

HOSPITALITY LEADING GREEN FOR A SUSTAINABLE SCENE: THE MEDIATING ROLE OF GREEN ORGANIZATIONAL CULTURE IN THE RELATIONSHIP BETWEEN GREEN SERVANT LEADERSHIP AND ENVIRONMENTAL PERFORMANCE

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Abstract: Amidst the increasingly pressing environmental issues confronting hospitality businesses, there arises an urging demand for the adoption of sustainable leadership paradigms. This study seeks to explore the influence of green servant leadership (GSL) on environmental performance (ENVP) within the Saudi Arabian hospitality sector, with a keen focus on the mediating function of green organizational culture (GOC). This study deployed on a purposive sampling technique with the engagement of 420 employees from the hospitality industry in the Eastern Region of Saudi Arabia. Further, the data analysis was conducted through using the partial least squares structural equation modeling to scrutinize the intricate connections among GSL, GOC, and ENVP. The study results revealed that GSL significantly bolsters both GOC and ENVP, underscoring its pivotal role in advancing sustainability within the sector. Furthermore, the study identified GOC as a crucial mediator in the nexus between GSL and ENVP, accentuating its significance in fostering environmentally conscious practices within organizational settings. By addressing these questions, this research seeks to contribute to the broader discourse on sustainable leadership by offering empirical insights into the role of GSL in encouraging environmental responsibility and supporting sustainable tourism development. Additionally, the research posits that GSL could serve as a catalyst for promoting environmental stewardship in the realm of hotel management, thereby enriching the ongoing dialogue on sustainable leadership methodologies. Beyond theoretical implications, this research furnishes practical recommendations for managerial tactics and policy formulation, aiming to bridge the gap between theory and application. Furthermore, it beckons for future investigations that should be deeper into the nuances of sustainable leadership dynamics concerning environmental performance in the hospitality domain. By shedding light on the intricate interplay among GSL, GOC, and ENVP, this study not only expands the scholarly understanding but also offers valuable insights into effective leadership strategies for fostering sustainability in the hospitality industry.

Keywords: green servant leadership, green organizational culture, environmental performance, hospitality industry, hospitality industry, Saudi Arabia

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INTRODUCTION

The globe is experiencing a sharp rise in ecological issues, driven by overuse of resources and the expansion of industrial activities (Aljoghaiman et al., 2024; Cai & Li, 2018; Yu et al., 2020; Ayad & Hasanein, 2024; Ayad et al., 2024). Companies face growing demands from stakeholders to handle hazardous waste responsibly and engage actively in conservation initiatives, as staying competitive increasingly depends on ecological accountability (Tang et al., 2018; AL-Khatib & Shuhaiber, 2021; Asiaei et al., 2022b). The growth of industrial operations has significantly worsened problems such as air and water contamination, along with increasing global temperatures (Singh et al., 2020). Producers are under heightened pressure to integrate ecological concerns into their operations to prevent losing stakeholder trust and market position (Alnaim & Metwally, 2024a; Buhaya & Metwally, 2024). Neglecting to adopt sustainable practices not only risks estranging clients and financiers but also endangers the long-term viability of the enterprise (Alnaim & Metwally, 2024b; Kassim et al., 2022; Cheng et al., 2023; Gunarathne et al., 2021; Asiaei et al., 2022a).

While financial hurdles may arise, studies emphasize the importance of focusing on sustainable resource use and strengthening organizational adaptability (Bassey et al., 2013; Begum et al., 2022; Kang et al., 2021). This encourages production firms to engage in Corporate Social Responsibility (CSR) efforts and explore new approaches in product design to address the increasing call for environmentally conscious practices from stakeholders (Channa et al., 2021). Due to the above pressures companies are now moving to more eco-friendly innovations, aiming to improve their environmental footprint (Alnaim & Metwally, 2024a; Ali et al., 2024; Buhaya & Metwally, 2024; Hanif et al., 2023; Metwally et al., 2024).

The growing attention towards Corporate Social Responsibility program and their effect on environmental achievement have caught researchers attention in recent years. Organizations faces unique challenge in maintaining accountability while

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pursuing green initiatives, which sparked debates among industry expert. Various research projects demonstrate how disclosure of eco-friendly programs influences company outcomes through different mechanisms (Metwally et al., 2022).

