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HOSPITALITY GOES GREEN: THE ROLE OF EMPLOYEE ENVIRONMENTAL ENGAGEMENT IN THE RELATIONSHIP BETWEEN GREEN CSR AND ENVIRONMENTAL PERFORMANCE

Ahmed HASANEIN [1*], Tamer AYAD [1]

[1] King Faisal University, Management Department, College of Business Administration, Al-Ahsaa, Saudi Arabia; aabdelrazek@kfu.edu.sa (A.H.); tayad@kfu.edu.sa (T.A.)

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Abstract: Due to the urgency of sustainable initiatives, the hospitality sector is wedged amid its unstoppable desires for growth and a rising need for genuine, effective environmental engagement. The inherent tension between expansion and sustainability has prompted scholars and practitioners alike to investigate strategic pathways through which environmental concerns can be harmonized with business objectives. This research explores the direct impact of Green corporate social responsibility (GCSR) on environmental performance (ENVP) in the Saudi Arabian hotel industry, as well as the mediating role of employee environmental engagement (EMEE) on the relationship between GCSR and ENVP. The study responds to the increasing call for empirical evidence linking green initiatives with organizational outcomes in the hospitality context, particularly within emerging economies. Data were collected from 400 Saudi Arabian hotel employees and analyzed using descriptive statistics in Excel v.15-2013 and SPSS v.29-2022 to understand participant demographics. Partial Least Squares Structural Equation Modeling (PLS-SEM v.4.1.0.9.2024) was utilized to examine the direct and indirect relationships of the research hypotheses. The findings revealed that GCSR positively and significantly influences both ENVP and EMEE, while EMEE partially mediates the relationship between GCSR and ENVP. These results underscore the importance of integrating green CSR practices into core business strategies and fostering employee engagement to achieve superior environmental performance. Therefore, hotels can leverage internal capabilities to generate meaningful and measurable environmental outcomes. Practical implications suggest that organizations in the hospitality sector can enhance their sustainability by aligning CSR initiatives with employee-driven environmental goals and implementing tailored training and awareness programs. This approach not only strengthens pro-environmental behaviors among employees but also supports long-term ecological and economic sustainability in the industry. The study provides a theoretically grounded, empirically supported model that offers actionable insights for policy-makers, hotel managers, and stakeholders.

Keywords: Green corporate social responsibility, ENVP, hospitality, Social Exchange Theory (SET), sustainability, Saudi Arabia

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INTRODUCTION

Over the past few decades, there has been a surge of scholarly and industry interest in the hospitality industry's role as a key driver of global economic growth. However, this growth has come under increasing scrutiny due to escalating sustainability concerns. The hospitality sector, characterized by intensive resource consumption and significant environmental footprints, faces mounting pressure to adopt environmentally responsible practices. These pressures stem from resource scarcity, climate change, and shifting stakeholder expectations. Consequently, hospitality enterprises are being compelled to mitigate their ecological impact and transition toward eco-friendly business models.

One prominent strategy that has emerged in this context is Green Corporate Social Responsibility (GCSR)—defined as the set of environmental initiatives and sustainable practices through which enterprises voluntarily align their operations to reduce environmental harm and contribute to ecological wellbeing (Wang & Bian, 2022; Hristov et al., 2022; Bhat et al., 2023). Within the hospitality industry, GCSR encompasses practices such as energy conservation, waste reduction, water preservation, and investments in green infrastructure and technologies (Karatepe et al., 2023; Suliman et al., 2023; Meng et al., 2024). Empirical research (e.g., Sarwar et al., 2024) confirms that GCSR initiatives not only reinforce a firm's sustainability orientation but also enhance its Environmental Performance (ENVP)—herein defined as the measurable outcomes reflecting an organization's efforts to minimize its ecological footprint and adhere to environmental standards.

Despite growing attention to GCSR and ENVP, a critical gap persists in understanding how internal organizational dynamics—particularly Employee Environmental Engagement (EMEE)—mediate this relationship. EMEE refers to employees' cognitive, emotional, and behavioral involvement in environmental initiatives at the workplace, rooted in their perception of environmental responsibility (Latif et al., 2022; Khan et al., 2024; Hahn et al., 2024). While some studies (Meng et al., 2024; Ibrahim et al., 2024) have alluded to the role of engaged employees in supporting

* Corresponding author

sustainability, the mediating function of EMEE in the GCSR–ENVP relationship remains underexplored, especially in the context of Middle Eastern or Gulf hospitality sectors such as Saudi Arabia.

