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## The Impact of Green Transformational Leadership on Employee Green Creativity and Pro-Environmental Behavior: The Mediating Role of Environmental Commitment in Islamabad's Hotel Industry

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### ABSTRACT

This study investigated the connection among Green Transformational Leadership (GTL), green creativity, pro-environmental behavior, and environmental commitment within the hotel industry, focusing on front-line employees in Islamabad, Pakistan. Applying a quantitative approach, the research aims to offer a detailed understanding of these relationships. A positivist research philosophy guides the quantitative research type, using a deductive approach to test hypotheses based on existing theories. Purposive sampling of 107 front-line employees from three- to five-star hotels affiliated with the Pakistan Hotels Association is utilized, promoting diversity. The study utilized questionnaires to measure key variables and outlined responsible and clear research practices. This complete research design ensures a detailed examination of the impact of GTL on individual employees, contributing to a detailed understanding of the hotel industry's eco-friendly practices.

**Keywords:** Green Transformational Leadership, Green Creativity, Pro-Environmental Behavior, Hospitality, Pakistan, Environmental Commitment

### INTRODUCTION

Hospitality, beyond its role as a growing business sector, clearly contributes to human well-being and the global economy. In 2022, the industry made a direct economic contribution of approximately USD 40 billion, and a proposed contribution of around USD 68 billion by 2027 to the global gross domestic product. However, the sector struggles with critical concerns raised by stakeholders, including pressure groups, environmental activists, and governments, particularly about environmental sustainability. The only campaign on earth, supported by the United Nations Environmental Program, highlights the importance of collective action from individuals, governments, businesses, and

corporations. Particularly, environmental sustainability for hospitality is also a key focus of the United Nations' Sustainable Development Goals (SDGs) under climate action SDG 13, the hospitality industry is responsible for about 1% of global carbon emissions and has been required to reduce emissions by 66% by 2030 and 90% by 2050, relative to 2010 levels (Aprill & O'Neil, 2019; Dagnachew & Hof, 2022). Later, with ongoing efforts to eliminate single-use plastics, their frequent use remains a challenge. Similarly, Water which is an essential factor for hotel operations requires careful consideration (Han & Hyun 2018). Furthermore, the hospitality industry relies heavily on the natural world, and it poses a threat to endangered species poses a challenge. However, securing a sustainable future for the hospitality industry requires a crucial focus on balancing economic growth with environmental responsibility.

In recent years, the hospitality sector in Pakistan has demonstrated a significant role in the nation's economic development, with an acceptable average growth rate of 5.0% in hotel establishments over the last five years. However, facing challenges such as the recent pandemic and floods (Manzoor et al., 2019), the sector contributed substantially with 7.1% to the country's GDP, driven by a rise in tourism. However, the economic value of Pakistan's hotel industry falls behind other service sectors due to environmental concerns, focusing on the need for a greener approach.

The hotel industry's direct impact on environmental issues includes water, waste, and energy, with implications for the overall environmental balance. Moreover, the sector's key degrading contributions include intensive usage of water, electricity, and energy consumption (Abdou et al., 2020). Recent research highlights the potential threat raised by hotel industry policies if not managed with environmental considerations in mind (Legrand et al., 2022). Furthermore, in response to environmental challenges, the hospitality industry is increasingly motivated to address environmental issues, giving rise to the concept of "green creativity." This involves not only adopting sustainable and environmentally friendly practices but also promoting innovative solutions that align with the Sustainable Development Goals (SDGs). By adopting a culture that prioritizes green and efficient practices, the industry not only benefits the environment but also makes significant contributions to both national and global sustainability objectives. Moreover, implementing environmentally friendly measures, like saving energy, reducing waste, and using renewable resources, can particularly decrease a hotel's carbon footprint. These practices not only bring environmental advantages but also improve the hotel's image, draw in environmentally aware travelers, and increase revenue. The positive impact of these green initiatives holds the broader economy by generating employment, supporting local businesses, and encouraging sustainable tourism. Thus, this can contribute to positive growth in the country's GDP.

In Pakistan's growing hotel industry, the focus on green creativity, pro-environmental behavior, and sustainable practices becomes crucial. Despite the industry's contribution to the country's economy, environmental concerns remain globally. Issues like waste, energy use, and water consumption highlight the need for a shift to greener practices. The hotel industry in Pakistan, while experiencing growth, faces enlarged challenges due to environmental issues. Abdou et al. (2020) highlight the environmental impact of high

water, electricity, and energy use, declined by potentially harmful policies. Responding to these challenges, "green creativity" emerges as a proactive approach, involving not only eco-friendly practices but also innovative solutions aligned with global sustainability goals, including the United Nations' Sustainable Development Goals (SDGs).

The literature highlights the essential role of leadership in guiding organizations toward eco-friendly practices. Green transformational leadership, known for encouraging commitment to the environment among employees, stands out. While current research recognizes the positive impact of green transformational leadership on employee creativity across various industries, there is a noticeable gap in understanding the complex change specific to the hospitality sector. The hospitality industry, operating within a unique framework defined by different challenges, customer expectations, and environmental responsibilities, stands apart from other sectors. Despite the general acknowledgment of leadership's positive influence on creativity, there remains a lack of clarity into how environmental commitment, especially crucial in environmentally sensitive industries like hospitality, acts as a mediator in this relationship.

This gap is established for several key reasons. Firstly, the hospitality industry's distinct characteristics, emphasizing customer experience and its direct impact on environmental resources (Kandampully et al., 2018; Kwon, & Boger, 2021), demand a detailed understanding that existing studies, while laying a foundation, lack in clarity to the hospitality context. Additionally, the importance of employees being committed to the environment is increasing, especially in the hospitality industry (Pham et al., 2019; Cop et al., 2020). It is critical to figure out how employees' dedication to the environment influences the relationship between leadership and creativity. The lack of this information makes it challenging to create specific plans for promoting eco-friendly practices in hotels. Moreover, in the hospitality industry, where customer satisfaction and positive stakeholder relationships are dominant, the importance of environmental commitment as a mediator becomes even more significant (Úbeda-García et al., 2021). It influences not only internal processes but also external perceptions and relationships with environmentally conscious guests, setting it apart from other sectors. The understanding of the mediating role of environmental commitment holds crucial policy implications within the hospitality industry. It can inform decisions shaping sustainable practices, employee training programs, and leadership strategies adapted to the unique needs of hotels. Such understandings contribute not only to environmental protection but also to economic growth within the industry.

This research aims to fill this gap by studying how green transformational leadership influences environmental commitment among hotel employees and, consequently, how this commitment mediates the effects of leadership on both green creativity and pro-environmental behavior. This study contributes significantly to understanding the effects of environmental commitment as a mediator in the relationship between green transformational leadership, green creativity, and pro-environmental behavior within the unique context of the hotel industry in Pakistan. By investigating this mediating role, the research offers valuable understandings supported by real-world evidence. The study addresses a population gap by focusing on the hotel industry, contributing to the limited literature on the specific actions of environmental commitment in this context.

Furthermore, the in-depth data collection approach enhances the reliability and applicability of the study's findings, making it a valuable contribution to the existing body of knowledge. The ultimate goal is to not only advance theoretical understanding but also provide practical recommendations for promoting sustainable practices, encouraging creativity, and enhancing eco-friendly behavior in the hotel industry.

## **LITERATURE REVIEW**

### **Green Transformational Leadership as an Important Source of Green Creativity**

Chen (2013) defines green transformational leadership as the capacity of a leader to inspire employees to exceed social norms and attain environmental objectives. Because customers are more worried about the environment and seek out ecologically friendly items, green innovation has grown to be an effective competitive tool (Meidute-Kavaliauskiene et al., 2021). Rational encouragement and promoting inspiration are two strategies used by transformational leaders (Al Ahmad et al., 2019; Koziol-Nadolna, 2020) to stimulate innovation in their organizations. According to Khan et al. (2022), transformational leaders can generate creative ideas and motivate their employees to change.