Within emerging economies, CSR programs create beneficial transformations in multiple areas. These include enhancement of CSR activities (Diab & Metwally, 2020), better financial performance (Sial et al., 2018), and higher levels of creativity (Abdelmotaleb et al., 2018). CSR initiatives serve as powerful tool for companies facing sociopolitical complexities, as it helps those companies to adapt to new management approaches (Diab & Metwally, 2020). Nevertheless, scholarly analysis suggests that CSR documentation occasionally prioritizes image management over authentic environmental dedication. It was reported that sustainability reporting might disguise reduction in operational expenses instead of genuine ecological commitments (Metwally et al., 2022).

In the hospitality and tourism industry, the focus on sustainability has increased recently, and became a central part of the discourse in the industry (Ayad et al., 2023; Hasanein, 2024; Saxuna et al., 2020; Sobaih et al., 2022a; 2022b). While early studies on sustainability concentrated on organizational tactics, recent studies have more concentration on the vital role played by employees in successfully enhancing and embedding sustainable practices. Research has shown that having engaged employees who exhibit pro-environmental behavior is crucial for the success of effective environmental programs (Khan et al., 2020; Omarova & Jo, 2022). From these studies in the hospitality sector, it is now apparent that sustainable improvements are not only shaped by corporate policies but also are heavily influenced by the actions of individual employees (Luu, 2023). This shift in thinking from merely highlighting organizational accomplishments to valuing individual contributions provides a richer insight into the factors that drive sustainability and how organizations can foster eco-friendly behaviors among their staff (Darvishmotevali & Altinay, 2022; Tosun et al., 2022).

Another area of research that is related to employees and their actions that had great importance recently in literature is leadership style. As leadership has influence on how employees engage with environmental practices. Various leadership styles have been studied, including transformational leadership which was proved to motivate eco-friendly behaviors through an inspiring vision (Mittal & Dhar, 2016; Riva et al., 2021; Robertson & Barling, 2017), and ethical leadership, which emphasizes ethical decision-making and a commitment to sustainability (Ahmad et al., 2022; Xuecheng & Iqbal, 2022). However, servant leadership which is characterized by its focus on empathy, stewardship, and community has not been extensively studied within the hospitality sector (Afridi et al., 2024; Luu, 2019; Tuan, 2020).

Servant leadership could offer valuable insights into how to better encourage environmentally responsible behaviors among employees in this industry. Servant leadership has demonstrated potential in cultivating a positive organizational culture within hospitality businesses, fostering a work environment that promotes service-oriented behavior and innovation. Research has shown that servant leadership is associated with higher levels of organizational citizenship behavior (Bavik, 2020; Newman et al., 2017), inspiring employees to go beyond their basic job responsibilities (Wang et al., 2018).

Additionally, evidence suggests that this approach encourages innovation in the workplace and the adoption of forward-thinking management practices (Karatepe et al., 2020). Building on this, the concept of Green Servant Leadership (GSL) has emerged, which integrates the principles of servant leadership with a strong emphasis on environmental sustainability. GSL encourages employees to take on ecological responsibility, motivating them to adopt sustainable practices, such as conserving resources and minimizing waste (Afsar et al., 2018; Newman et al., 2017; Dey et al., 2022). The relationship between GSL and environmental performance can be explained by Self-Determination Theory (Deci & Ryan, 2012), which suggests that employees are more likely to engage in sustainable behaviors when they are intrinsically motivated, have a high sense of autonomy, competence, and belonging to the organization and its improvement. By creating a workplace that aligns personal values with larger environmental objectives, GSL empowers employees to take charge of sustainability initiatives, ultimately leading to improved environmental performance. However, there are many studies that concentrated on sustainability in the hospitality industry, and the role of leadership in encouraging pro-environmental behaviors and achieving positive environmental, and financial outcomes (Ahmed et al., 2022; Mittal & Dhar, 2016). There is still a lack of empirical research examining how GSL specifically impacts ENVP (Afridi et al., 2024; Patwary et al., 2023; Sun et al., 2021). Traditional leadership models often do not adequately address the unique environmental challenges faced by the hospitality industry (Ying et al., 2020). In contrast, GSL incorporates sustainability into its leadership practices, fostering a culture that actively promotes environmental stewardship (Patwary, 2023; Tuan, 2020). To fill part of this gap in literature the current study will explore the impact of GSL on ENVP, further it will examine the role of Green Organizational Culture (GOC) as a mediator in this relationship. By investigating how GOC enhances the effectiveness of GSL in promoting sustainability, the research aims to clarify the relationship between different leadership styles and organizational culture.