To address this gap, the present study is theoretically grounded in Social Exchange Theory (SET), which posits that mutual exchange relationships—such as those between enterprises and employees—can foster pro-environmental behaviors when organizations visibly invest in green initiatives. SET provides a compelling framework to examine how GCSR initiatives can cultivate EMEE, which in turn enhances ENVP. The primary research question guiding this study is: How does Employee Environmental Engagement mediate the relationship between Green Corporate Social Responsibility and Environmental Performance in Saudi Arabian hospitality enterprises. By addressing this question, the research contributes to existing knowledge in three keyways. First, it operationalizes and empirically validates the mediating role of EMEE in the GCSR–ENVP nexus—an area that has received limited scholarly attention.

Second, it contextualizes these constructs within the Saudi Arabian hospitality sector, thereby enriching the literature with insights from a non-Western, resource-intensive setting. Third, it offers practical implications for hotel managers and policy-makers seeking to improve sustainability outcomes through employee-centered CSR strategies.

LITERATURE REVIEW

1. Green CSR and Environmental Performance

To date, several studies (e.g., Rehman et al., 2022; Wang & Bian, 2022; Hristov et al., 2022; Hsu & Chen, 2023; Bhat et al., 2023; Soomro et al., 2024; Bonsu et al., 2024; Albloush et al., 2024; Nguyen et al., 2024; Khoshnaw et al., 2024; Khaddage-Soboh et al., 2024; Sahan et al., 2025) have investigated the relationship between GCSR and ENVP in different contexts. The study of Xin et al. (2023) exposed that the green practices of GCSR through rationing consumption, minimizing waste, and sustaining resources may lead to improved environmental performance of enterprises. A recent study by Tian & Wang (2024) claimed that there is an unambiguous influence of GCSR practices on enterprises' ENVP via implementing programs of waste reduction, minimizing energy consumption, conserving resources, and reducing environmental emissions. Concerning the hospitality context, limited studies (Nassani et al., 2022; Sarwar et al., 2024) have explored the effect of GCSR on ENVP of hospitality enterprises. Nassani (2022) exposed that hospitality enterprises e.g., hotels that implement sustained initiatives of GCSR lead to improved their ENVP. Likewise, a recent study by Sarwar et al. (2024) added that the GCSR initiatives not only improve hotels' ENVP but also enhance guest satisfaction and hotel competitive advantage. Drawing on these discussions (Figure 1), the following hypothesis was suggested:

H1: GCSR positively and directly influences Hotel ENVP

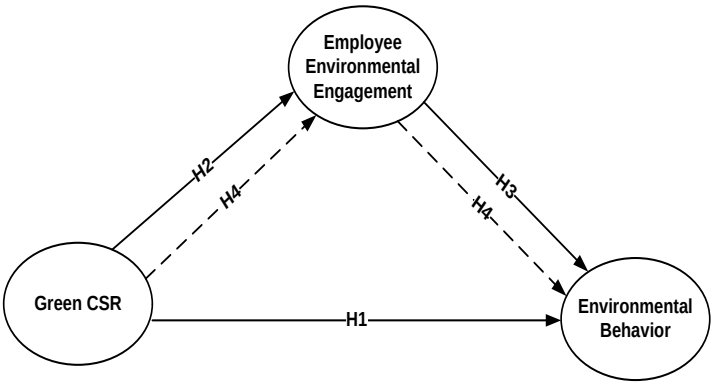

Figure 1. Theoretical Framework of the Study

2. Green CSR and Employees Environmental Engagement

There is a growing body of literature (e.g., Low & Spong, 2022; Latif et al., 2022; Hammon et al., 2023; Nasir Ansari & Irfan, 2023; Khan et al., 2024; Hahn et al., 2024; Iqbal et al., 2024; Park et al., 2024; Yang et al., 2024; Bouguerra et al., 2025) that recognizes the pivotal influence of GCSR on EMEE. To date, a study by Iqbal et al. (2024) claimed that the Green initiatives of GCSR play a crucial role in EMEE. GCSR programs through encouragement, motivation active envelopment of employees toward these green initiatives lead them to foster their green behavior as well as enhance their green engagement. Numerous studies (e.g., Karatepe et al., 2022; Karatepe et al., 2023; Suliman et al., 2023; Meng et al., 2024; Ibrahim et al., 2024; Tam & Phong, 2024; Maneethai et al., 2024; Sarwar et al., 2024) mainly focusses on the influence on GCSR practices on employee environmental engagement in realm of hospitality sector. The study of Maneethai et al. (2024) revealed that hospitality enterprises such as hotels are mainly committed to green initiatives and GCSR practices and thus may tend to encourage and motivate their employees to adopt these green values which will enhance their environmental engagement and involvement. Based upon these discussions (see Figure1), it would be proposed that:

H2: GCSR positively and directly influences EMEE

3. Environmental Engagement and Environmental Performance

Numerous studies (e.g., Irani et al., 2022; Aggarwal & Agarwala, 2023; Nasir Ansari & Irfan, 2023; Kong et al., 2024; Alkashami et al., 2024; Kaur, 2024) have focused on the crucial role of environmental engagement on enterprises' ENVP. The study of Hammon et al. (2023) explored the role of environmental outcomes i.e., EMEE on public sector

enterprises' ENVP. The main findings revealed that promoting environmental outcomes such as employees' environmental engagement, may lead to fostering enterprises' green culture, sustainability as well as environmental performance. Moreover, the involvement of employees in environmental practices and initiatives such as reducing wastes, preserving energy and minimizing environmental emissions plays a pivotal role in shaping enterprises' environmental performance (Aggarwal & Agarwala, 2023; Kaur, 2024).

Recent studies concerning hospitality sector (Nisar et al., 2024; Abedelrahim et al., 2024; Sachdeva & Singh, 2024; Arevin, 2024; Bouguerra et al., 2025; Sahan et al., 2025) underscored the role of hospitality employees' environmental engagement on environmental performance. The study of Abedelrahim et al. (2024) found that highly engaged hospitality employee toward GCSR practices tend to enhance guests' environmental awareness thus fostering environmental performance. Therefore (Figure1), the following hypotheses was postulated:

H3:EMEE positively and directly influences ENVP

H4:EMEE has indirect influence between GCSR and ENVP

RESEARCH METHODOLOGY

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

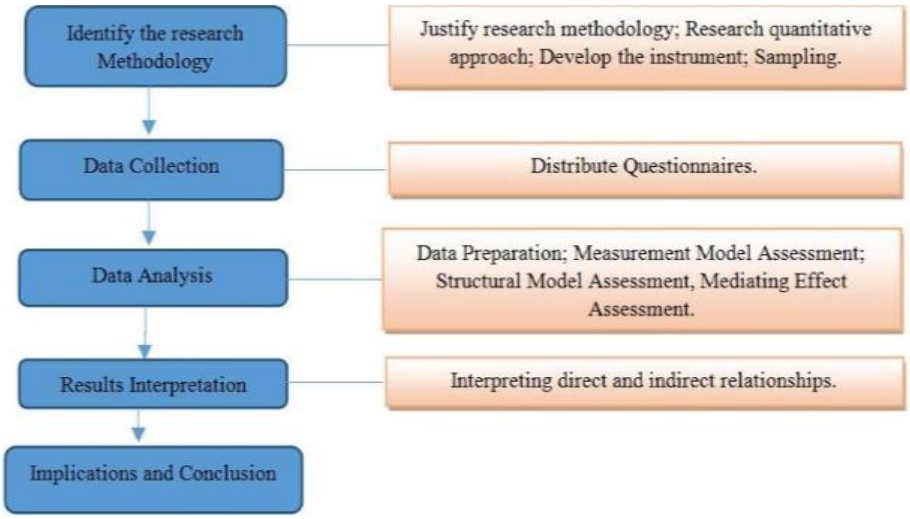

Figure 2. Research Methodology Flowchart

1. Measurements of the Study

The scale used to measure the variables in this study was developed based on the literature reviews. The Green CSR where measured by eight-item scale, the scale suggested by Shahzad et al. (2020), which cover the responsibility of the organization towards community, environment, consumer, and employees. The phrases used in this scale to measure the variable are: Non-governmental organizations operating in challenging areas are supported by our organization; our organization goes beyond legal requirements to protect consumer rights; Initiatives and campaigns that enhance the well-being of the society are well supported by our organization; employee skill development and career advancement are encouraged by our organizational policies; our organization takes part in initiatives to protect and enhance the quality of the natural environment; in order to give its employees a healthy work-life balance, our firm implements flexible rules; our organization takes into account the sustainable growth that considers the needs of future generations; and customer satisfaction is a top priority for our organization.