Previous research has shown that GTL has a strong relationship (Naveed-Saif, 2014) with organizational innovation (Özgül & Zehir, 2023; Elrehail et al., 2018). GTL is beneficial in generating new ideas (Singh, Del Giudice, Chierici, & Graziano, 2020), and leaders can promote new ideas by encouraging employees to think through an issue from every aspect (Kremer et al., 2019). Green transformational leadership will improve an organization's performance and minimize unfavorable consequences that affect the organization's overall performance (Singh et. al. 2020). Additionally, we will identify the most effective green transformational leader trait that will help in determining the employee's green performance. Transformational leadership involves behavioral elements that force customers to think outside the box. The implementation of transformational leadership is crucial in problem-solving from diverse angles (Nyakomitta, 2021; Begum et al., 2022).

An important factor in influencing eco-friendly practices in Pakistan's hotel sector is green transformational leadership. Green transformational leaders encourage and inspire their employees to adopt sustainable practices (Rehman & Yaqub, 2021). These leaders inspire their staff to think creatively about implementing eco-friendly solutions into their everyday operations by cultivating a culture of environmental awareness. This strategy encourages innovation and a sense of responsibility that goes beyond simply following environmental laws. As a result, eco-friendly techniques are being developed within Pakistan's hotel business. The way that hotels address sustainability concerns demonstrate the influence that green transformational leadership has on creative thinking. Green creative thinking is coming up with creative concepts that benefit the community, the environment, and overall corporate operations while simultaneously minimizing harm to the environment (Song & Yu, 2018).

This consequently gives rise to innovative and sustainable concepts that improve the hotel industry's overall green performance in Pakistan. The term "green transformational leadership" describes the process of coming up with new ideas for environmentally friendly goods, services, procedures, or methods that are deemed creative, innovative, and practical (Arici & Uysal, 2022). Previous research in the hospitality sector showed a strong

relationship between green transformational leadership and green creativity (Li et al., 2020; Liu et al., 2020; Al-Ghazali et al., 2022).

**H1:** There is a significant relationship between green transformational leadership and green creativity.

### **Green Transformational Leadership Shaping Pro-Environmental Behavior in Pakistan's Hotel Industry**

Green transformational leadership influences employee voluntary pro-environment behaviors through internal motivations and emotional states (Mi et al., 2019; Li et al., 2020). Green transformational leaders, in particular, can set an example for workers in their organizations so that they become familiar to a system that can be environmentally conscious (Chen et al., 2014), exert an idealized influence of environmental protection, advocate for and put environmental protection concepts into practice to create a "role model" effect, and mold behaviors that align with environmental vision. Significantly, in these processes, environmental inspirational motivation may build confidence and passion in workers, encouraging them to consider environmental issues (Robertson & Barling, 2013). This indicates to workers that environmental protection needs to be given priority (Li et al., 2020). Simultaneously, green transformational leaders offer the resources required in the workplace that allow staff members to reach their full potential and enhance their environmental protection and problem-solving skills through intellectual stimulation related to the environment (Robertson & Barling, 2013; Zhou et al., 2018). According to Robertson & Barling (2017), employees might also get the confidence to take on difficult environmental protection tasks and duties by practicing personal care for the environment. To be an environmentalist, one needs to understand what is meant by the term "environment." "The sum total of all living and nonliving things in a particular area, especially one considered as influencing the growth or behavior of living things" is the definition of an environment (Dietz et al., 2002). It is crucial to take note of this definition since it provides us with guidelines for appropriate behavior in a certain setting. An environmentalist is someone who understands how their actions affect the environment and how they may affect their own health. Being an environmentalist is about being aware of what we do and how we can change the world, not simply about recycling and driving a Prius (Barr, 2004).

Green Transformational Leadership is driving a change in pro-environmental behavior in Pakistan's hotel business. Leaders who take this approach encourage their employees to go beyond traditions and adopt environmentally friendly behaviors. This type of leadership style fosters environmental awareness and encourages innovative approaches to integrating sustainability into daily hotel operations. Hotels in Pakistan are leading the way in promoting pro-environmental behavior in the business and reducing their ecological impact by recognizing effective leadership attributes and fostering a commitment to sustainability (Afridi et al., 2023). Hence,

**H2:** There is a significant relationship between green transformational leadership and pro-environmental behavior.

### **The Mediating Influence of Environmental Commitment on the Relationship between Green Transformational Leadership and Green Creativity**

Employee environmental commitment is defined as "a frame of mind denoting both a feeling of attachment and responsibility to environmental issues in the workplace" by Raineri and Paillé (2016). Because employee environmental dedication can be used as a gauge to evaluate organizational actions and attitudes, it can be quite essential. According to Grant et al. (2008), environmental commitment helps us understand the relationship between employees and organizations about the environment (Gul, 2015). Although employee environmental commitment is significant and helps green practises flourish, little is known about how it interacts with other green factors within an organization (Paillé & Valéau, 2021).

A few examples of factors that can influence an employee's environmental commitment are their identification with environmental values, their belief in acting in a way that is morally right for the environment, and their awareness of the potential negative effects on the environment of not taking certain actions or measures (Keogh & Polonsky, 1998). Keogh and Polonsky (1998) presented a three-part model to describe how workers demonstrate environmental commitment. The model categories of employee environmental commitment can be produced by the three primary forces— effective, continuous, and normative which result in links of obligation that are rational, felt, and emotional. According to the current research, employees can be regarded as highly devoted to environmental issues when they show that they have environmental intentions, beliefs, and efforts toward achieving environmental goals.

The way that hospitality is provided is changing in Pakistan's dynamic hotel business due to the mediating effect of environmental commitment on the interaction between Green Transformational Leadership and Green Creativity. The way that green transformational leadership and green creativity interact is changing in Pakistan's dynamic hotel industry as a result of the mediating role that environmental commitment plays in this connection. These organizations' Green Transformational Leaders encourage a dedication to environmental responsibility, which causes a change in the mindset of employees (Meraj et al., 2023). This dedication functions as an essential go-between, directing the impact of transformational leaders in the direction of encouraging Green Creativity.

Under the direction of these leaders, employees are actively using their creativity to adopt sustainable practices in addition to following environmental standards. As hotels in Pakistan place an increasing emphasis on being green, environmental commitment plays a mediating role that acts as the center of gravity, guaranteeing that the industry's visionary leadership is translated into tangible eco-innovations (Yousaf, Radulescu, Sinisi, Serbanescu, & Paunescu, 2021). The hotel business in Pakistan is undergoing a creative and environmentally conscious revolution, and environmental commitment plays a crucial mediating role as hotels aim to fit with global sustainability goals. This paradigm improves their overall environmental performance.

**H3: Environmental commitment mediates the relationship between green transformational leadership and green creativity**

### **The Mediating Influence of Environmental Commitment on the Relationship between Green Transformational Leadership and Pro-environmental Behavior**

Environmentalism is a concept that has been discussed recently due to the excessive use of disposable products, environmentally harmful manufacturing processes, and the disruption caused by natural disasters. It advocates and supports the preservation of natural resources and their transfer to future generations (Yue et al., 2020; Khoaele et al., 2023). The idea of environmental commitment became apparent as a result of interactions between people and the natural environment, which is an essential component of human existence and is commonly linked to one another (Mebratu, 1998).

According to Davis et al. (2009), the concept of environmental commitment is defined by an individual's long-term adaptation and psychological attachment to the environment. One of the most important issues for organizations today is natural environmental management, which arose from legislation set by national governments and pressure from people who were very committed to the environment and these problems have a substantial impact on every step of a company's operations (Lindblom & Ohlsson, 2011). Particularly with postmodernism, there has been a rapid change in expectations and wants that has increased production and consumption, which has contributed to the loss of natural resources and environmental damage. However, people who understand the need to preserve natural resources for the continuation of life favor the products and services offered by environmentally conscious businesses (Agrawal et al., 2023). Environmentally conscious workers will be employed by companies that produce goods and services thanks to their environmental management systems (Mendis & Welmilla, 2021). This will make it simpler for customers who favor eco-friendly products to find these companies and become devoted customers.

Due to their recent adoption of environmentally friendly practices, hotels that provide services and play a significant role in the tourism industry have come to be recognized as "Green Hotels" (Abdou et al., 2020). To minimize environmental harm, a hotel company that cares about the environment also actively employs green management and marketing techniques and adheres to eco-friendly regulations. However, according to Tanveer, Yusliza, & Fawehinmi (2023), these methods also allow hotel staff members to improve their views on the environment, leading to more ecologically conscious and conscientious behavior. Prioritizing green practices among hotel leaders promotes a sense of dedication to environmental responsibility among their workers. This dedication acts as a bridge, converting the leadership's vision into tangible actions and behaviors that support the creation of a greener hotel environment. In essence, the dedication to environmental values serves as a link between the pro-environmental behavior culture in the hotel industry and the impact of transformational leadership.