This focus is particularly important given the limited existing research on how GOC affects the connection between leadership and environmental outcomes. This study is set within Saudi Arabia's hospitality and tourism sector, a rapidly growing industry with substantial ecotourism potential and complex environmental challenges. Much of the current sustainability research has focused on developed countries, often neglecting the unique contextual factors that influence sustainability practices in emerging markets. As Saudi Arabia aligns its tourism strategy with global sustainability goals, it becomes increasingly crucial to understand the role of leadership in fostering environmental responsibility within the hospitality industry. Consequently, this study aims to answer the following research questions: (1) How does Green Servant Leadership Influence Environmental Performance? and (2) Does Green Organizational Culture mediate the relationship between GSL and Environmental Performance? By addressing these questions, this research seeks to contribute to the broader discourse on sustainable leadership by offering empirical insights into the role of GSL in encouraging environmental responsibility and supporting sustainable tourism development. The remainder of this paper is organized as follows: Section 2 provides a theoretical framework for GSL and GOC, synthesizing existing literature to formulate the hypotheses of the study.

Section 3 details the research methodology, including sample selection, data collection methods, measurement tools, and empirical models. Section 4 presents the study's findings and discusses their implications for theory and practice. Finally, Section 5 concludes with a summary of key insights, limitations of the study, and suggestions for future research.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

1. Green servant leadership and environmental performance

Pioneered by Greenleaf, servant leadership revolves around the core principles of prioritizing the welfare of others (Greenleaf, 2007; Faraz et al., 2021; Aboramadan et al., 2022) and embodying the traits of a responsible leader (Liden et al., 2014). This leadership approach is characterized by acts of selflessness and empathy directed towards the common good (Gandolfi & Stone, 2018). The scholarly community has increasingly recognized the capacity of servant leadership to advance environmental sustainability, as evidenced by studies conducted by Luu (2019) and Tripathi et al. (2020).

Servant leadership places a strong emphasis on the well-being of employees and underscores the importance of aligning team objectives with the overarching goals of the organization. Concurrently, it emphasizes the provision of unwavering support to team members, fostering a collaborative and nurturing work environment (Abdelmotaleb et al., 2021; Karatepe et al., 2020). Furthermore, servant leaders exhibit key qualities such as empathy, accountability, and a steadfast commitment to the success and prosperity of their teams. They lead by example, demonstrating these attributes through their actions and inspiring their team members to emulate these values (Whittington, 2017). By embodying these characteristics, servant leaders not only promote a positive team dynamic but also cultivate a culture of mutual respect, cooperation, and shared success within the organization (Li et al., 2025; Zafar et al., 2025). Having said this, GSL significantly improves organizational environmental performance through promoting ecological responsibility and motivating sustainable practices among employees (Wang et al., 2018). In that sense, GSL has been incorporating environmental responsibility into leadership practices, as numerous scholars suggest (Ahmed et al., 2025; Patwary et al., 2023; Tuan, 2020).

Leaders who embrace GSL shows dedication towards sustainability, resource preservation, and addressing environmental challenges within their organizations (Afridi et al., 2021a; Luu, 2019). This perspective emphasizes the environmental health over individual gains or temporary accomplishments (Gandolfi & Stone, 2018). Some studies in the literature revealed that GSL substantially enhances environmental outcomes (Afridi et al., 2024; Han et al., 2025; Hou et al., 2023). As leaders who genuinely value sustainability inspires their workforce to adopt environmentally conscious behaviors (Li et al., 2020; Li et al., 2025). Through exemplary leadership, they promote resource conservation and waste reduction initiatives (Luu, 2019; Tuan, 2020; Zafar et al., 2025). Moreover, GSL was connected to tangible environmental improvements, including reduced ecological footprints and enhanced energy efficiency (Luu, 2020). By embedding environmental responsibility into organizational culture, servant leaders motivate teams toward achieving sustainability objectives (Mittal & Dhar, 2016). The integration of sustainability in leadership practices ensures alignment between business objectives and environmental considerations. Leaders foster an environment valuing sustainability, which encourages employee engagement in eco-friendly initiatives (Darvishmotevali & Altinay, 2022). This shared commitment enhances both environmental performance and operational sustainability. Furthermore, when employees observe leadership prioritizing sustainability, they develop stronger organizational commitment (Wang et al., 2018). This enhanced sense of purpose strengthens dedication to environmental initiatives, leading to improved outcomes. Based on this, the following hypothesis is proposed:

H1: GSL positively and directly influences ENVP

2. Green servant leadership and green organizational culture

Green organizational culture represents an emerging field in sustainability research, with limited studies addressing this concept. Recent studies in the literature suggest understanding this newly introduced concept through existing organizational culture frameworks (Gürlek & Tuna, 2018). The traditional conception of organizational culture encompasses shared values and beliefs that guide appropriate behaviors (Schein, 1992), whereas green organizational culture reflects environmental values and principles that shape organizational responses. The impact of GSL on GOC is deeply rooted in the Servant Leadership Theory. As servant leaders are deploying a service-oriented approach that enhances community wellbeing (Abdelmotaleb et al., 2021). This way of leadership transforms the way of managing others from an authoritative disciplining way into service-focused type. Unlike conventional leadership approaches who prioritize individual success, servant leadership emphasis stakeholder needs and collective advancement (Abdelmotaleb et al., 2021; Pawar et al., 2020).

This leadership philosophy has relevance in contemporary organizational contexts where sustainable management practices gain importance. The theory promotes trust-building and collaboration, encouraging employee participation in achieving organizational objectives. Through stewardship concept, servant leaders develop enduring relationships that inspire beneficial behaviors for the entire organization (Kauppila et al., 2022). GOC represents shared environmental values and behavioral standards within organizations. Green organizational culture is developed in a better way when servant leaders actively promote environmental responsibility, motivating employees to adopt sustainable practices. Studies demonstrate that when leadership consistently exhibits eco-friendly behaviors, employees tend to embrace environmentalism as fundamental organizational value (Zafar et al., 2020; Bivona & Scirè, 2024). In that sense, instead of making authoritative orders to implement environmentally friendly activities, GSL makes this become a norm in the place culture without imposing any new routine in the place. Having said this, servant leaders foster green attitudes through organizing sustainability focused activities in the workplace. This initiative might include environmental conservation programs and energy efficiency measures. Such actions help embed sustainability into organizational framework, establishing systems that reward eco-conscious behaviors (Pirzada et al., 2023). Finally, Ying et al. (2020) explained that environmental stewardship and servant leadership naturally

aligns, as leaders inspire employees to maintain both organizational and personal environmental responsibility. This approach creates a culture where employees independently pursue green initiatives. Based on this, the following hypothesis is proposed:

H2: GSL positively and directly influences GOC

2.3 Green organizational culture and environmental performance

Many studies in the literature have reported that companies that have strong green organizational culture have evolved and created more innovative approaches to face almost all challenges that may affect their performance. Manufacturing companies with strong green organizational culture in the literature were faced by increased pressure to maintain sustainable practices, these pressures have encouraging employee's alignment with environmental objectives (Chang & Lin, 2015). This cultural framework guides employee behaviors supporting sustainability commitments and enhanced the ENVP (Abdelfattah & Elfeky, 2021; Imran & Jingzu, 2022). Moreover, companies that have GOC aim to maximize the positive impacts of their work while minimizing harm to the environment (Roscoe et al., 2019; Sobaih et al., 2022a; 2022b). GOC was referred to by some studies in the literature as pro-environmental culture, sustainability culture, green consciousness, or eco-friendly culture.

Many studies in the literature have concentrated on the impact of GOC on ENVP. Some studies suggest that GOC had an influence on how companies perceive their environmental responsibilities, with employees playing a critical role in driving this transformation (Ayad et al., 2023; Hysing & Olsson, 2018; Roscoe et al., 2019). Wang (2019) explained that companies are more likely to adopt GOC if they have strong management principles and a genuine concern for environmental protection (Leonidou et al., 2015; Hasanein, 2024). When a company's culture is rooted in environmental values, it becomes easier to engage in eco-friendly practices and develop sustainable products (Qu et al., 2022; Wang, 2019). In this way, GOC can serve as a powerful tool for translating environmental goals into tangible outcomes (Pham et al., 2018). However, it may seem a direct positive relationship, but companies must make tradeoff between their green initiatives and financial performance when addressing environmental challenges. As companies on the one hand, strive to achieve optimal performance, even if it means sacrificing some profits. On the other hand, they aim to maximize efficiency to increase profitability (Levinthal & Workiewicz, 2018). Without strong GOC, companies may struggle to allocate sufficient resources to their environmental strategies, even though these resources are essential for supporting eco-friendly actions. In such cases, the focus on maximizing profits often takes precedence. But for companies with a strong GOC, the pressure to improve environmental performance can become a catalyst for growth and innovation. This leads us to propose the following hypotheses:

H3: GOC positively and directly influences ENVP

H4: GOC has an indirect influence between GSL and ENVP

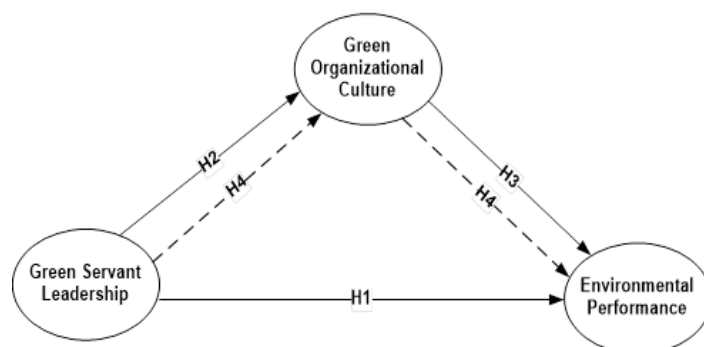


Figure 1. The Conceptual Framework of the Study

RESEARCH METHODOLOGY

The methodology of the study was conducted according to the following Figure 2.

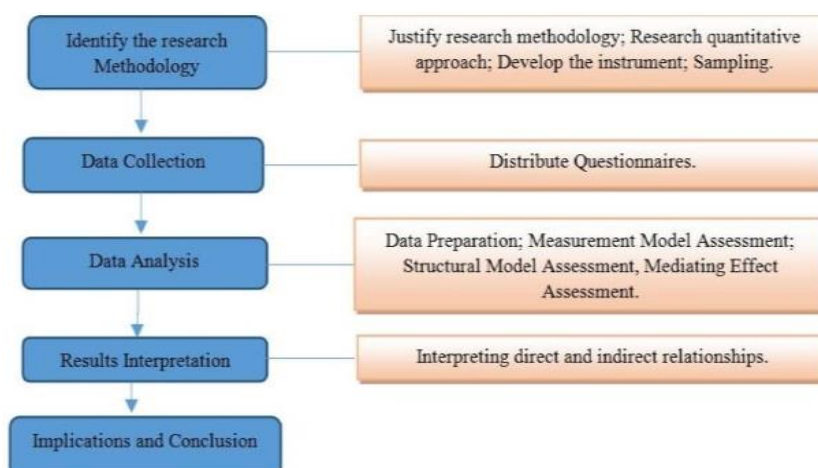


Figure 2. Research Methodology Flowchart

1. Development of measurement scales

The survey for the study was divided into three parts. The first portion included information about the study's objectives and survey completion instructions. Throughout the second section, information about the participants' demographic characteristics is given. In the third part of the research, other aspects were examined. A seven-point Likert scale was employed in the study, which 1 represents "strongly disagree" while 7 representing "strongly agree." Twelve items developed from Liden (2014) provided the green servant leadership (GSL) scale. Regarding green organizational culture (GOC) scale, five items were adopted from Marshall et al. (2015). Regarding environmental performance (ENVP) scale, five items were developed from Melnyk et al. (2003). Professionals in the hospitality enterprises (hotel experts and leaders) have reviewed the survey to make sure it is reliable and user-friendly. The survey's content validity was maintained by rewording and rearranging several statements in response to participant and academic feedback.

2. Procedures

This research mainly concentrates on the influence of GSL on GOC of employees as well as ENVP of Saudi Arabian hospitality enterprises. A purposive sampling technique was employed to target Saudi Arabian employees from the Eastern Region. Both Arabic and English versions of the study survey were accessible. The English translation of the survey was examined and confirmed by two bilingual experts. Twenty hospitality professionals were also asked to pilot the survey to ensure correct wording and pinpoint areas that needed improvement. After piloting, a few small language changes were made to better accommodate employees. The online survey was executed following the methodology of Hair et al. (2010).

