leaders shapes organizational culture, as a motivation for employees' involvement in environmental issues (Shrivastava, 1995) and as a communication mechanism that enables improving environmental performance (Hanna et al., 2000). Research in the organizational culture literature suggests that a positive organizational green culture can act as a motivation for the implementation of environmentally sustainable practices (Fernández et al., 2003). When an organization's culture places a premium on environmental stewardship, employees are more likely to embrace and enact environmentally conscious behaviors, such as waste reduction, energy efficiency, and sustainable sourcing. An organizational green culture is posited to guide decision-making towards choices that prioritize ecological considerations, contributing to improved environmental performance over time.

**H4.** *Organizational green culture has a positive effect on environmental performance.*

## 2.6. Eco-friendly behavior, environmental performance and organizational Green culture

The previous hypothesis suggests that organizations fostering a strong organizational green culture will exhibit higher levels of environmental performance. Specifically, organizational green culture is expected to influence employees' attitudes and behaviors, encouraging them to adopt sustainable practices and contributing to the organization's overall commitment to environmental stewardship. Responsible leaders aim to discern the true potential of their team members, motivating them to assume responsible roles within the organization (Zhao and Zhou, 2019). Similarly, responsible leaders enhance employee motivation, leading to a transformation of their self-concepts and personal standards aligned with organizational goals and needs (Han et al., 2019). While prior studies have predominantly connected responsible leadership to various attitudinal and behavioral outcomes among employees (Voegtlin et al., 2012), limited attempts have been made to establish links between Eco-friendly behavior as organization-level factors and organizational green culture concerning multifaceted company performance. Consequently, it would be valuable to explore the intermediary organizational elements in the relationship between responsible leadership, organizational green culture and overall company performance.

Organizational culture creates a framework within which employees operate. An organizational green culture is characterized by shared values, norms, and practices that prioritize sustainability and responsible environmental stewardship. Within this cultural context, employees are expected to exhibit environmentally conscious behaviors in their daily activities. Eco-friendly behavior can have a significant impact on the overall environmental performance of an organization, when



employees more actively embrace and enact environmentally friendly practices in their jobs, such as reducing energy consumption, minimizing waste, and participating in eco-friendly initiatives, it contributes to the organization's broader commitment to sustainability (Zhao and Kou, 2018).

Moreover, research in organizational psychology highlights the role of employees as agents of change within organizations. Individuals who engage in pro-environmental behavior may influence their colleagues, creating a positive feedback loop within the organizational culture that further enhances environmental performance. Numerous studies have indicated that employees are more inclined to exhibit pro-environmental behaviors when they possess knowledge and awareness regarding environmental issues, ecological deterioration, and a perceived sense of behavioral control (e.g., Crossman, 2011; Gärling et al., 2003). Kollmuss and Agyeman (2002) contended that a sense of calling and workplace membership can elicit environmental passion and emotional involvement. However, this impact is less pronounced when employees lack awareness about the causes and effects of environmental degradation, and when they do not consider the non-immediacy of ecological destruction as a matter to be addressed.

Organizational green culture establishes a foundational framework of shared norms and values that signal the strategic importance of sustainability (Schein, 1990). However, the translation of these normative commitments into measurable environmental performance hinges on the active engagement of employees in eco-friendly behaviors. Such behaviors act not merely as complementary practices but as essential mechanisms through which green culture is enacted. By operationalizing abstract cultural principles into concrete actions—such as energy conservation, waste reduction, and green innovation—employees serve as the conduits through which strategic sustainability goals are realized (Boiral and Paillé, 2012; Paillé et al., 2014). This alignment between cultural values and individual behavior fosters behavioral congruence, wherein the internalization of green norms at the employee level enhances the efficacy of green culture in producing environmental outcomes (Daily et al., 2009). In essence, a culture of sustainability, no matter how robust, remains inert without employee-level activation. Employees are not passive recipients of organizational culture—they are the agents who convert strategic intent into routine, performance-enhancing action (Robertson and Barling, 2013).

The moderating effect of eco-friendly behavior on the relationship between green culture and environmental performance is best understood through social cognitive theory (Bandura, 1986) and the theory of planned behavior (Ajzen, 1991). When employees exhibit high levels of eco-conscious conduct, they reinforce organizational norms through consistent, observable enactment of green practices. This behavioral reinforcement contributes to a dynamic feedback loop, where cultural norms and personal behaviors co-evolve, leading to sustained ecological performance (Kim et al., 2019; Norton et al., 2014). As social learning theory suggests, behaviors that are normatively endorsed and visibly rewarded gain momentum within peer networks, amplifying their effect (Ones and Dilchert, 2012). Consequently, eco-friendly behavior does not function independently from green culture—it enhances the salience, visibility, and impact of that culture across the organization. If enacted in isolation, eco-friendly actions may lack organizational alignment or institutional support, undermining their scalability and permanence. Thus, it is through their synergy that culture and behavior yield superior environmental outcomes. While green culture sets the stage for sustainable transformation, eco-friendly behavior determines the extent to which its potential is realized (Zibarras and Coan, 2015).

Understanding the regulating effect of eco-friendly behavior on the environmental performance of organizational green culture is crucial. It grants insights into the mechanisms through which individual actions contribute to broader organizational outcomes, shedding light on the interplay between organizational culture and employee behavior in the context of environmental sustainability.