#### **H4: Environmental commitment mediates the relationship between green transformational leadership and pro-environmental behavior.**

The theory guiding this study is the Social Exchange Theory, created by George Homan in 1958. This theory looks at how people evaluate the advantages and disadvantages of their interactions. In simple terms, it suggests that when individuals do something, they expect to get something valuable in return, whether it's something you can touch or just a positive feeling (Cropanzano & Mitchell, 2005). In organizations, this theory helps us

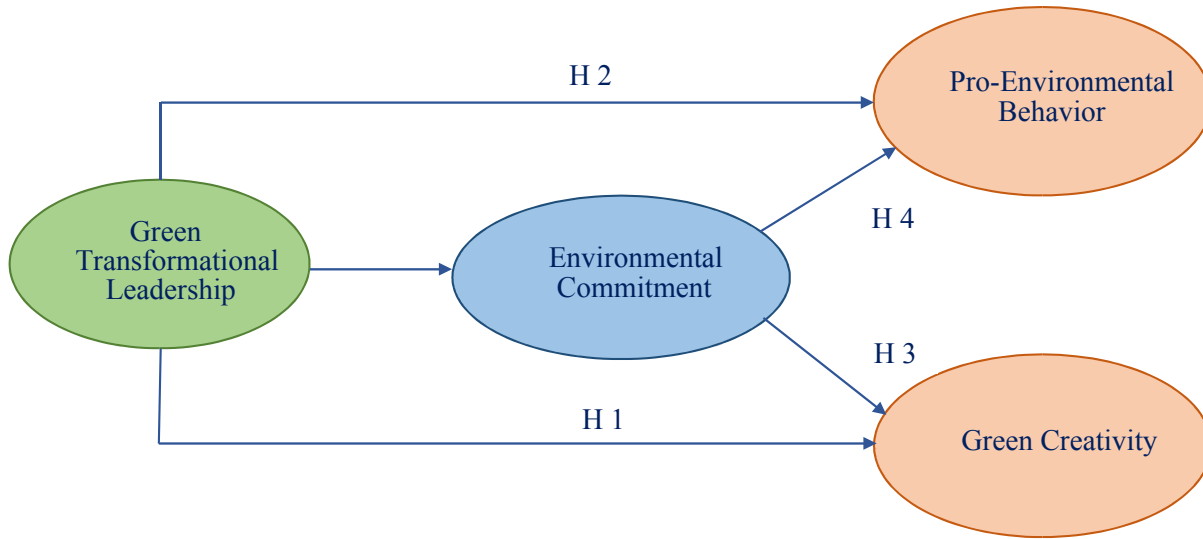
understand how leadership styles, especially Green Transformational Leadership (GTL), influence how employees act, like caring for the environment, being creative, and doing things that are good for the environment.

This study is based on the idea that GTL, a leadership style that inspires employees to go beyond normal ways of doing things and achieve environmental goals, creates positive interactions at work (Du & Yan, 2022). GTL, according to Sun et al. (2022), goes further than regular leadership, encouraging employees to be innovative and creative. This fits with the Social Exchange Theory, where leaders, through GTL, inspire and support employees, expecting them to be more creative and committed in return. Furthermore, employee environmental commitment, as described by Raineri & Paillé (2016), is when employees feel attached and responsible for environmental issues at work. In the Social Exchange Theory, this commitment is vital, showing the expectations and responsibilities between employees and the organization. Raineri & Paillé (2016) further argued that this commitment helps us understand how employees and organizations feel about the environment, making it important in the context of social exchange and environmental practices.

Furthermore, Social Exchange Theory examines how GTL affects two things: employee green creativity (coming up with new and eco-friendly ideas) and pro-environmental behavior (doing things that are good for the environment). The theory suggests that the positive and give-and-take nature of interactions at work should lead to creative ideas and actions that are good for the environment. Studies by Wikhamn & Hall (2012) and Liu & Qi (2022) support the idea that these outcomes are part of the social exchange process. In Pakistan's hotel industry, we see how the Social Exchange Theory works. GTL, by inspiring employees to think creatively and be environmentally friendly, starts a positive exchange. Employees, in return, contribute to the organization's goals for sustainability, creating a back-and-forth relationship. The commitment to environmental responsibility, encouraged by GTL, becomes the key that holds this relationship together, making sure it's sustainable and good for everyone involved. Moreover, understanding social exchange in organizations has practical benefits. GTL practices act as positive influences, encouraging commitment, creativity, and environmentally friendly actions. This positive give-and-take, grounded in the Social Exchange Theory, has the potential to make organizations successful, more sustainable, and better for the environment, especially in the hotel industry. In conclusion, the Social Exchange Theory is a strong foundation for looking at how GTL, employee environmental commitment, green creativity, and pro-environmental behaviour are connected in Pakistan's hotel industry. The theory's focus on give-and-take relationships fits well with the way sustainable leadership works, providing a solid framework for understanding and predicting how employees will act in response to GTL, all for the sake of environmental sustainability.

### **Theoretical Framework**





### Research Design

Abbott and McKinney (2013) argued that the research design serves as the most critical aspect for the entire research process, guiding the collection, analysis, and interpretation of data. In this study, a comprehensive quantitative approach is used, and this approach provides a detailed understanding of the relationships between Green Transformational Leadership (GTL), green creativity, pro-environmental behavior, and environmental commitment. The overall goal is to uncover the complex actions within the context of front-line employees working in hotels in Islamabad.

The study targets front-line hotel staff in Islamabad, recognizing the impossibility of studying the entire population. To ensure meaningful insights, a purposive sample will be chosen, representing diversity within the broader population. The sample size, determined using Morgan's Table (Chuan & Penyelidikan, 2006), consists of 107 respondents, including Pakistani employees from three-, four-, and five-star hotels affiliated with the Pakistan Hotels Association (PHA). Focusing on PHA-affiliated hotels is strategic, offering a cross-section of Islamabad's hotel industry with diverse employee demographics, thus enhancing the external validity of findings.

The research employs nonprobability purposive sampling to investigate environmentally conscious GTL practices and their impact on employees' pro-environmental behavior. This intentional selection allows for the involvement of participants with relevant understandings and experiences. Utilizing a multi-stage technique, three strata are created, and employees are selected using a proportionate sample. Purposive sampling aligns with the research objectives, aiming to explore the experiences and perceptions of front-line employees concerning GTL practices. This intentional selection provides context-specific data, contributing to a deeper understanding of the research questions logically.

The unit of analysis in the present research is individual front-line employees working in hotels in Islamabad. The focus on individual front-line employees ensures a detailed examination of their perspectives, behaviors, and responses, providing valuable insights

into the impact of green transformational leadership on environmental commitment, creativity, and pro-environmental behavior within the specific context of hotels in Islamabad. Moreover, by narrowing the focus to this specific group, the study aims to capture the complexities of their experiences, perceptions, and behaviors in response to GTL practices. This choice of unit is essential for gaining awareness into the impact of leadership practices on individual employees, contributing to a more detailed understanding of the broader organizational context.

### **Measurement Instruments**

The measurement instruments used in this study play an important role in collecting data that aligns with the research objectives. Questionnaires serve as the primary tool for gathering information from front desk staff in the targeted hotels in Islamabad. These questionnaires are carefully designed to measure the key variables of interest: GTL, green creativity, pro-environmental behavior, and environmental commitment.

The decision to use questionnaires is based on their efficiency in gathering standardized responses from a large sample. The inclusion of a five-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree," adds a quantitative dimension to the responses. This structured format not only facilitates data analysis but also allows for the comparison of responses across participants.

The GTL questions, consisting of 5 items, were adopted, and credit goes to the questionnaire's author, Younis and Hussain (2023). The Pro-environmental behavior questionnaire, comprising 5 items, was sourced from an article penned by Florian Lange and Siegfried Dewitte in 2019. Furthermore, the questionnaire for Green Creativity was adopted from an article which was written by Jiang, Wang, Lu, Liu, Wang, and Li (2020), and Environmental commitment was borrowed from Shah, Al-Ghazali, Bhatti, Aman, Fahlevi, Aljuaid, and Hasan (2023).