In order to measure the variable of environmental performance, the scale developed by Melnyk et al. (2003) was adopted. The scale consists of five statements, investigating: Environmental initiatives significantly improved the tourism company's reputation; Environmental initiatives led to a significant decrease in total costs; Environmental initiatives greatly reduced waste across throughout the entire value chain process; Environmental initiatives notably improved the product and process quality; Environmental initiatives greatly decreased lead times.

As for the mediating variable of this study "Employee Environmental Engagement", the scale tested and approved by Albrecht et al. (2021) was adopted, consisting of 4 measurement statements, testing: I make every effort to positively contribute to the organization's environmental sustainability objectives; Our environmental sustainability practices inspire me; I have a strong interest in this organization's efforts to be environmentally sustainable; and I am optimistic, Regarding the environmental sustainability components of my job.

The pilot study included responses from twenty-five hospitality professionals, including senior managers and experts. When they gave their feedback, a few sentences were edited and updated to increase the quality of the content.

2. Research Population and Sampling

The study focuses on employees within the hotel industry in Saudi Arabia as the target population for the study. Given the difficulty in accurately determining the workforce size in the hotel industry of both countries, and following Veal's recommendations for large or undefined populations, the sample size is estimated based on a population of

20,000 individuals (Ayad, 2024). The suitable sample size was calculated using the Herbert Larkin equation (Ayad & Hasanein, 2024), yielding 377 responses.

3. Data Collection

The study employed self-administered questionnaires as part of its quantitative research approach to collect primary data. To ensure the efficiency and validity of the questionnaire, a panel of academics and experts in the field of tourism reviewed and revised the questionnaire. In October and November 2024, the questionnaires were distributed to 432 employees working in the hotel sector in Saudi Arabia, in the end, 400 completed surveys were returned, yielding a response rate of 92.6%, and were analyzed statistically. To meet the objectives of the study, the questionnaire was divided into four sections. The demographic data was collected in the first section, and the three sections that follow concentrate on the three research variables: Green CSR (GCSR), environmental performance (ENVP) and employee environmental engagement (EMEE). On a 5-point Likert scale, respondents evaluate items related to these criteria.

4. Data Analysis Techniques

In order to glean valuable insights from the collected data, which enabling informed decision-making, the Excel v.15-2013 and SPSS v.29-2022 were used to analyze descriptive data and to explore the sample's demographic characteristics. Additionally, the study hypotheses were tested and the relationships between all variables were examined using the partial least squares structural equation modeling PLS-SEM v.4.1.0.9.2024. As explained by Ringle et al. (2020), the PLS analysis was done using SmartPLS-4.01. Additionally, based on Podsakoff et al. (2003), Harman's test was used to minimize the risk of common method variance (CMV).

RESULTS

1. The Outer Model

1.1. Construct Validity

The construct validity or convergent validity test was conducted to determine whether a test that is designed to measure a specific construct correlates with other tests that evaluate the same construct, which was achieved in this study, as the analysis results showed that the reliability of all the items tested were greater than the recommended cut-off-point of 0.7 (Hair et al., 2017). Also, the composite reliability test was conducted to measure the internal consistency in scale items, and results showed that the "rho_a" of all variables were greater than 0.7, which meet the cut-off-point developed by Bryman & Cramer (2012); Hair (2017). Moreover, and in order to measure the extent of variance that is explained by a construct in comparison to the variance due to measurement error, the average variance extracted "AVE" test was conducted.

The results showed that the "AVE" of all variables were above 0.5, which meet the recommended cut-off-point of Fornell & Larcker (1981). This is a positive result, as the "AVE" for each construct in any measurement model have to be at least 0.50; otherwise the items account for more errors than the variance in the constructs. Table 1 for more details.