**H5.** *Eco-friendly behavior has a regulating effect on the environmental performance of organizational green culture.*

### 3. Methods

To test our research model (See Fig. 1 below), we collected data from 572 full-time employees and managers working in four- and five-star hotels in Antalya, Türkiye. First, the researcher approached the top management of hotels if they would allow to carry out the study at their hotels. After obtaining approval from top managers, convenience sampling was utilized, and 850 questionnaires were distributed to hospitality industry employees and managers working in various departments. The drop-off and pick-up method was used to raise the response rate. We also provided a cover letter explaining the aim of the study and assurance of the anonymity and confidentiality of responses. It was also instructed that the filled questionnaires should be inserted into a sealed envelope. The questionnaire was translated into Turkish and had two sections i.e. demographics and the scales of responsible leadership, environmental performance, organizational green culture and eco-friendly behavior. After distributing the questionnaires, the researcher collected 591 surveys in July 2023. 19 out of 591 completed surveys were not analyzable due to either missing or repetitive answers. Overall, 572 valid questionnaires were gathered for analysis. The demographic characteristics of respondents are shown in Table 1.

When Table 1 is analyzed, it is observed that 55.9 % of the participants are female, 44.1 % are male; 45.6 % are married, 54.4 % are single; 19.9 % are 18–25 years old, 34.6 % are 26–33 years old, 27.4 % are 34–41 years old, 13.6 % are 42–49 years old, and 4.4 % are 50 years old and above. It is observed that 6.8 % of the participants are primary-secondary school graduates, 22.7 % are high school graduates, 35.3 % are associate degree graduates, 28.5 % are undergraduates, 6.6 % are postgraduate graduates; 30.1 % had 1–5 years of professional service, 37.4 % had 6–10 years, 20.3 % had 11–15 years, and 12.2 % had 16 years or more. It is observed that 12.9 % of the participants work in procurement, 13.8 % in marketing, 13.3 % in accounting, 14.3 % in front office, 16.1 % in restaurant and kitchen, 8.0 % in housekeeping, 21.5 % in other departments; 13.5 % worked in managerial positions

**Table 1**  
Demographic characteristics.

		N	%
Gender	Female	320	55,9
	Male	252	44,1
Marital Status	Married	261	45,6
	Single	311	54,4
Age	18–25	114	19,9
	26–33	198	34,6
	34–41	157	27,4
	42–49	78	13,6
	50 years and older	25	4,4
Educational Status	Primary School-Secondary School	39	6,8
	High School	130	22,7
	Associate's Degree	202	35,3
	Bachelor's Degree	163	28,5
	Postgraduate	38	6,6
Duration of Professional Service	1–5 Years	172	30,1
	6–10 Years	214	37,4
	11–15 Years	116	20,3
	16 years and more	70	12,2
Department	Procurement	74	12,9
	Marketing	79	13,8
	Accounting	76	13,3
	Front Office	82	14,3
	Restaurant and Kitchen	92	16,1
	Housekeeping	46	8,0
	Other	123	21,5
Workplace position	Manager	77	13,5
	Personnel	495	86,5

and 86.5 % in personnel positions.

### 3.1. Measures

All scales utilized for this research were unidimensional and they were gauged by a five-Likert Scale (from 1 =Strongly Disagree to 5 =Strongly Agree). The responsible leadership scale was assessed using five items developed by [Özkan and Üzümlü's scale \(2021\)](#). The sample items follow as: "My manager involves relevant stakeholders in the decision-making process. "My manager evaluates the expectations of different stakeholders before making a decision." The Cronbach alpha coefficient was 0.901 for this scale. To measure Environmental Performance, we used the scales which was developed by Kim et al. (2019a, b) and modified by [Nisar et al. \(2021\)](#). This scale consists of 7 items. The sample items are: "Our hotel has reduced waste." "Our hotel has conserved water usage". The Cronbach alpha coefficient was 0.902. The Eco-friendly Behavior scale was measured using the 6-item scale developed by Kim et al. (2019a). The sample items are "I sort and recycle the garbage in the workplace" and "I pay close attention to water leaks". The Cronbach alpha coefficient was 0.895. The Organizational Green Culture was gauged using a 6-item scale developed by [Wang \(2019\)](#) and validated by [Yeşiltaş et al. \(2022\)](#). The sample items follow as "Our hotel makes a concerted effort to make every employee understand the importance of environmental preservation." Our hotel links environmental objectives with our other corporate goals." The Cronbach alpha coefficient was 0.883. The translation back translation method was used for all our scales except responsible leadership. The translation technique proposed by [Brislin \(1970\)](#) was followed within the process of translation.

## 4. Analysis

Descriptive analysis was conducted to outline and compare demographic information, including marital status, occupation, age, and education level. To verify the construct validity of the study's scales, confirmatory factor analysis was employed. Cronbach's alpha was calculated for each scale to evaluate the reliability of the scores. Before formulating hypotheses, a correlation matrix was developed to display variable relationships, and multicollinearity was assessed.

In addition, mediation and moderated mediation models were examined using [Hayes, \(2013\)](#) PROCESS macro, incorporating bootstrapping to obtain a 95 percent bootstrap confidence interval. The PROCESS analysis included one independent variable (responsible leadership), one mediator (organizational green culture), one moderator (eco-friendly behavior), and one dependent variable (environmental performance).

To test the hypotheses, [Hayes, \(2013\)](#) mediation analysis method was used. First, a mediation analysis (model 4 in the PROCESS macro) was conducted, followed by a moderated mediation analysis (model 14 in the PROCESS macro).

### 4.1. Confirmatory factor analysis

To test the hypotheses, confirmatory factor analysis was initially conducted to assess the data's reliability and validity. Convergent and discriminant validity analyses were subsequently performed to confirm the measures' validity and reliability. Composite Reliability (CR) indicates the model's structural reliability, with CR values required to be 0.70 or above ([Doğan, 2019](#)). Convergent validity was assessed through Average Variance Extracted (AVE) values, which should exceed 0.50 ([Doğan, 2019](#)). However, if a factor's CR is greater than 0.60, an AVE below 0.50 is considered acceptable ([Hair et al., 1998](#)). Reliability for each scale was also evaluated using Cronbach's alpha analysis.