The research used questionnaires with 5 items each to gather data. The Green Transformational Leadership (GTL) questionnaire measures employees' perceptions of leadership practices, ensuring visibility. The Green Creativity questionnaire assesses creative responses to environmentally conscious leadership. The Pro-Environmental Behavior questionnaire measures environmentally friendly behaviors, chosen for its established validity. The Environmental Commitment questionnaire captures individuals' commitment to sustainable practices, based on established frameworks.

### **Data Analysis Technique**

The research used a comprehensive methodological approach, including data collection and analysis. The process involved utilizing various statistical techniques, including Reliability Analysis for all variables, Frequency Tables, and Demographics assessment. Descriptive Statistics, Skewness, and Kurtosis analyses were conducted to understand the distributional characteristics of the data. Additionally, correlation and regression analyses were employed to examine the relationships among the variables. The primary focus of the investigation was to explore the linkages between green transformational leadership (GTL) as the independent variable, environmental commitment as the mediator, and green creativity and pro-environmental behavior as the dependent variable. To achieve this, Smart Partial Least Squares (smart-PLS) was utilized. Partial Least Squares Structural Equation Modeling (PLS-SEM) software facilitates a comprehensive examination of

complex relationships, providing a powerful platform for assessing the connection between variables in the context of our research.

**Skewness and Kurtosis (Normality)**

Normality is assessed by analyzing skewness and kurtosis of the sample data, and the aim of assessing normality is to determine whether the data is sourced from a normally distributed population. For this study, the normality assessment was performed on SmartPLS 4. The results of the sample data demonstrate normal distribution as both the skewness and kurtosis are under an acceptable range of +2 to -2 and +7 to -7 (George & Mallery, 2010), respectively. Moreover, it's worth mentioning here that the PLS SEM test has the capability to not only perform tests with normally distributed data, but it can also deal the abnormal data.

**Descriptive Analysis**

Table 2 below shows the descriptive statistics, which include the minimum and maximum values describing strongly disagree to strongly agree, which are measured on a Likert scale, mean values of variables, standard deviation, and the Cronbach's Alpha values. Moreover, the descriptive mean values range from 3.635 to 3.996, which represent respondents' tilt towards agreement on the Likert scale. Additionally, standard deviation ranges in-between 0.753 to 0.977, and the Cronbach 's alpha values are consistent with the acceptable standard metric of 0.700, which shows that the data is highly reliable for further analysis.

**Table 2. Descriptive statistics and Cronbach's alpha**

	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>S. D</b>	<b>Alpha</b>
GTL	1	5	3.635	0.977	0.902
GC	1	5	3.996	0.880	0.793
PEB	1	5	3.804	0.886	0.797
EC	1	5	3.946	0.753	0.873

**Measurement Model Analysis**

The study has selected two dependent variables, including GC and PEB, and one independent variable was analyzed for both dependent variables. Moreover, environmental commitment is analyzed as a mediator for both relationships.

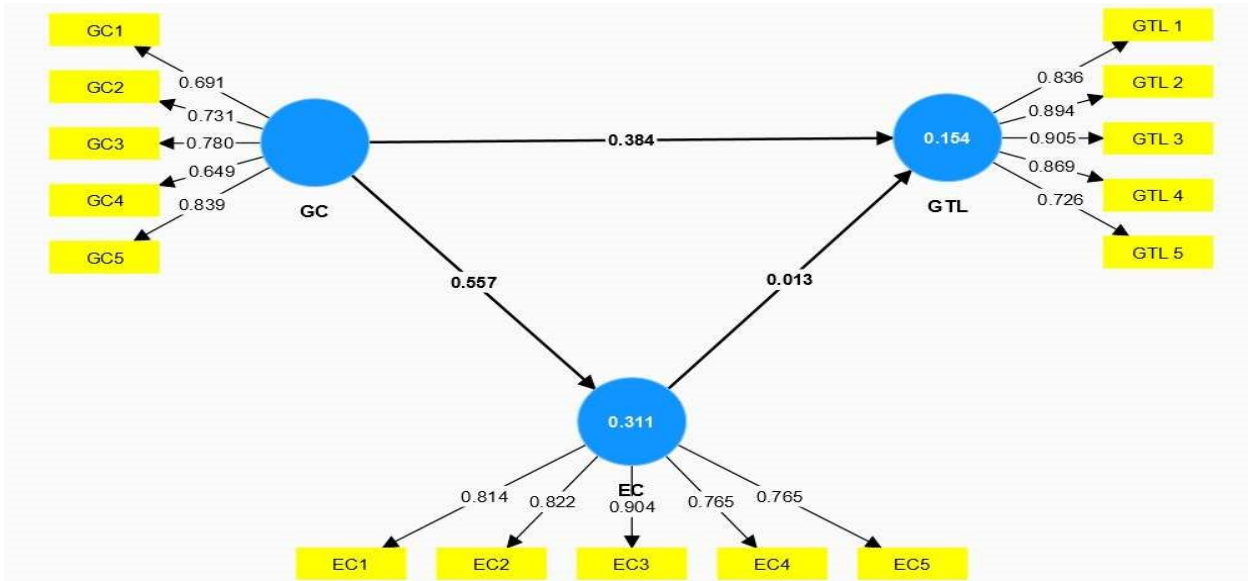


Figure 1

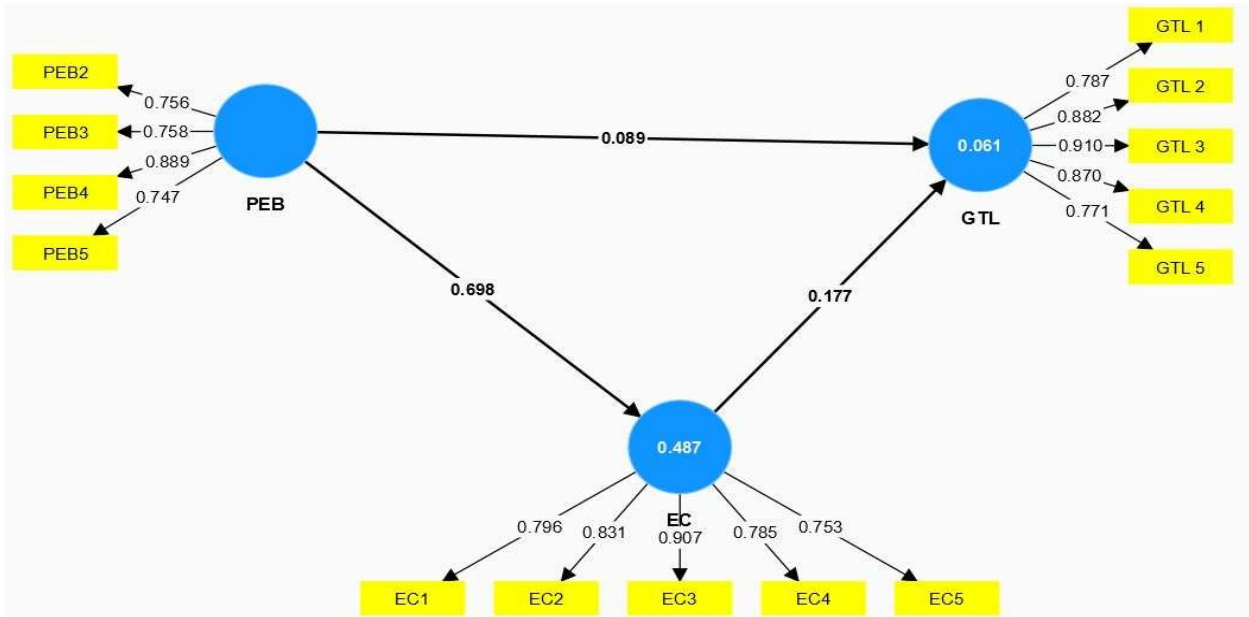


Figure 2

### Loadings

Purpose of Outer loadings in structural equation modeling (SEM) is to choose the significance evidence and dimensions of the observed variables are associated with their unseen constructs. Moreover, loadings perform as a coefficient to measure the contribution of each of the variable in assessing the fundamental concepts and show connectivity of the

hidden factors they depict. Additionally, to assess the measurement model in structural equation, loading play an important role to evaluate the reliability and validity of model. Owing to this, results collected from the Smart PLS shows that only PEB1 has far lower value that the acceptable par value of 0.700 (Hair et al., 1998), and based on it PEB1 was removed from further analysis.