Table 1. Construct Validity

(Note: "λ" indicate standardized outer loading; "α" indicate Alph Cronbach's ; "rho_a "construct reliability coefficient)

Variables	Items	"λ"	"AVE"	"α"	"rho_a"
Green CSR "GCSR"	GCSR-1	0.926	0.674	0.935	0.965
	GCSR-2	0.722			
	GCSR-3	0.920			
	GCSR-4	0.864			
	GCSR-5	0.882			
	GCSR-6	0.723			
	GCSR-7	0.920			
	GCSR-8	0.738			
Environmental Performance "ENVP"	ENVP-1	0.922	0.692	0.888	0.908
	ENVP-2	0.795			
	ENVP-3	0.860			
	ENVP-4	0.766			
	ENVP-5	0.805			
Employee Environmental Engagement "EMEE"	EMEE-1	0.864	0.589	0.761	0.871
	EMEE-2	0.936			
	EMEE-3	0.723			
	EMEE-4	0.722			

1.2. Discriminant Validity

The discriminant validity test, a subtype of construct validity, was performed to evaluate how accurately a test measures the concept it was designed to measure and to verify that two tests, which should not be highly correlated, are indeed unrelated. In brief, this test demonstrates the distinctiveness of the constructs within the model, ensuring that each variable in the model is different from the others, thus confirming the discriminant validity of Kock's model (Kock, 2020). This was achieved using the Fornell-Larcker criterion and HTMT tests (Fornell & Larcker, 1981) Table 2 and Figure 3. The square root of the Average Variance Extracted is shown by the bolded figures.

Table 2. Fornell-Larcker criterion

Variables	GCSR	ENVP	EMEE
GCSR	**0.821**		
ENVP	0.752	**0.832**	
EMEE	0.759	0.722	**0.767**

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); 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. Additionally, the heterotrait-monotrait ratio of correlations were less than cut-off-point of 0.9, as stated and proposed by Henseler & Ringle (2015).

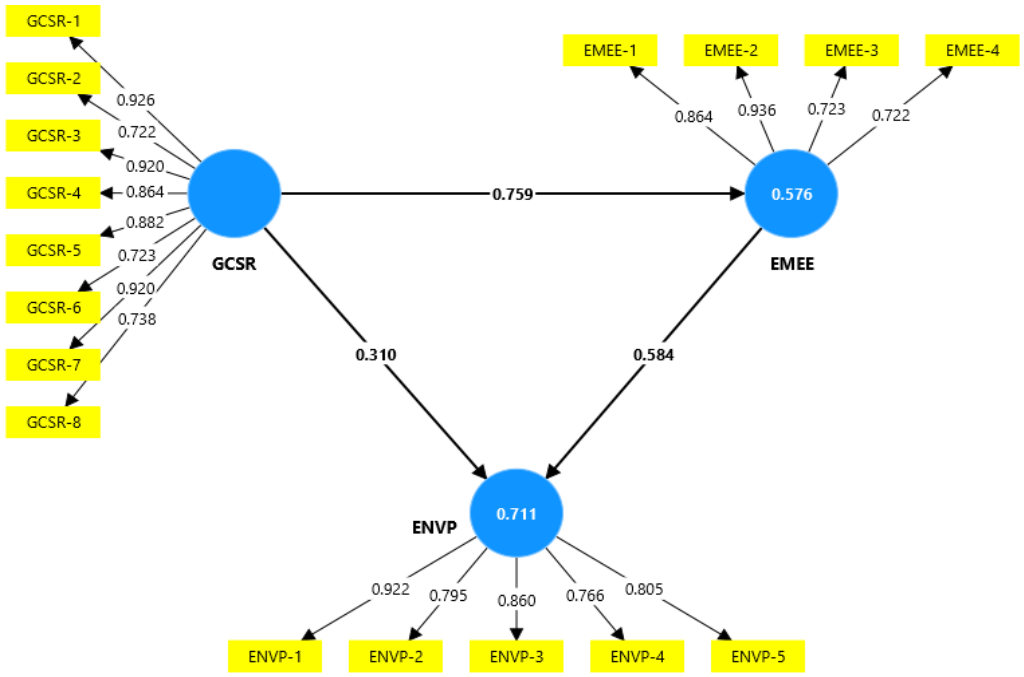

Figure 3. The Final Model

As shown in Table 3, it can be revealed that All HTMT values are less than 0.90 and this supports distinct construct validity. It is worth noting that the results imply that the model's concepts are all distinct and do not have strong correlations.