Examining [Table 2](#) reveals that the scales used in the study demonstrate validity and reliability, with Composite Reliability (CR) values for all variables in the research scale exceeding 0.70, indicating construct

**Table 2**  
Measurement model.

Factor	Factor Statements	Loading	CA	CR	AVE
Responsible leadership	My manager is aware of the expectations of different stakeholders.	0798	0901	0888	0612
	My manager takes into account the consequences of his/her decisions for relevant stakeholders.	0792			
	My manager involves relevant stakeholders in the decision-making process.	0781			
	My manager assesses the expectations of different stakeholders before making a decision.	0759			
	My manager tries to reach a consensus among relevant stakeholders.	0782			
	Our hotel reduces the amount of waste	0762			
Environmental performance	Our hotel uses water sparingly	0748	0902	0912	0595
	Our hotel uses energy sparingly	0783			
	Our hotel reduces the purchase of non-renewable materials, chemicals and components.	0770			
	Our hotel takes important steps to reduce overhead costs	0787			
Eco-friendly behaviors	Our hotel works to achieve a better position in the market	0770	0895	0862	0475
	Our hotel helps to enhance its reputation.	0782			
	I turn off electrical appliances such as computers, TV screens, etc. before leaving work.	0739			
	When I leave a room where no one is present, I turn off the light.	0775			
	I sort and recycle garbage at work.	0638			
	I use materials at work economically	0670			
	I use materials repeatedly at work	0682			
	I restrict water use in the toilet to save water	0535			
	I watch out for water leaks	0754			
	Our hotel makes a concerted effort to ensure that every employee understands the importance of protecting the environment.	0636			
Organizational green culture	Our hotel has a clear policy of promoting environmental awareness in all areas.	0661	0883	0840	0468
	Our hotel carries out activities with a high priority on environmental protection	0657			
	Protecting the environment is a central	0696			

(continued on next page)

**Table 2** (continued)

Factor	Factor Statements	Loading	CA	CR	AVE
	corporate value at our hotel				
	Our hotel links its environmental objectives with other corporate objectives.	0720			
	Our hotel develops products and processes that minimize environmental impact.	0729			

Measurement model fit statistics: [ $\chi^2$ /sd (1.787); RMSEA (0.037); NFI (0.944); RFI (0.937); CFI (0.974); GFI (0.936)]

reliability for the factors and model. Additionally, the AVE value meets the required threshold, confirming the model's convergent validity. Cronbach's alpha values for each scale structure are above 0.70, signifying adequate internal consistency among scale items. The measurement model fit indices, including  $\chi^2$ /sd, RMSEA, NFI, RFI, CFI, and GFI, also show that the model fits well.

Analyzing Table 3 shows that the highest correlation matrix value is 0.583, with other values significantly lower. There is no substantial correlation ( $>0.85$ ) between the independent variables, indicating an absence of multicollinearity risk. Consequently, discriminant validity is confirmed (Hair et al., 2019). Furthermore, to assess the presence of potential multicollinearity among the independent variables, Variance Inflation Factor (VIF) values were examined. According to O'Brien (2007), a VIF value below 5 indicates the absence of multicollinearity. The VIF value between Responsible Leadership and Environmental Performance was calculated as 1.153; between Responsible Leadership and Organizational Green Culture, 1.515; between Responsible Leadership and Eco-friendly Behavior, 1.385; between Environmental Performance and Organizational Green Culture, 1.175; between Environmental Performance and Eco-friendly Behavior, 1.124; and between Organizational Green Culture and Eco-friendly Behavior, 2.320. As all VIF values were well below the critical threshold of 5, it was concluded that multicollinearity did not pose a concern in the present study. Accordingly, discriminant validity was established.

#### 4.2. Mediation and moderation analyses

After confirming the validity and reliability of the data collected in the study, Hayes, (2013) PROCESS macro was utilized to analyze the mediation and moderated mediation models, employing bootstrapping to generate 95 percent confidence intervals. First, the mediation relationship (model 4 in the PROCESS macro) was reported, followed by the moderated mediation (model 14 in the PROCESS macro). Next, the significance of the direct effect, indirect effect, and moderated mediation was evaluated using the bootstrapping method to assess mediation.

Analyzing Table 4 reveals that responsible leadership positively influences organizational green culture, with a significant effect size of  $\beta = 0.583$  ( $p < 0.05$ ). Responsible leadership also has a positive impact on environmental performance, with a total effect of  $\beta = 0.365$  ( $p < 0.05$ ), and a direct positive effect on environmental performance with  $\beta = 0.212$  ( $p < 0.05$ ). The mediation effect refers to the influence of an intermediary variable on the relationship between the independent and dependent variables. While the total effect of responsible leadership on

**Table 4**

Mediation analysis.

Factor	B	SE	t	p	R	R2
Responsible Leadership → Organizational Green Culture	0583	0034	17,121	0000	0583	0340
Responsible Leadership + Organizational Green Culture → Environmental Performance	0212 0262	0047 0047	4532 5602	0000 0000	0422	0178
Responsible Leadership → Environmental Performance	0365	0039	9349	0000	0365	0133

environmental performance is  $\beta = 0.365$  (Table 4), this effect decreases to  $\beta = 0.212$  due to the mediating influence of organizational green culture (Table 4). Despite this reduction in effect size, the significant positive impact of responsible leadership on environmental performance ( $p < 0.05$ ) indicates that organizational green culture partially mediates the relationship between responsible leadership and environmental performance.

#### 4.3. Regulatory analysis

It is observed that organizational green culture has a mediating effect on the effect of responsible leadership on environmental performance. The regulating effect of eco-friendly behavior on the effect of organizational green culture on environmental performance was tested using the PROCESS macro Model 14.