**Table 3: Loadings**

	<b>EC</b>	<b>GC</b>	<b>GTL</b>	<b>PEB</b>
<b>EC1</b>	0.814			
<b>EC2</b>	0.822			
<b>EC3</b>	0.904			
<b>EC4</b>	0.765			
<b>EC5</b>	0.765			
<b>GC1</b>		0.691		
<b>GC2</b>		0.731		
<b>GC3</b>		0.780		
<b>GC4</b>		0.649		
<b>GC5</b>		0.839		
<b>GTL1</b>			0.836	
<b>GTL2</b>			0.894	
<b>GTL3</b>			0.905	
<b>GTL4</b>			0.869	
<b>GTL5</b>			0.726	
<b>PEB1</b>				0.018
<b>PEB2</b>				0.756
<b>PEB3</b>				0.758
<b>PEB4</b>				0.889
<b>PEB5</b>				0.747

**Internal Consistency Reliability and Convergent Validity**

In structural equation model composite reliability helps in assessing the overall model fit, though composite reliability is alike concept of Cronbach’s alpha, but composite reliability further helps in reviewing and exploring the internal continuity of the model. Moreover, the acceptable minimum value of composite reliability is 0.600 and displayed in below table values for all the variables are above the par acceptable value and resulting in fulfils the criteria of internal consistency reliability. Convergent validity on the other hand helps to evaluate the degree to which a hidden concept explains the variance of its indicators and as per the results as demonstrated

in below table, values of each of the variable is above the acceptable par value of 50%.

**Table 4: Reliability and Validity Results.**

Construct	Items	Loadings	Composite Reliability	Average Variance Extracted (AVE)
EC	EC1 <- EC	0.814	0.882	0.665
	EC2 <- EC	0.822		
	EC3 <- EC	0.904		
	EC4 <- EC	0.765		
	EC5 <- EC	0.765		
GC	GC1 <- GC	0.691	0.810	0.549
	GC2 <- GC	0.731		
	GC3 <- GC	0.780		
	GC4 <- GC	0.649		
	GC5 <- GC	0.839		
GTL	GTL1 <- GTL	0.836	0.928	0.720
	GTL2 <- GTL	0.894		
	GTL3 <- GTL	0.905		
	GTL4 <- GTL	0.869		
	GTL5 <- GTL	0.726		
PEB	PEB2 <- PEB	0.756	0.806	0.623
	PEB3 <- PEB	0.758		
	PEB4 <- PEB	0.889		
	PEB5 <- PEB	0.747		

### **Discriminant Validity**

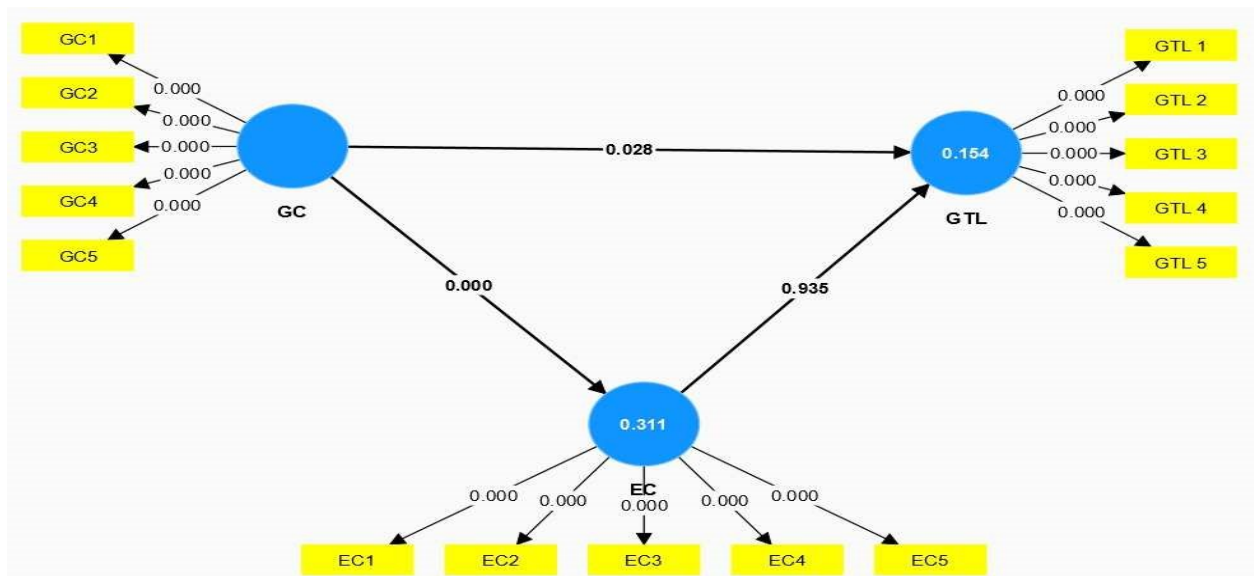
Discriminant validity is crucial to uphold each construct's unique measurability, assuring that different concepts are effectively captured. It is assessed by comparing the square root of AVE with latent variable values, verifying effective discrimination and reinforcing the measurement model's reliability in distinguishing different concepts. The values on the diagonal in the table exceeding others show successful discrimination between constructs. Moreover, construct validity is evaluated using the Heterotrait-Monotrait Ratio (HTMT) criterion and the results shows that the values remained low than threshold values of 0.85, which demonstrate discriminant validity between constructs and suggesting strong construct validity. The HTMT test measures the extent to which constructs differ from each other compared to how much they vary within themselves. It ensures that measures of different constructs are truly different, supporting the validity of the dissertation's instruments. This precise analysis provides confidence in the accuracy and reliability of the measurement tools used in the study.

**Table 5 HTMT value**

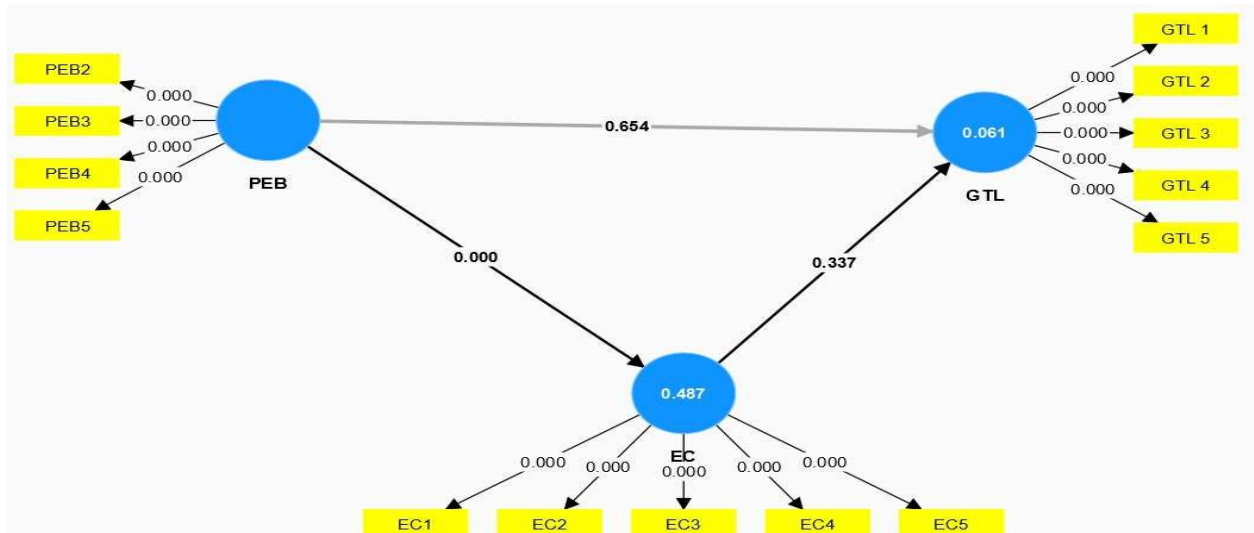
Construct Pair	HTMT Value
GC ↔ EC	0.654
GTL ↔ EC	0.253
PEB ↔ EC	0.823
PEB ↔ GTL	0.228

**Structural Model**

The Structural Model in Partial Least Squares Structural Equation Modeling (PLS SEM) serves as a critical tool for evaluating relationships among variables. By examining path coefficients and t-values, we analyze both direct and indirect connections within the model. Using a two-sided tail ensures an in-depth assessment, considering positive and negative directions for the four variables, including two dependents (PEB and GC), one independent (GTL), and one mediator (EC). The interpretation relies on a threshold t-value of  $\pm 1.64$ , indicating significance and guiding hypothesis validation or rejection. Moreover, if T value is greater than 1.64 than the null hypothesis is rejected. Below Figure(s) show the study's structural model, providing a visual representation of intervariable relationships. This illustration helps in understanding the proposed connections, facilitating a generalized understanding of the complex dynamics between Green Transformational Leadership (GTL), Environmental Commitment (EC), Pro-environmental Behavior (PEB), and Green Creativity (GC).