Table 3. HTMT Results

Variables	EMEE	ENVP	GCSR
EMEE			
ENVP	0.718		
GCSR	0.702	0.696	

2. The Inner Model

2.1. Coefficient of determination (R^2)

In order to determine how effectively the statistical model predicts the outcome and interpret the proportion of variation in the dependent variable that is predicted by the statistical model. The predictive power of the suggested model was evaluated using the test "R^2", which is a value between 0 and 1. A value of 1 signifies a perfect match, while a value of 0 implies that the independent variable has no explanatory power. According to Chin's threshold, the results shown in Table 4 prove that the "IV" significantly influenced the "DV" (Chin, 1998), which was respectively moderate and high.

Table 4. R^2 Test Results

Variable	R^2	Level
ENVP	0.711	High
EMEE	0.576	Moderate

2.2. Effect size (f^2)

The Effect size test "f2" was performed to determine the individual constructs power and impact of an "IV" on a "DV" in the proposed model. According to the recommendations of Cohen (1988), the results shown in Table 5 indicate that the effect sizes of the "IVs" on the "DVs" were ranging from small to large effect.

Table 5. Effect Size (f^2)

Variables	ENVP	EMEE
GCSR	0.240 (Medium)	1.359 (Large)
EMEE	0.499 (Large)	

2.3. Goodness of Fit of the Model (GoF)

A goodness of fit test "GoF" was conducted across the measurement, structural, and overall model performance levels to ensure that the study's advised model fulfills the requirements for a global comprehensive fit measure model, as stated and proposed by Chin (2009):

$$GoF = \sqrt{R^2 x\ AVE};\ GoF = 0.648$$

According to the goodness of fit test result and the recommended point of reference provided by Wetzels et al. (2009), it is possible and conceivable to conclude that the GOF of the advised model is adequate enough to be considered appropriate to serve as a global PLS model.

3. Assessment of Hypotheses "Significance of Path Coefficients"

The test of path coefficient significance was conducted to assess how effectively the proposed theoretical model is compatible with the primary data. The results of each hypothesis test are presented in Table 6 and 7.

Table 6. Direct Path Coefficient (Significant at P** = 0.000)

Hypothesis	β	σ	t-score (O/STDEV)	Sig.	Result
H-1: GCSR ->ENVP	0.310	0.054	5.755	0.000***	Supported
H-2: GCSR ->EMEE	0.759	0.031	24.106	0.000***	Supported
H-3: EMEE ->ENVP	0.584	0.047	12.306	0.000***	Supported

As shown in Table (6), it can be revealed that the SEM results confirmed all proposed hypotheses (Figure 1). As demonstrated by Figure 3,"GCSR" has a direct positive and significant impact on "ENVP" [Effect size = 0.240; Std.-Beta = 0.310; P-value = 0.000] and "EMEE" [Effect size = 1.359; Std.-Beta = 0.759; P-value = 0.000]. Moreover, "EMEE" positively and significantly influences "ENVP" [Effect size = 0.499; Std.-Beta = 0.584; P-value = 0.000]. Therefore, all the direct impacts hypotheses H1, H2 and H3 were shown to be true and received support Figure 3.

As for the indirect relationship between the study variables, "EMEE" shows a mediating impact on the relationship between "GCSR" and "ENVP" [Std.-Beta = 0.443 and P-value = 0.000]. Consequently, as the mediating relationship was significant, the hypothesis H4 was accepted Table 7.

Table 7. Indirect Path Coefficient (Significant at P** = 0.000)

Hypothesis	β	σ	t-score (O/STDEV)	Sig.	Result
H-4: GCSR ->EMEE ->ENVP	0.443	0.051	8.603	0.000***	Supported

DISCUSSION

This study set out to explore how Green Corporate Social Responsibility (GCSR) influences Environmental Performance (ENVP) in the Saudi Arabian hotel industry, with a particular focus on the mediating role of Employee Environmental Engagement (EMEE). By examining both direct and indirect relationships among these constructs, the study not only reaffirms but also extends prior findings in meaningful ways. The results confirm that GCSR significantly and positively affects ENVP among hotel employees, aligning with Soomro et al. (2024), who emphasized the role of GCSR in fostering environmental consciousness and pro-environmental behavior.

However, this study goes beyond mere affirmation by situating the analysis within the underexplored Saudi Arabian hospitality context, which is undergoing rapid transformation under sustainability-focused national agendas like Saudi Vision 2030. This geographic and sectoral focus provides novel empirical evidence that enhances the generalizability of GCSR-ENVP dynamics beyond Western or East Asian contexts that have dominated the literature.