When Table 6 is examined, it is observed that organizational green culture has a positive effect on environmental performance at a significance level of  $\beta = 0.226$ ;  $p < 0.05$ . The interaction variable has a positive effect on environmental performance at a total significance level of  $\beta = 0.119$ ;  $p < 0.05$ . In the relationship between organizational green culture and environmental performance, eco-friendly behavior has a regulating effect.

When Table 7 is examined, the effect of organizational green culture on environmental performance in the case of highly eco-friendly behavior is significant (indirect effect = 0.353;  $p = 0.000$ ; LL 95 % CI = 0.218; UL 95 % CI = 0.487). In the case of low employee environmental behavior, the effect of organizational green culture on environmental performance is not significant (indirect effect = 0.117;  $p = 0.066$ ; LL 95 % CI = -0.014; UL 95 % CI = 0.247). As a result, when eco-friendly behavior is average or high, it plays a regulating role in the effect of organizational green culture on environmental performance.

When the slope graph is examined, the effect of organizational green culture on environmental performance varies according to the level of eco-friendly behavior. As a result, the effect of organizational green

**Table 5**

Bootstrap results for indirect effect (Indirect effect of responsible leadership on environmental performance).

Factor	Effect	BootSE	BootLL 95 % CI	BootUL 95 % CI
Organizational Green Culture	0153	0040	0077	0232

**Table 3**

Correlation matrix.

		Responsible Leadership	Environmental Performance	Organizational Green Culture	Eco-friendly Behavior
Responsible Leadership	Correlation Coefficient	1			
Environmental Performance	Correlation Coefficient	,365**	1		
Organizational Green Culture	Correlation Coefficient	,583**	,385**	1	
Eco-friendly Behavior	Correlation Coefficient	,528**	,332**	,750**	1

**Table 6**  
Regulatory analysis (Outcome Variable Environmental Performance).

Factor	B	SE	t	p
Responsible Leadership -> Environmental Performance	0207	0047	4415	0000
Organizational Green Culture -> Environmental Performance	0226	0060	3759	0000
Interaction Term (Organizational Green Culture * Eco-friendly Behavior) -> Environmental Performance	0119	0031	3884	0000

R2: 0201

**Table 7**  
Bootstrap analysis of importance test on Regulatory-Intermediation effects (Outcome Variable Environmental Performance).

Editor: Eco-friendly Behavior	Effect	SE	t	p	LL 95 % CI	UL 95 % CI
High	0353	0069	5141	0000	0218	0487
Average	0226	0060	3746	0000	0107	0344
Low	0117	0066	1756	0080	−0014	0247

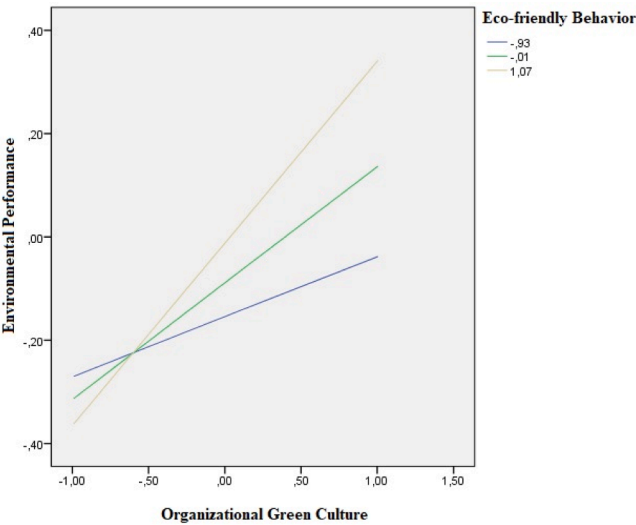


Fig. 2. Regulatory impact graph.

culture on environmental performance increases as eco-friendly behavior increases.

Hypotheses	Conclusion
H <sub>1</sub> Responsible leadership has a positive effect on environmental performance	Supported
H <sub>2</sub> Responsible leadership has a positive effect on organizational green culture.	Supported
H <sub>3</sub> The effect of responsible leadership on environmental performance is mediated by organizational green culture.	Supported
H <sub>4</sub> Organizational green culture has a positive effect on environmental performance.	Supported
H <sub>5</sub> Eco-friendly behavior moderates the mediation effect on environmental performance and organizational green culture.	Supported

5. Discussion

Drawing on stakeholder theory, upper-echelon theory, and stewardship theory, we attempted to test a moderated mediation research model to examine the mediating effect of environmental green culture on the relationship between responsible leadership and environmental performance. Further, we investigated to what extent eco-friendly

behavior moderates the mediating effect on the relationship between environmental performance of organizational green culture.

First, our findings suggested that responsible leadership has a positive influence on environmental performance. This implies that when responsible leadership behaviors are demonstrated in organizations, the environmental performance of these organizations is higher. This aligns with the theoretical principles based on stewardship theory. The findings support previous studies in hospitality industry literature which elucidated that responsible leadership is positively associated with the environmental performance of organizations (Liao and Zhang, 2020). Second, the results suggested that responsible leadership has a positive effect on organizational green culture. As expected, the findings indicated that responsible leaders can create a culture within organizations that prioritizes environmental concerns. This is consistent with the theoretical underpinnings embedded with the upper-echelon theory which argues leaders can affect the shared values and norms of organizations. In this context, responsible leaders can positively influence organizational green culture i.e. environmental values and practices. These results were in line with previous research in hospitality literature such as Ur Rehman et al. (2023).