After the instrument was developed, an online survey was created and carefully examined for accuracy and presentation before participants were given the link of e-survey. In addition to inviting employees to participate, the introduction described the study's purpose. Participants were briefed on the study's research goals and confidentiality. The introduction with the link of e-survey (English and Arabic) was distributed to employees who currently working in hotels located in Eastern Region via different social media accounts (LinkedIn, Facebook, X) . Every response was reviewed several times a day. In case anyone had any further questions, contact details (name, phone number, email address, and social media accounts) were provided to participants by the end of the introduction.

The objectives of the study were clearly disclosed to participants to guarantee the proper standards of ethical consideration. Participants were assured that their answers would remain anonymous, and they gave their verbal assent to the questionnaires utilized in the quantitative phase. The researchers leveraged networks, including relatives and coworkers, in identifying subjects. All of respondents agreed that gathering the data was done for research purposes and that their participation was completely voluntary. Data collection for the study took place over a duration of Three months, from December 2024 to February 2025. An overwhelming 84% of the 500 surveys that were distributed were successfully completed, with 420 of those surveys being finished. Furthermore, there was no missing data. The sample size of 420 valid responses was suitable considering Nunnally's (1994) requirements for maintaining a 1:10 item-to-sample ratio. It was discovered that 325 employees, or 77.3% of the 420 valid responses, identified as male, while 95 employees, or 22.7% of the employees, recognized as female. employees who were between the ages of 26 and 35 made up the biggest percentage of responses (66.3%), also 88.2% of the employees were well-knowledgeable about hotel green practices.

The data was examined using PLS-SEM, a variance-based technique for route analysis. Hair et al. (2017) stated that PLS-SEM offers an alternative to the traditional covariance-based SEM (CB-SEM). Henseler et al. (2009) claim that PLS-SEM has become more well-liked because of its application in exploratory and prediction-focused research. According to Hair et al. (2017) and Do Valle & Assaker (2016), it is not constrained by normality assumptions in the sampling distribution and performs well with both small and large sample sizes. Using SmartPLS-4.01, the PLS analysis was completed (Ringle et al., 2020). Furthermore, a study using Har-man's test was performed to lower common-method variance (CMV) in accordance with Podsakoff et al. (2003).

RESULTS

An exploratory factor analysis (EFA) of all 22 items revealed that only 29.8% of the variation could be explained by the first component. CMV is therefore not a significant problem in the current investigation. Additionally, since every Variance Inflation Factor (VIF) value is less than 5 (Table 1), there are no issues with multicollinearity. The analysis of the outer model included a review of the psychometric properties of multiple scales through specific criteria including Cronbach's α , Composite Reliability (CR), and Average-Variance-Extracted (AVE) (Table 1). Strong convergent validity is indicated by standardized factor loadings " λ " for each scale item, which are displayed above 0.7.

Table 1. Measurements and variables parametric attributes

Scale Variables	Λ	VIF
Green Servant Leadership: ($\alpha = 0.791$, CR = 0.781, AVE = 0.843)		
GSL1	0.811	1.144
GSL2	0.783	2.809
GSL3	0.883	2.691
GSL4	0.822	1.153
GSL5	0.752	1.661
GSL6	0.831	1.785
GSL7	0.885	1.780
GSL8	0.841	1.056

GSL9	0.752	1.241
GSL10	0.936	1.131
GSL11	0.753	1.048
GSL12	0.943	1.035
Green Organizational Culture: ($\alpha = 0.853$, CR = 0.726, AVE = 0.771)		
GOC1	0.874	1.047
GOC2	0.731	1.246
GOC3	0.813	1.067
GOC4	0.975	1.266
GOC5	0.859	1.807
Environmental Performance: ($\alpha = 0.943$, CR = 0.843, AVE = 0.862)		
ENVP1	0.804	2.654
ENVP2	0.757	2.485
ENVP3	0.925	1.448
ENVP4	0.889	2.489
ENVP5	0.793	1.756

According to results in Table (2), each variable in the suggested model more well explains the variation of its constituent parts than the other factors, as per the guidelines of Fornell & Larcker (1981) and Hair et al. (2017). The discriminant validity of the model is therefore confirmed. Moreover, every item has a higher loading on its corresponding construct than on any variable construct in the suggested model of the study. Also, the model's discriminant validity, as confirmed by Chin (1998), is highly supported by these findings.