Furthermore, the finding that GCSR positively influences EMEE supports prior conclusions drawn by Hahn et al. (2024), but our study advances this knowledge by empirically validating EMEE as an actionable psychological mechanism through which GCSR manifests in improved environmental performance. Unlike previous research that has treated EMEE as a peripheral construct, our findings position it centrally in the causal chain between corporate policy and organizational outcomes. Additionally, the study found that EMEE significantly predicts ENVP, corroborating Kaur (2024), who argued that environmentally engaged employees are key drivers of long-term behavioral change. Nevertheless, our analysis contributes a more integrative model by demonstrating not just this direct effect, but also the partial mediating role EMEE plays between GCSR and ENVP. This nuanced insight helps to reconcile inconsistencies in the literature, where the mechanisms underlying the GCSR–ENVP relationship have often been theoretically suggested but rarely empirically substantiated. The mediating role of EMEE, as validated in this study, fills a critical conceptual gap by highlighting employee engagement not as a passive outcome of GCSR but as a transformative conduit that actively translates green policies into improved environmental outcomes. This supports and extends findings by Abedelrahim et al. (2024), while emphasizing the potential for EMEE to function as a lever of strategic environmental change within service organizations.

From a practical standpoint, the findings offer several implications for hospitality management. First, the evidence suggests that hotel managers should integrate GCSR initiatives directly into their corporate ethos—not merely as

compliance or branding tools, but as employee-centered programs that inspire collective environmental responsibility. Second, GCSR initiatives that involve employees in their design and implementation are likely to strengthen not only engagement but also measurable environmental outcomes. This highlights the need for targeted sustainability training, participatory green programs, and recognition systems that reinforce pro-environmental behavior at the individual level.

Research Implications

1. Theoretical Implications

This study makes several theoretical contributions to the literature on sustainability and organizational behavior in the hospitality sector. First, by empirically validating the direct impact of Green Corporate Social Responsibility (GCSR) on Environmental Performance (ENVP), the research reinforces the conceptual premise that socially responsible environmental initiatives are not merely symbolic but can yield measurable performance outcomes.

While prior research has explored GCSR's impact in general industrial or Western service contexts, this study extends the theoretical domain by confirming these relationships in the Middle Eastern hotel sector, thus enhancing the cross-cultural validity of existing sustainability frameworks. Second, the study significantly advances theory by establishing Employee Environmental Engagement (EMEE) as a partial mediator in the GCSR–ENVP linkage. Although EMEE has been previously mentioned in literature as a desirable outcome of sustainability practices, it has seldom been tested as a causal mechanism that bridges corporate-level initiatives and organizational environmental outcomes.

Drawing on Social Exchange Theory (SET), this study confirms that employee engagement arises as a form of reciprocation when employees perceive genuine organizational commitment to environmental values, thereby contributing theoretically to the ongoing discourse on individual-level mediators of sustainability performance. Finally, by integrating SET into the sustainability literature in hospitality, the study positions EMEE as not only a psychological response but also as a strategic organizational asset. It highlights the micro-foundations of environmental performance within hotel enterprises and encourages future research to investigate complementary mediators (e.g., green motivation, job satisfaction, or green transformational leadership) within this theoretical framework.

2. Practical Implications

From a managerial perspective, this study provides actionable insights for hotel practitioners aiming to enhance their sustainability profile. First, the results suggest that implementing Green CSR initiatives - such as energy-saving programs, water conservation measures, and waste reduction policies - can directly improve a hotel's environmental performance.

However, these initiatives are most effective when employees are actively engaged. Thus, hotel managers should recognize employee engagement as a strategic lever rather than a secondary outcome. Second, the validated mediating role of EMEE indicates that employee involvement in environmental practices is not automatic; it must be cultivated through intentional HR and leadership practices. Managers should implement structured green training programs, participative decision-making processes, and incentive schemes that align employees' daily responsibilities with the hotel's broader environmental goals. This engagement can enhance both intrinsic motivation and a sense of ownership over sustainability outcomes.

Third, the findings imply that GCSR is not just a corporate branding strategy but a functional tool for internal culture transformation. For hotels seeking to align with national sustainability frameworks such as Saudi Vision 2030, integrating GCSR into the organizational culture - through onboarding practices, internal communications, and performance appraisals - can foster long-term ecological benefits and competitive advantage.