**Figure 1**



**Figure 2**

**Assessment of Structural Model**

Table 5 shows the hypotheses supported in the present study to have a t-value greater than 1.64. Therefore, both direct relationship hypotheses was not supported in the current study. For hypothesis where the direct impact from Green Commitment (GC) on Green Transformational Leadership (GTL) is positively significant (T = 2.193;  $p < 0.05$ ), and based on these results the hypothesis is supported. However, the second direct hypothesis, which includes Pro-Environmental Behavior (PEB) on Green Technology Leadership (GTL) remained insignificant (T = 0.0=448;  $p > 0.05$ ), and not supported.

**Table 6 Hypotheses Testing Results (Direct Effect)**

	Original sample (O)	Sample mean (M)	Standard deviation	T statistics	2.50%	97.50%	P values
GTL->GC	0.384	0.367	0.175	2.193	-0.026	0.651	0.028
GTL ->PEB	0.089	0.079	0.198	0.448	-0.347	0.400	0.654



**Mediation Analysis**

The investigation also explores the indirect impact of independent variables through mediation. To assess mediation, various tests, including the Sobel test and bootstrapping, will be applied to measure the indirect effect of a hidden variable. The selection of the bootstrapping technique is motivated by its suitability for small sample sizes and its effectiveness in multivariate models. Hence, the study utilized bootstrapping (with 5000 subsamples) to evaluate the indirect effect of Technology Adoption. The presented figure above indicates that the mediation (indirect effect) of

Environmental Commitment ( $T = 0.914$ ;  $p > 0.05$ ) does not support to the mediating influence of Pro-Environmental Behavior (PEB) on Green Transformational Leadership (GTL). Similarly, the mediation of Environmental Commitment in relation to Green Creativity (GC) is non-significant ( $T = 0.075$ ;  $p > 0.05$ ) concerning GTL. Therefore, both of the hypotheses for mediation are significant.

**Table 7 Hypotheses Testing Results (Indirect Effect)**

	Original sample (O)	Sample mean (M)	Standard deviation	T statistics	2.50%	97.50%	P values
G T L - > E C - >GC	0.007	0.023	0.099	0.075	-0.146	0.248	0.940
G T L - > E C - >PEB	0.123	0.141	0.135	0.914	-0.168	0.392	0.361

**CONCLUSION**

The research set out to examine the relationships between green transformational leadership (GTL), green creativity (GC), pro-environmental behavior (PEB), and environmental commitment (EC) among front-line employees in the hotel industry in Islamabad. The data collection involved distributing questionnaires to employees in 3-star, 4-star, and 5-star hotels. Subsequently, the collected fresh data went through initial validation and reliability checks to ensure its stability for subsequent regression and correlation analyses. Descriptive statistics and Cronbach's alpha values for the variables GTL, GC, PEB, and EC highlighted their internal consistency. Notably, GTL shows a mean score of 3.635 with a Cronbach's alpha of 0.902, GC scored a mean of 3.996 with a Cronbach's alpha of 0.793, PEB had a mean of 3.804 with a Cronbach's alpha of 0.797, and EC displayed a mean of 3.946 with a Cronbach's alpha of 0.873, indicating satisfactory reliability.

The discriminant validity analysis, assessed through the Heterotrait-Monotrait ratio (HTMT), generally revealed acceptable discriminant validity, as the HTMT values were well below the recommended threshold of 0.85 for most relationships. However, it's worth noting that the HTMT value for the relationship between GTL and EC was relatively low at 0.253, suggesting potential concerns about discriminant validity between these

constructs. This finding prompts a closer examination of the conceptualization of GTL and EC or potential methodological details that may have influenced the results. Overall, while the majority of relationships show acceptable discriminant validity, the lower HTMT value for GTL and EC indicates the need for cautious interpretation, calling for further investigation into the detailed connections between these constructs in the unique context of the hotel industry in Islamabad.

The study's findings explain the associations and mediation outcomes within the explored variables related to Green Transformational Leadership (GTL), Green Creativity (GC), Pro-environmental Behavior (PEB), and Environmental Commitment (EC) in the context of hotels in Pakistan. The analysis of direct relationships reveals a positive association between GC and GTL, supporting Hypothesis 1 (H1). However, H2, which proposed a significant relationship between GTL and PEB, was not supported. Turning to the mediation hypotheses, H3 and H4 proposed that Environmental Commitment mediates the relationships between GTL and both GC and PEB.

Opposite to these hypotheses, the study found no significant mediating influence of Environmental Commitment on either GTL and GC or GTL and PEB, and the indirect effects were nonsignificant. Furthermore, the discussion explores the broader context of sustainable practices in the hotel industry, drawing parallels with earlier research.

The emphasis on utilizing renewable and eco-friendly resources throughout hotel operations is highlighted, not only for environmental benefits like reduced wastage and pollution but also for economic advantages such as cost reduction and savings. Acknowledging the significant impact of these practices on environmental performance at the organizational level, as evidenced by previous studies (Nisar et al., 2021), further demonstrated the importance of environmentally sustainable practices in hotel management. This research holds particular significance for Pakistan's hotel industry, contributing insights into the complicated connections between leadership, environmental commitment, creativity, and eco-friendly behavior. The supported hypotheses and detailed insights contribute to the goal of offering practical recommendations for promoting sustainable practices and enhancing eco-friendly behavior within the unique context of the hotel industry.

In short, the study found a strong and positive connection between Green Creativity (GC) and Green Transformational Leadership (GTL), supporting Hypothesis 1. Moreover, the non-significant outcomes for hypotheses H2, H3, and H4 in the Pakistani hotel industry illuminate the refined dynamics surrounding Green Team Leadership (GTL), Environmental Commitment, Green Culture (GC), and Pro-Environmental Behavior (PEB).

A positive impact of GC and GTL is important for the hotel industry, showing a way to promote eco-friendly practices and innovation. The link between GC and GTL suggests that when hotel leaders show traits of green leadership, like inspiring a shared vision for eco-friendliness and encouraging creativity, it leads to more green creativity among staff. This is significant for hotel management, suggesting that investing in green leadership could spark a culture of eco-friendly innovation in hotel teams.

In the hospitality industry, where people care more about the environment, this positive link between GC and GTL is promising. Hotels led by those who prioritize green leadership

may see a ripple effect, with staff more likely to think creatively about being eco-friendly. Practical suggestions from this connection include targeted training for hotel leaders to improve their green leadership skills. Workshops can focus on creating a sense of environmental responsibility, encouraging innovation, and building a workplace culture that values and appreciates green creativity. Also, recognizing and appreciating eco-friendly actions from staff can further encourage this positive link. Additionally, hotel management should think about including environmental goals in their leadership training programs. This proactive step by the hotel industry could help with broader environmental efforts and make them stand out in a market where people care more about eco-friendly choices.

The absence of support for H2 indicates that the anticipated significant association between GTL and PEB did not materialize within the sampled Islamabad hotels, shedding light on potential variations in environmental practices inherent to the Pakistani hospitality sector. The inability to establish Environmental Commitment as a mediator, as postulated by H3 and H4, enriches the findings by underscoring the intricate nature of these relationships. The non-significant mediating impact of Environmental Commitment on both GTL and GC, as well as GTL and PEB, challenges preconceived notions about the direct influence of leadership on environmental outcomes. These outcomes emphasize the complexity of sustainable practices in the local hotel industry, suggesting the presence of unique contextual factors that may moderate the hypothesized relationships.