Table 2. Fornell and Larcker Discriminant validity (*Bold ratios show the square root of AVE)

	GSL	GOC	ENVP
GSL	0.798		
GOC	0.512	0.853	
ENVP	0.483	0.390	0.896

Table 3. Direct and Indirect Path Coefficient

Paths	Path Coefficient	T Value	P values
Direct Effect			
[H1] GSL \rightarrow ENVP.	0.597	4.604	0.000***
[H2] GSL \rightarrow GOC.	0.717	15.366	0.000***
[H3] GOC \rightarrow ENVP.	0.361	3.465	0.001***
Indirect Effect			
[H4] GSL \rightarrow GOC \rightarrow ENVP.	0.259	3.496	0.000***

As shown in Table (3) and Figure (3), the major findings supported that green servant leadership (GSL) is a pivotal factor for environmental performance (ENVP) ($\beta = 0.597$, $T = 4.604$, $p < 0.000$) and green organizational culture (GOC) ($\beta = 0.717$, $T = 15.366$, $p < 0.000$) which supporting H1 and H2.

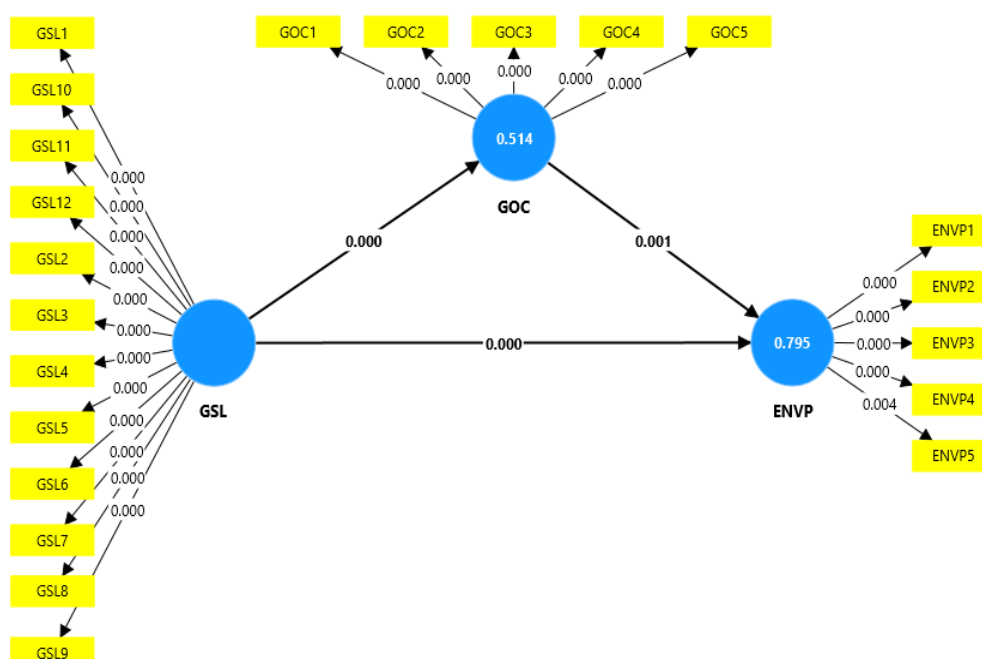


Figure 3. The Research final model

Moreover, GOC has a pivotal and significant influence on ENVP ($\beta = 0.361$, $T = 3.465$, $p < 0.001$) thus confirming H3. Examining the specific indirect effects that were bootstrapped revealed that GOC works as a partial mediator in the interactions between GSL and ENVP ($\beta = 0.259$, $T = 3.496$, $p < 0.000$) confirming H4. This partial mediation indicates that while GSL still has a direct influence on ENVP, this effect is at least partially justified by GOC. These findings emphasize the crucial function of GSL and GOC in verifying the ENVP in Saudi Arabian hospitality enterprises.