Lastly, hotel managers should consider developing employee-driven green initiatives, such as environmental ambassador programs or sustainability task forces, to embed environmental responsibility into the fabric of daily operations. These practices not only drive environmental outcomes but also contribute to employee satisfaction, organizational commitment, and ultimately, customer perceptions of the hotel as a socially responsible enterprise.

CONCLUSION

The purpose of this research is to investigate how "GCSR" directly affects "ENVP" in the hotel sector in Saudi Arabia, as well as how "GCSR" indirectly affects "ENVP" through "EMEE." Data were gathered from 400 Saudi Arabian hotel employees. Excel version 15-2013 and SPSS version 29-2022 were used to analyze descriptive data in order to look at the participants' demographics. Additionally, PLS-SEM v.4.1.0.9.2024 was used to evaluate the research hypotheses and look into the direct and indirect correlations between variables. According to the SEM results, "GCSR" has a positive and significant impact on "ENVP" and "EMEE" in the Saudi Arabian hotel industries.

The findings also showed that "EMEE" acted as a mediator in the relationship between "GCSR" and "ENVP." While actively supporting employee engagement programs, decision-makers may find it easier to incorporate green CSR practices into core business strategy if they recognize and take use of these reciprocal interactions.

Hospitality enterprises can develop a sustainable culture, improve their environmental performance, and gain a competitive edge in the hospitality industry by coordinating corporate social responsibility (CSR) aims with employee-driven environmental objectives. Furthermore, specialized training and awareness initiatives can assist long-term ecological and economic sustainability in the sector by bolstering workers' pro-environmental actions.

Study Limitations and Future Directions

Despite the valuable insights this study provides into the dynamics of green corporate social responsibility (GCSR), employee environmental engagement (EMEE), and environmental performance (ENVP) within the Saudi Arabian hotel

industry, several limitations must be acknowledged. First, the generalizability of the findings is limited by the study's geographic and sectoral focus. The data were collected exclusively from hotel employees in Saudi Arabia, a context characterized by unique cultural, regulatory, and environmental factors, particularly under the influence of Saudi Vision 2030. While this setting provides a novel contribution to the literature, it also constrains the external validity of the results. Future research is encouraged to replicate and extend this study across different countries, regions, and hospitality segments—such as resorts, eco-lodges, or international hotel chains - to validate the robustness of the model in diverse environmental and institutional contexts. Second, the study relies on self-reported data, which can introduce common method bias, social desirability effects, and potential inaccuracies in respondent perceptions.

Although confidentiality was assured and procedural remedies were implemented to mitigate such biases, the reliance on employees' subjective assessments of their own engagement and their organization's environmental performance may not fully reflect actual behavioral outcomes or objective performance metrics. Future studies could incorporate multi-source data, including managerial assessments, third-party environmental audits, or observational measures, to triangulate findings and enhance data credibility. Third, the use of a cross-sectional research design limits the ability to draw causal inferences from the identified relationships. While the structural equation modeling approach provides statistical support for directional hypotheses, the design cannot conclusively establish temporality or rule out reverse causality. Longitudinal research designs or experimental interventions would be valuable in future investigations to assess how changes in GCSR policies or engagement strategies affect employee behaviors and environmental outcomes over time.

Future research should consider adopting a longitudinal design to better capture the dynamic interplay between Green Corporate Social Responsibility (GCSR), Employee Environmental Engagement (EMEE), and Environmental Performance (ENVP) over time, thereby enhancing causal inference. Researchers are also encouraged to explore cross-cultural comparative studies across different hotel markets to assess the influence of national cultural, regulatory, and institutional contexts on the GCSR–EMEE–ENVP nexus. Moreover, future studies could incorporate objective environmental performance metrics - such as energy consumption, waste reduction rates, or carbon footprint data - to complement self-reported responses and reduce bias. Another promising direction involves expanding the current model by examining additional mediators or moderators, such as green leadership, organizational climate, or psychological empowerment, to uncover more nuanced pathways of influence. Lastly, qualitative or mixed-method approaches could yield deeper insights into how hotel employees interpret, respond to, and co-construct environmental engagement practices, offering a richer understanding of sustainability implementation at the micro level.

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