With an exclusive sample from Islamabad hotels and a robust response from 107 participants, this study provides a localized perspective on the challenges and subtleties involved in promoting environmentally conscious behaviors within the Pakistani hospitality sector. Future discussions may delve deeper into specific industry characteristics, cultural considerations, or regulatory frameworks that contribute to the observed patterns. Such insights pave the way for future research directions, aiming to enhance our understanding of sustainable practices within this specific context and potentially inform targeted interventions for fostering environmental responsibility in the Pakistani hotel industry.

To sum up, the confirmed link between GC and GTL, as found by this study, is important not just for hotels in Islamabad but also gives ideas for practical steps. By encouraging green leadership in hotel leaders, the industry can build a culture of green creativity, meeting the expectations of people who care about the environment and contributing to a more sustainable future.

### **Limitations**

This study has some limitations to keep in mind. The group of hotels chosen for the research doesn't represent all types of hotels. We only looked at 3-star, 4-star, and 5-star hotels in Islamabad, and specifically, we chose hotels linked with the Pakistan Hotels Association. So, the findings might not apply to all kinds of hotels.

Another point is that we only talked to front-line employees in hotels; other types of employees weren't included. This means our understanding might be incomplete because we didn't get perspectives from everyone working in the hotels. For collecting information, we only used one method - giving out questionnaires in person. While this way has its good sides, relying only on what people write down themselves could have some issues. We

didn't use any other ways or sources to gather information. Lastly, this study focused only on Islamabad in Pakistan. Since Pakistan is still developing, hotels might not be as much of a focus here compared to other industries. So, the findings might not be the same in places where hotels are more important.

These limitations show that we need to be careful when interpreting the study's results. It might not be accurate to apply them to all hotels or other places outside Islamabad. Future research might want to include a broader range of hotels, talk to different kinds of employees, and consider other ways to gather information.

### **Recommendations**

Future research should address the identified limitations to enhance the generalizability of findings. To overcome the limited hotel representation, researchers could expand the sample to include diverse hotel categories and locations, ensuring a more comprehensive understanding of the industry. Additionally, incorporating perspectives from various employee roles beyond frontline staff would provide a holistic view of the organizational dynamics.

To enhance data robustness, future studies should employ a mixed-methods approach, combining questionnaire data with interviews or observations. This approach would offer richer insights into the complex relationships between green leadership, creativity, and pro-environmental behavior. Furthermore, extending the research beyond Islamabad to encompass different regions with varying developmental contexts would contribute to a more nuanced understanding of the hospitality industry's eco-friendly practices. Finally, investigating the effectiveness of specific training programs aimed at developing green leadership skills among hotel managers and assessing their impact on fostering a culture of eco-friendly innovation would be valuable. These recommendations aim to address the study's limitations and facilitate the application of findings to a broader hotel industry context.

### **Practical and Theoretical Implications**

The study's theoretical implications enhancing the understanding of green transformational leadership, green creativity, and their complex connections with the hotel industry. By establishing a positive link between green creativity and leadership, the research contributes to leadership theories, emphasizing the critical role of environmental values in tooling innovation. Practically, the findings suggest that investing in targeted training for hotel leaders to enhance their green leadership skills can stimulate a culture of eco-friendly creativity among staff. This has practical applications in hotel management, aligning with the growing consumer preference for environmentally conscious practices. Implementing such strategies could not only improve the industry's environmental performance but also enhance its competitiveness in a market increasingly driven by eco-friendly considerations.

### **REFERENCES**

- Abbott, M. L., & McKinney, J. (2013). *Understanding and applying research design*. John Wiley & Sons.
- Abdou, A. H., Hassan, T. H., & El Dief, M. M. (2020). A description of green hotel practices and their role in achieving sustainable development. *Sustainability*, 12(22), 9624.

- Abdou, A. H., Hassan, T. H., & El Dief, M. M. (2020). A description of green hotel practices and their role in achieving sustainable development. *Sustainability*, *12*(22), 9624.
- Afridi, S. A., Javed, A., Ali, S. Z., Zafar, S., & Haider, M. (2023). Cultivating Sustainability: The Role of Generative Leadership, Green Passion, and Green Work Behavior in Pakistan's Tourism Industry. *Sustainability*, *15*(19), 14139.
- Agrawal, R., Agrawal, S., Samadhiya, A., Kumar, A., Luthra, S., & Jain, V. (2023). Adoption of green finance and green innovation for achieving circularity: An exploratory review and future directions. *Geoscience Frontiers*, 101669.
- Al Ahmad, S., Easa, N. F., & Mostapha, N. (2019). The effect of transformational leadership on innovation: Evidence from Lebanese Banks.
- Al-Ghazali, B. M., Gelaidan, H. M., Shah, S. H. A., & Amjad, R. (2022). Green transformational leadership and green creativity? The mediating role of green thinking and green organizational identity in SMEs. *Frontiers in Psychology*, *13*, 977998.
- Aprill, M., & O'Neil, J. K. (2019). Greenhouse gases and sustainable development. *Encyclopedia of Sustainability in Higher Education*, 872-879.
- Arici, H. E., & Uysal, M. (2022). Leadership, green innovation, and green creativity: A systematic review. *The Service Industries Journal*, *42*(5-6), 280-320.
- Barr, S. (2004). Are we all environmentalists now? Rhetoric and reality in environmental action. *Geoforum*, *35*(2), 231-249.
- Begum, S., Ashfaq, M., Xia, E., & Awan, U. (2022). Does green transformational leadership lead to green innovation? The role of green thinking and creative process engagement. *Business Strategy and the Environment*, *31*(1), 580-597.
- Bloomfield, J., & Fisher, M. J. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses Association*, *22*(2), 27-30.
- Bonett, D. G., & Wright, T. A. (2015). Cronbach's alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of organizational behavior*, *36*(1), 3-15.
- Chen, Y. S., Chang, C. H., & Lin, Y. H. (2014). Green transformational leadership and green performance: The mediation effects of green mindfulness and green self-efficacy. *Sustainability*, *6*(10), 6604-6621.
- Chuan, C. L., & Penyelidikan, J. (2006). Sample size estimation using Krejcie and Morgan and Cohen statistical power analysis: A comparison. *Jurnal Penyelidikan IPBL*, *7*(1), 78-86.
- Chuang, S. T. (2010). Rural tourism: Perspectives from social exchange theory. *Social Behavior & Personality: an international journal*, *38*(10).
- Cop, S., Alola, U. V., & Alola, A. A. (2020). Perceived behavioral control as a mediator of hotels' green training, environmental commitment, and organizational citizenship behavior: A sustainable environmental practice. *Business Strategy and the Environment*, *29*(8), 3495-3508.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of management*, *31*(6), 874-900.
- Crossan, F. (2003). Research philosophy: towards an understanding. *Nurse Researcher (through 2013)*, *11*(1), 46.