Third, our results suggested that organizational green culture mediated the influence of responsible leadership on environmental performance. This implies that a strong organizational green culture enhances the effectiveness of responsible leadership initiatives by creating an environment where sustainable practices are valued, encouraged, and integrated into everyday operations, ultimately leading to improved environmental performance. These findings are congruent with prior studies (Aggarwal and Agarwala, 2023) which found that green organizational culture plays an intervening role in the relationship between green human resources practices and environmental performance. Furthermore, our results suggested that green organizational culture has a positive influence on environmental performance. This means the presence of an organizational green culture within an organization leads to improved environmental performance. In other words, nurturing an organizational green culture creates a conducive environment for promoting sustainable practices and initiatives, conclusively leading to enhanced environmental performance for the organization. Our findings were also in accord with previous research (García-Machado and Martínez-Ávila, 2019; Imran and Jingzu, 2022) which found organizational green culture is a significant predictor of the environmental performance of organizations. Moreover, our results suggested that eco-friendly behavior moderates the mediation effect on environmental performance and organizational green culture. This implies that the impact of eco-friendly behavior influences how the relationship between environmental performance and organizational green culture unfolds. To explain further, we found that the strength and direction of the mediation effect between environmental performance and organizational green culture vary depending on the level of eco-friendly behavior exhibited by employees within organizations. Employees who engage in higher levels of eco-friendly behavior are more likely to contribute positively to the development and reinforcement of organizational green culture. This outcome is consistent with previous research (e.g. Ebrahimi et al., 2021) which showed eco-friendly as a moderator.

5.1. Theoretical implications

This research adds to the literature in multiple ways. First, even though research examining green leadership behaviors in the hospitality setting has grown over the last years for instance, green transformational leadership (Mittal and Dhar, 2016) green inclusive leadership (Aboramadan et al., 2022), the investigation of responsible leadership remained relatively unnoticed. Second, hospitality literature indicates that there is not much research addressing responsible leadership as a predictor hence, our paper is one of the few studies that investigated the effects of responsible leadership on environmental performance, green organizational culture and eco-friendly behavior's



moderation mechanism on green organizational culture's mediation effect. Third, we contribute to theory by responding to recent calls from scholars who ask to extend research on the impacts of leadership behaviors associated with environmental concerns (Crucke et al., 2022). We have carried out this by examining responsible leadership in the hospitality industry as there is a scarcity of consequences of these leadership behaviors on green outcomes. Finally, we add to the extant literature with a novel research model, to our best knowledge, no study has investigated the above-mentioned variables together within an integrated model in the service sector in Türkiye.

## 5.2. Practical implications

Our findings offer notable suggestions for hospitality organizations. The present study demonstrated that tourism organizations should internalize a responsible leadership mindset. This is because responsible leaders advocate for environmentally friendly policies and foster a culture that values environmental responsibility. Furthermore, when hotel employees see their leaders actively promoting sustainability and environmental stewardship, they will be more likely to participate in green practices, suggest innovative solutions, and contribute to improving environmental performance. Also, we recommend recruiters of tourism organizations recognize the importance of responsible leadership. When they recruit leaders they should assess those leaders who demonstrate a commitment to sustainability through their actions, decisions, and communication, since they will serve as role models for employees and stakeholders. Moreover, we suggest that human resource departments should acknowledge leaders about why green practices are crucial to sustainability goals. Similarly, leader-specific training and learning programs should be organized by human resource departments for an awareness of green initiatives.

Our findings underlined that by integrating green principles into the organizational culture, responsible leaders help create a sense of purpose and shared commitment to sustainability among employees. We recommend HR departments of hospitality organizations shape their assessment appraisal systems around responsible leadership components, thereby, leaders will adopt an environmentally friendly philosophy. Finally, we advise that HR should launch a feedback system in which employees freely express their thoughts and suggestions about responsible leadership impacts.

## 5.3. Limitations and future research directions

Our study has its limitations like many other studies. First, since we used cross-sectional data, it is difficult to draw certain causal relationships based on the collected data. Therefore, we recommend future research to choose a longitudinal data collection approach to show causation between the variables. Second, we employed self-reported measures to examine variables within our research model as this way of collecting data may lead to possible biases. We suggest future studies to use multiple data sources to avoid potential biases. Third, we collected data from hotels in Türkiye, we advise future researchers to consider collecting data from multiple countries to compare the results of Türkiye. Finally, we investigated responsible leadership as the only independent variable in our research, future studies may consider examining other leadership types such as ethical leadership to assess its impact on environmental performance. Also, future researchers may investigate other intervening mechanisms, for instance, green creativity or green innovation as more research would highlight the indirect effects of underexplored constructs.

## 6. Conclusion

In this paper, we attempted to reveal the impact of responsible leadership on environmental performance and the mediating effect of organizational green culture on that relationship. We also examined to

what extent eco-friendly behavior moderates the mediation effect on environmental performance and organizational green culture. To achieve the aim of our study, five hypotheses derived from the literature were tested using data collected from 572 Turkish hotel employees. Our analysis with a means of Structural Equation Modeling suggested that there are significant relationships between the constructs. We found that responsible leadership positively affects environmental performance and organizational green culture has a mediating role in the relationship between responsible leadership and environmental performance. This implies that responsible leadership characterized by responsibility and sustainability positively influence the environmental performance of an organization. Furthermore, we showed that leaders who prioritize sustainability and environmental stewardship influence the development and maintenance of a green culture within an organization. To sum up, tourism organizations and hotels aiming to create a green culture within their organizations and ultimately lead a higher environmental performance should hire, train and develop their managers in the line of responsible leadership traits.

We encourage future work to explore the direct relationship between responsible leadership and eco-friendly behavior. This would require a multilevel design to disentangle individual behaviors from organizational outcomes, perhaps integrating social cognitive theory (Bandura, 1986) to examine how leaders' model green behaviors for employees. A more detailed examination could offer additional insights into how leadership simultaneously influences both cultural and behavioral dynamics within sustainable organizations (Robertson and Barling, 2013).

## Research ethics

We further confirm that any aspect of the work covered in this manuscript that has involved human patients has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript.