DISCUSSION AND CONCLUSION

The current study examined how GSL influences ENVP in Saudi Arabia's hospitality and tourism sector, paying particular attention to the role of GOC as a mediator. The findings confirmed a strong, positive relationship between GSL and ENVP, supporting the first hypothesis (H1). These results align with previous research (Afridi et al., 2024; Hou et al., 2023; Linuesa-Langreo et al., 2016; Vatankhah et al., 2024; Wang et al., 2018; Ying et al., 2020), reinforcing the idea that leadership approaches emphasizing environmental responsibility led to improved environmental outcomes. Leaders who adopt servant leadership qualities play a crucial role in fostering eco-conscious behaviors among employees, leading by example and driving sustainability initiatives such as resource conservation and waste reduction (Luu, 2019; 2020; Tuan, 2020). Additionally, the study supported the second hypothesis (H2), demonstrating that GSL has a significant positive effect on GOC. In the Saudi Arabian context, GSL emerged as a key factor in shaping an organizational culture centered around sustainability. These findings are consistent with earlier research showing that servant leaders drive environmentally responsible behavior by launching conservation initiatives, improving energy efficiency, and implementing waste reduction measures (Pirzada et al., 2023). By embedding sustainability into their organizational structures and cultivating an atmosphere where eco-friendly practices are both encouraged and rewarded, GSL helps establish long-term environmental values within companies (Ying et al., 2020).

The third hypothesis (H3) was also validated, with evidence confirming that GOC positively influences ENVP. This aligns with past studies emphasizing the importance of green organizational culture in promoting environmental collaboration and engagement with key stakeholders such as suppliers and customers (Hysing & Olsson, 2018; Roscoe et al., 2019). Research suggests that organizations with a well-established green culture are more likely to integrate sustainability into their operations, reinforcing eco-friendly behavior among employees and driving the development of sustainable products (Leonidou et al., 2015; Qu et al., 2022; Wang, 2019). When organizations foster a strong environmental ethos, they can effectively translate their sustainability goals into measurable outcomes (Pham et al., 2018). Furthermore, the study supported the fourth hypothesis (H4), showing that GOC serves as a partial mediator between GSL and ENVP. While GSL continues to have a direct impact on ENVP, part of this influence is channeled through the development of a strong green organizational culture. These results highlight the interconnected roles of leadership and culture in shaping environmental performance within Saudi Arabia's hospitality sector. The study also underscores the importance of considering contextual factors, as variations in cultural, regulatory, ethical, political, and behavioral environments across different regions can affect the success of sustainability efforts. Acknowledging these complexities is essential for designing leadership strategies that effectively enhance environmental performance.

Implications, limitations and future research directions

This study presents significant theoretical contributions through a framework discerning the interplay between GSL, GOC, and ENVP, specifically in the context of Saudi Arabia's hospitality and tourism industry. Finally, while the links that connect GSL with ENVP and GOC with ENVP have been studied in the past, this study extends these findings, demonstrating that GOC is part of what makes ENVP so vital. This study explores details related to both the direct effect of GOC and its moderating role, which helps towards a more comprehensive understanding of the role of leadership and organizational culture for sustainability. Practical implications for industry professionals — administrators, managers, and policymakers — can be drawn from the study's findings.

The results highlight the positive impact of GSL on ENVP, whereby leadership programs to enhance the ability of employees to improve the environmental performance of the organization is necessary. Companies should be built on policies that can create sustainability through having a system of environmental responsibility, through innovation, and execution. Additionally, the analysis shows that GOC acts as a mediator in the GSL–ENVP relationship, emphasizing the relevance of the incorporation of sustainability in organizational culture. Effective sustainability training informs employees about eco-friendly practices and involves them in a broader community commitment to environmental responsibility, translating into optimal results for all the stakeholders involved.

Despite these contributions, the study has some limitations. Since it relies on cross-sectional data, it cannot establish causality, making a strong case for future research to use longitudinal or panel data to capture how these relationships evolve over time. Cross-sectional research provides only a snapshot of variables at a given moment, which might not fully illustrate how GOC shapes organizational behavior in the long run. This limitation suggests that the true impact of GOC could be greater than what is currently observed. This research should be expanded on in new cultural and economic environments to improve the generalizability of these results. Using a mixed-methods approach — blending qualitative techniques like in-depth interviews with quantitative analysis — might yield a richer understanding of the causal dynamics at play between GSL, GOC, and ENVP. Also, exploring green innovation, regulatory influences, and sustainability HR management can further improve this conceptual model. A strong avenue of future research is possible within circular economic principles and sustainability challenges in SMEs, many aspects of which remain underexplored and could be discovered in relation to how environmental performance constructs itself in hospitality and tourism.

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