We confirm that the manuscript has been read and approved by all named authors.

## Intellectual property

We confirm that we have given due consideration to the protection of intellectual property associated with this work and that there are no impediments to publication, including the timing of publication, with respect to intellectual property. In so doing we confirm that we have followed the regulations of our institutions concerning intellectual property.

## Funding

No funding was received for this work. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## CRediT authorship contribution statement

**Yuce Huseyin:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Elbardan Hany:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Turkmenoglu Mehmet Ali:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Murat Ak:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

## Declaration of Competing Interest

No conflict of interest exists. We wish to confirm that there are no

known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

## Acknowledgement

The author(s) declare that no financial support was received for the research, authorship, and/or publication of this article.

## References

- Aboramadan, M., Crawford, J., Turkmenoglu, M.A., Farao, C., 2022. Green inclusive leadership and employee Green behaviors in the hotel industry: does perceived Green organizational support matter? *Int. J. Hosp. Manag.* 107, 103330. <https://doi.org/10.1016/j.ijhm.2022.103330>.
- Afsar, B., Maqsoom, A., Shahjehan, A., Afridi, S.A., Nawaz, A., Fazliani, H., 2020. Responsible leadership and employee's proenvironmental behavior: the role of organizational commitment, Green shared vision, and internal environmental locus of control. *Corp. Soc. Responsib. Environ. Manag.* 27 (1), 297–312.
- Aggarwal, P., Agarwala, T., 2023. "Relationship of Green human resource management with environmental performance: mediating effect of Green organizational culture". *Benchmark. Int. J.* 30 (7), 2351–2376.
- Ahmad, H., Yaqub, M., Lee, S.H., 2024. Environmental-, social-, and governance-related factors for business investment and sustainability: a scientometric review of global trends. *Environment, development and sustainability*, 26 (2), 2965–2987.
- Ajzen, I., 1991. The theory of planned behavior. *Organ. Behav. Hum. Decis. Process.* 50 (2), 179–211.
- Akram, U., Lavuri, R., Bilal, M., Hameed, I., Byun, J., 2024. Exploring the roles of Green marketing tools and Green motives on Green purchase intention in sustainable tourism destinations: a cross-cultural study. *J. Travel Tour. Mark.* 41 (4), 453–471.
- Arici, H.E., Uysal, M., 2022. Leadership, green innovation, and green creativity: A systematic review. *Serv. Ind. J.* 42 (5–6), 280–320.
- Aslaksen, H.M., Hildebrandt, C., Johnsen, H.C.G., 2021. The long-term transformation of the concept of CSR: towards a more comprehensive emphasis on sustainability. *Int. J. Corp. Soc. Responsib.* 6 (1), 11.
- Bandura, A., 1986. *Social foundations of thought and action*. Englewood Cliffs NJ 1986 (23–28), 2.
- Berson, Y., Oreg, S., Dvir, T., 2008. CEO values, organizational culture and firm outcomes. *J. Organ. Behav. Int. J. Ind. Occup. Organ. Psychol. Behav.* 29 (5), 615–633.
- Boiral, O., Paillé, P., 2012. Organizational citizenship behaviour for the environment: measurement and validation. *J. Bus. Ethics* 109, 431–445.
- Brislin, R.W., 1970. Back-translation for cross-cultural research. *J. CrossCult. Psychol.* 1 (3), 185–216.
- Crossman, J., 2011. Environmental and spiritual leadership: tracing the synergies from an organizational perspective. *J. Bus. Ethics* 103, 553–565.
- Crucke, S., Servaes, M., Kluijtmans, T., Mertens, S., Schollaert, E., 2022. Linking environmentally-specific transformational leadership and employees' Green advocacy: the influence of leadership integrity. *Corp. Soc. Responsib. Environ. Manag.* 29 (2), 406–420.
- Cvejić, I., Plešić, T., Bojanić, P., 2024. Engagement with future. *Gener. Unfulfilled Empathy. Topoi* 43 (1), 49–54.
- Daily, B.F., Bishop, J.W., Govindarajulu, N., 2009. A conceptual model for organizational citizenship behavior directed toward the environment. *Bus. Soc.* 48 (2), 243–256.
- Darvishmotevali, M., Altinay, L., 2022. Green HRM, environmental awareness and Green behaviors: the moderating role of servant leadership. *Tour. Manag.* 88, 104401.
- Davis, J.H., Schoorman, F.D., Donaldson, L., 1997. Toward a stewardship theory of management. *Academy of management. Acad. Manag. Rev.* 22 (1), 20.
- Doğan, D., 2019. *SmartPLS ile veri analizi*. Zet Yayınları, Ankara.
- Doh, J.P., Quigley, N.R., 2014. Responsible leadership and stakeholder management: influence pathways and organizational outcomes. *Acad. Manag. Perspect.* 28 (3), 255–274.
- Domańska, A., Hernández-Linares, R., Zajkowski, R., Żukowska, B., 2024. Family firm entrepreneurship and sustainability initiatives: women as corporate change agents. *Bus. Ethics Environ. Responsib.* 33 (2), 217–240.
- Ebrahimi, P., Khajeheian, D., Fekete-Farkas, M., 2021. A SEM-NCA approach towards social networks marketing: evaluating consumers' sustainable purchase behavior with the moderating role of eco-friendly attitude. *Int. J. Environ. Res. Public Health* 18 (24), 13276.
- Faraz, N.A., Ahmed, F., Ying, M., Mehmood, S.A., 2021. The interplay of green servant leadership, self-efficacy, and intrinsic motivation in predicting employees' pro-environmental behavior. *Corp. Soc. Responsib. Environ. Manag.* 28 (4), 1171–1184.
- Fernández, E., Junquera, B., Ordiz, M., 2003. Organizational culture and human resources in the environmental issue: a review of the literature. *Int. J. Hum. Resour. Manag.* 14 (4), 634–656.
- Freire, C., Gonçalves, J., 2021. The relationship between responsible leadership and organizational citizenship behavior in the hospitality industry. *Sustainability* 13 (9), 4705.
- García-Machado, J.J., Martínez-Ávila, M., 2019. Environmental performance and Green culture: the mediating effect of Green innovation. An application to the automotive industry. *Sustainability* 11 (18), 4874.
- Gregory, B.T., Harris, S.G., Armenakis, A.A., Shook, C.L., 2009. Organizational culture and effectiveness: a study of values, attitudes, and organizational outcomes. *J. Bus. Res.* 62 (7), 673–679.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., 2019. *Multivariate Data Analysis*, 8th ed. Cengage Learning.
- Hair, Joseph F., Tatham, Ronald, L., Anderson, Rolph, E., Black, William, 1998. *Multivariate data analysis with readings*, 5th Edn. Prentice Hall, Englewood Cliffs, NJ.
- Hambrick, D.C., Mason, P.A., 1984. Upper echelons: the organization as a reflection of its top managers. *Acad. Manag. Rev.* 9 (2), 193–206.
- Han, Z., Wang, Q., Yan, X., 2019. How responsible leadership motivates employees to engage in organizational citizenship behavior for the environment: a double-mediation model. *Sustainability* 11 (3), 1–13.
- Hanna, M.D., Newman, W.R., Johnson, P., 2000. Linking operational and environmental improvement through employee involvement. *Int. J. Oper. Prod. Manag.* 20 (2), 148–165.
- Hayes, Andrew F., 2013. *Introduction to mediation, moderation, and conditional process analysis: a regression-based approach*, Second edition. Guilford Press, New York. (2013).
- Imran, M., Jingzu, G., 2022. Green organizational culture, organizational performance, Green innovation, environmental performance: a mediation-moderation model. *J. AsiaPac. Bus.* 23 (2), 161–182.
- James, K.V., Priyadarshini, R.G., 2021. Responsible leadership: a new paradigm for organizational sustainability. *Manag. Labour Stud.* 46 (4), 452–470.
- Javed, M., Ali, H.Y., Asrar-ul-Haq, M., Ali, M., Kirmani, S.A.A., 2020. Responsible leadership and triple-bottom-line performance—do corporate reputation and innovation mediate this relationship? *Leadersh. Organ. Dev. J.* 41, 501–517.
- Khan, N., Acuti, D., Lemarie, L., Viglia, G., 2024. The intention-behaviour gap in sustainable hospitality: a critical literature review. *Int. J. Contemp. Hosp. Manag.*
- Kim, Y.J., Kim, W.G., Choi, H.M., Phetvaroon, K., 2019. The effect of Green human resource management on hotel employees' eco-friendly behavior and environmental performance. *Int. J. Hosp. Manag.* 76, 83–93.
- Kollmuss, A., Agyeman, J., 2002. Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior? *Environ. Educ. Res.* 8, 239–260.
- Lee, M.T., Raschke, R.L., 2020. Innovative sustainability and stakeholders' shared understanding: the secret sauce to "performance with a purpose". *J. Bus. Res.* 108, 20–28.
- Liao, Z., Zhang, M., 2020. The influence of responsible leadership on environmental innovation and environmental performance: the moderating role of managerial discretion. *Corp. Soc. Responsib. Environ. Manag.* 27 (5), 2016–2027.
- Maak, T., Pless, N.M., 2006. Responsible leadership in a stakeholder society – a relational perspective. *J. Bus. Ethics* 66 (1), 99–115.
- Maak, T., Pless, N.M., Voegtlin, C., 2016. Business statesman or shareholder advocate? CEO responsible leadership styles and the micro-foundations of political CSR. *J. Manag. Stud.* 53 (3), 463–493.
- Martins, L.L., 2020. Strategic diversity leadership: the role of senior leaders in delivering the diversity dividend. *J. Manag.* 46 (7), 1191–1204.
- Miska, C., Mendenhall, M.E., 2018. Responsible leadership: a mapping of extant research and future directions. *J. Bus. Ethics* 148 (1), 117–134.
- Miska, C., Hilbe, C., Mayer, S., 2014. Reconciling different views on responsible leadership: a rationality-based approach. *J. Bus. Ethics* 125 (2), 349–360.
- Mittal, S., Dhar, R.L., 2016. Effect of Green transformational leadership on Green creativity: a study of tourist hotels. *Tour. Manag.* 57, 118–127.
- Nisar, Q.A., Haider, S., Ali, F., Jamshed, S., Ryu, K., Gill, S.S., 2021. Green human resource management practices and environmental performance in Malaysian Green hotels: the role of Green intellectual capital and pro-environmental behavior. *J. Clean. Prod.* 311, 127504.
- Norton, T.A., Zacher, H., Ashkanasy, N.M., 2014. Organisational sustainability policies and employee Green behaviour: the mediating role of work climate perceptions. *J. Environ. Psychol.* 38, 49–54.
- O'Brien, R.M., 2007. A caution regarding rules of thumb for variance inflation factors. *Qual. Quant.* 41 (5), 673–690.
- Ones, D.S., Dilchert, S., 2012. Environmental sustainability at work: a call to action. *Ind. Organ. Psychol.* 5 (4), 444–466.
- Özkan, O.S., Üzümlü, B., 2021. Sorumlu liderlik: bir Ölçek uyarlama Çalışması. *J. Manag. Econ. Res.* 19 (4), 199–212.
- Patwary, A.K., Mohd Yusof, M.F., Bah Simpong, D., Ab Ghaffar, S.F., Rahman, M.K., 2023. Examining proactive pro-environmental behaviour through green inclusive leadership and green human resource management: an empirical investigation among Malaysian hotel employees. *J. Hosp. Tour. Insights* 6 (5), 2012–2029.
- Paillé, P., Chen, Y., Boiral, O., Jin, J., 2014. The impact of human resource management on environmental performance: an employee-level study. *J. Bus. Ethics* 121, 451–466.
- Parker, D.W., Holesgrove, M., Pathak, R., 2015. Improving productivity with self-organised teams and agile leadership. *Int. J. Product. Perform. Manag.* 64 (1), 112–128.
- Piowar-Sulej, K., Iqbal, Q., 2023. Leadership styles and sustainable performance: a systematic literature review. *J. Clean. Prod.* 382, 134600.
- Pless, N.M., 2007. Understanding responsible leadership: role identity and motivational drivers. *J. Bus. Ethics* 74 (4), 437–456.
- Pless, N.M., Maak, T., 2011. Responsible leadership: pathways to the future. *J. Bus. Ethics* 98 (1), 3–13.
- Rafiq, M., Cham, T.H., Tapsir, S.H., Mansoor, A., Farrukh, M., 2024. How does globally responsible leadership promotes pro-environmental behavior through Green management initiatives? *J. Glob. Responsib.*

- Robertson, J.L., Barling, J., 2013. Greening organizations through leaders' influence on employees' pro-environmental behaviors. *J. Organ. Behav.* 34 (2), 176–194.
- Schein, E., 1990. *Organizational culture and leadership*. Jossey-Bass, San Francisco, CA.
- Shehawy, Y.M., Agag, G., Alamoudi, H.O., Alharthi, M.D., Brown, A., Labben, T.G., Abdelmoety, Z.H., 2024. Cross-national differences in consumers' willingness to pay (WTP) more for Green hotels. *J. Retail. Consum. Serv.* 77, 103665.
- Shrivastava, P., 1995. The role of corporations in achieving ecological sustainability. *Acad. Manag. Rev.* 20 (4), 936–960.
- Székely, F., Knirsch, M., 2005. Responsible leadership and corporate social responsibility: metrics for sustainable performance. *Eur. Manag. J.* 23 (6), 628–647.
- Tantalo, C., Priem, R.L., 2016. Value creation through stakeholder synergy. *Strateg. Manag. J.* 37 (2), 314–329.
- Tourais, P., Videira, N., 2024. Sustainability transition strategies in a business context: A co-creation process in the Portuguese hospitality sector. *Corp. Soc. Responsib. Environ. Manag.* 31 (1), 600–628.
- Ur Rehman, Z., Shafique, I., Khawaja, K.F., Saeed, M., Kalyar, M.N., 2023. Linking responsible leadership with financial and environmental performance: determining mediation and moderation. *Int. J. Product. Perform. Manag.* 72 (1), 24–46.
- Vatankhah, S., Fejes, O.F., Karatepe, O.M., Nosrati, S., 2023. Fly Green: environmentally specific servant leadership and its impact on Green performance outcomes. *Curr. Issues Tour.* 1–16.
- Voegtlin, C., 2011. Development of a scale measuring discursive responsible leadership. *J. Bus. Ethics* 98 (1), 57–73.
- Voegtlin, C., Patzer, M., Scherer, A.G., 2012. Responsible leadership in global business: a new approach to leadership and its multi-level outcomes. *J. Bus. Ethics* 105 (1), 1–16.
- Waldman, D.A., Siegel, D., 2008. Defining the socially responsible leader. *Leadersh. Q.* 19 (1), 117–131.
- Wang, C.H., 2019. How organizational green culture influences green performance and competitive advantage: The mediating role of green innovation. *J. Manuf. Technol. Manag.* 30 (4), 666–683.
- Wang, Z., Ye, Y., Liu, X., 2024. How CEO responsible leadership shapes corporate social responsibility and organization performance: the roles of organizational climates and CEO founder status. *Int. J. Contemp. Hosp. Manag.* 36 (6), 1944–1962.
- Waris, I., Suki, N.M., Ahmed, A., Barkat, W., 2024. Environmental corporate social responsibility initiatives and green customer citizenship behavior in tourism industry: the mediating roles of green trust, customer-company identification and green corporate image. *Soc. Responsib. J.* 20 (6), 1138–1156.
- Wihler, A., Nolan, R.C., Zheng, Y., Inceoglu, I., Leroy, H., Charnley, F., 2024. Driving sustainability in organizations: polymathic responsible leadership and circular economy. *Interaktion. Organisation. Zeitschrift für Angewandte Organisationspsychologie (GIO), Gruppe*, pp. 1–11.
- Wright, C., Nyberg, D., 2017. An inconvenient truth: how organizations translate climate change into business as usual. *Acad. Manag. J.* 60 (5), 1633–1661.
- Yeşiltaş, M., Gürelek, M., Kenar, G., 2022. Organizational Green culture and Green employee behavior: differences between Green and non-Green hotels. *J. Clean. Prod.* 343, 131051.
- Zhao, C., Kou, X., 2018. Empirical analysis of the impact of corporate culture on corporate competitiveness. *Stat. Decis.* 34 (6), 181–184.
- Zhao, H., Zhou, Q., 2019. Exploring the impact of responsible leadership on organizational citizenship behavior for the environment: a leadership identity perspective. *Sustainability* 11 (4), 1–15.
- Zheng, S., Jiang, L., Cai, W., Xu, B., Gao, X., 2021. How can hotel employees produce workplace environmentally friendly behavior? The role of leader, corporate and coworkers. *Front. Psychol.* 12, 725170.
- Zibarras, L.D., Coan, P., 2015. HRM practices used to promote pro-environmental behavior: a UK survey. *The. Int. J. Hum. Resour. Manag.* 26 (16), 2121–2142.