- Dagnachew, A. G., & Hof, A. F. (2022). Climate change mitigation and SDGs: modelling the regional potential of promising mitigation measures and assessing their impact on other SDGs. *Journal of Integrative Environmental Sciences*, 19(1), 289-314.
- Davis, J.L.; Green, J.D.; Reed, A. Interdependence with the Environment: Commitment, Interconnectedness, and Environmental Behavior. *J. Environ. Psychol.* 2009, 29, 173–180.
- Dietz, T., Kalof, L., & Stern, P. C. (2002). Gender, values, and environmentalism. *Social science quarterly*, 83(1), 353-364.
- Du, Y., & Yan, M. (2022). Green transformational leadership and employees' taking charge behavior: The mediating role of personal initiative and the moderating role of green organizational identity. *International journal of environmental research and public health*, 19(7), 4172.
- Elrehail, H., Emeagwali, O. L., Alsaad, A., & Alzghoul, A. (2018). The impact of transformational and authentic leadership on innovation in higher education: The contingent role of knowledge sharing. *Telematics and Informatics*, 35(1), 55-67.
- George, D. & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference*, 17.0 update (10a ed.) Boston: Pearson.
- Gul, Z. (2015). Impact of employee commitment on organizational development. *FWU Journal of Social Sciences*, 9(2), 117-124.
- Hair JF, Tatham RL, Anderson RE and Black W (1998) *Multivariate data analysis*. (Fifth Ed.) Prentice-Hall:London.
- Han, H., & Hyun, S. S. (2018). What influences water conservation and towel reuse practices of hotel guests?. *Tourism Management*, 64, 87-97.
- Jiang, H., Wang, K., Lu, Z., Liu, Y., Wang, Y., & Li, G. (2020). Measuring green creativity for employees in green enterprises: scale development and validation. *Sustainability*, 13(1), 275.
- Kandampully, J., Zhang, T. C., & Jaakkola, E. (2018). Customer experience management in hospitality: A literature synthesis, new understanding and research agenda. *International Journal of Contemporary Hospitality Management*, 30(1), 21-56.
- Keogh P. D., Polonsky M. J. (1998). Environmental commitment: A basis for environmental entrepreneurship? *Journal of Organizational Change Management*, 11(1), 38-49.
- Khoaele, K. K., Gbadeyan, O. J., Chunilall, V., & Sithole, B. (2023). The Devastation of Waste Plastic on the Environment and Remediation Processes: A Critical Review. *Sustainability*, 15(6), 5233.
- Kozioł-Nadolna, K. (2020). The role of a leader in stimulating innovation in an organization. *Administrative Sciences*, 10(3), 59.
- Kremer, H., Villamor, I., & Aguinis, H. (2019). Innovation leadership: Best-practice recommendations for promoting employee creativity, voice, and knowledge sharing. *Business Horizons*, 62(1), 65-74.
- Kwon, J., & Boger, C. A. (2021). Influence of brand experience on customer inspiration and pro-environmental intention. *Current Issues in Tourism*, 24(8), 1154-1168.
- Legrand, W., Chen, J. S., & Laeis, G. C. (2022). *Sustainability in the hospitality industry: Principles of sustainable operations*. Taylor & Francis.

- Li, W., Bhutto, T. A., Xuhui, W., Maitlo, Q., Zafar, A. U., & Bhutto, N. A. (2020). Unlocking employees' green creativity: The effects of green transformational leadership, green intrinsic, and extrinsic motivation. *Journal of Cleaner Production*, 255, 120229.
- Li, Z., Xue, J., Li, R., Chen, H., & Wang, T. (2020). Environmentally specific transformational leadership and employee's pro-environmental behavior: The mediating roles of environmental passion and autonomous motivation. *Frontiers in psychology*, 11, 1408.
- Lindblom, A., & Ohlsson, J. (2011). STAKEHOLDERS ON THE ENVIRONMENTAL STRATEGY OF THE FIRM: A Study of the Swedish Energy Intensive Industry.
- Liu, F., & Qi, M. (2022). Enhancing Organizational Citizenship Behaviors for the Environment: Integrating Social Identity and Social Exchange Perspectives. *Psychology Research and Behavior Management*, 1901-1914.
- Liu, Z., Wang, X., Hu, X., Lin, Y., & Mao, T. (2020). Green transformational leadership and green creativity: the mediating role of green commitment and the moderating role of green values. *Design Engineering*, 409-421.
- Manzoor, F., Wei, L., Asif, M., Haq, M. Z. U., & Rehman, H. U. (2019). The contribution of sustainable tourism to economic growth and employment in Pakistan. *International journal of environmental research and public health*, 16(19), 3785.
- Mebratu, D. (1998). Sustainability and sustainable development: historical and conceptual review. *Environmental impact assessment review*, 18(6), 493-520.
- Meidute-Kavaliauskiene, I., Çiğdem, Ş., Vasilis Vasiliauskas, A., & Yıldız, B. (2021). Green innovation in environmental complexity: The implication of open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 107.
- Mendis, M. V. S., & Welmilla, I. (2021). Green consciousness of employees. *Human Resource Management in Challenging Environments*, 11, 88-106.
- Meraj, R., Nasir, S., Shafqat, A., & Indrees, S. (2023). Green Human Resource Management (GHRM) and Environmental Performance in the Pakistani Hotel Industry: The Role of Green Perceived Organizational Support (POS), Pro-Environmental Behavior and Green Innovative Work Behavior (GIWB). *Pakistan Journal of Humanities and Social Sciences*, 11(2), 936-952.
- Mi, L., Gan, X., Xu, T., Long, R., Qiao, L., & Zhu, H. (2019). A new perspective to promote organizational citizenship behaviour for the environment: The role of transformational leadership. *Journal of Cleaner Production*, 239, 118002.
- Nyakomitta, K. O. (2021). Influence of Transformation Leadership on the Performance of Commercial Banks in Kenya (Doctoral dissertation, JKUAT-COHRED).
- Paillé, P., & Valéau, P. (2021). "I don't owe you, but I am committed": Does felt obligation matter on the effect of green training on employee environmental commitment?. *Organization & Environment*, 34(1), 123-144.
- Pham, N. T., Tučková, Z., & Phan, Q. P. T. (2019). Greening human resource management and employee commitment toward the environment: an interaction model. *Journal of Business Economics and Management*, 20(3), 446-465.

- Raineri, N., & Paillé, P. (2016). Linking corporate policy and supervisory support with environmental citizenship behaviors: The role of employee environmental beliefs and commitment. *Journal of Business Ethics*, 137, 129-148.
- Rehman, A., & Yaqub, M. S. (2021). Determining the influence of green transformational leadership, green innovation and green hrn practices on environmental performance of hospitality industry of pakistan: A moderating role of individual employee behaviour under COVID-19. *Bulletin of Business and Economics (BBE)*, 10(2), 100-114.
- Robertson, J. L., & Barling, J. (2013). Greening organizations through leaders' influence on employees' pro-environmental behaviors. *Journal of organizational behavior*, 34(2), 176-194.
- Shah, S. H. A., Al-Ghazali, B. M., Bhatti, S., Aman, N., Fahlevi, M., Aljuaid, M., & Hasan, F. (2023). The Impact of Perceived CSR on Employees' Pro-Environmental Behaviors: The Mediating Effects of Environmental Consciousness and Environmental Commitment. *Sustainability*, 15(5), 4350.
- Singh, S. K., Del Giudice, M., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological forecasting and social change*, 150, 119762.
- Soiferman, L. K. (2010). Compare and Contrast Inductive and Deductive Research Approaches. Online Submission.
- Song, W., & Yu, H. (2018). Green innovation strategy and green innovation: The roles of green creativity and green organizational identity. *Corporate Social Responsibility and Environmental Management*, 25(2), 135-150.
- Sun, X., El Askary, A., Meo, M. S., & Hussain, B. (2022). Green transformational leadership and environmental performance in small and medium enterprises. *Economic Research-Ekonomska Istraživanja*, 35(1), 5273-5291.
- Tanveer, M. I., Yusliza, M. Y., & Fawehinmi, O. (2023). Green HRM and hospitality industry: challenges and barriers in adopting environmentally friendly practices. *Journal of Hospitality and Tourism Insights*.
- Wikhamn, W., & Hall, A. T. (2012). Social exchange in a Swedish work environment. *International Journal of Business and Social Science*, 3(23), 56-64.
- Younis, Z., & Hussain, S. (2023). Green Transformational Leadership: Bridging the gap between Green HRM Practices and Environmental Performance through Green Psychological Climate. *Sustainable Futures*, 6, 100140.
- Yousaf, Z., Radulescu, M., Sinisi, C. I., Serbanescu, L., & Paunescu, L. M. (2021). Harmonization of green motives and green business strategies towards sustainable development of hospitality and tourism industry: Green environmental policies. *Sustainability*, 13(12), 6592.
- Yue, B., Sheng, G., She, S., & Xu, J. (2020). Impact of consumer environmental responsibility on green consumption behavior in China: The role of environmental concern and price sensitivity. *Sustainability*, 12(5), 2074.
- Özgül, B., & Zehir, C. (2023). How Managers' Green Transformational Leadership Affects a Firm's Environmental Strategy, Green Innovation, and Performance: The Moderating Impact of Differentiation Strategy. *Sustainability*, 15(4), 3597.



Úbeda-García, M., Claver-Cortés, E., Marco-Lajara, B., & Zaragoza-Sáez, P. (2021). Corporate social responsibility and firm performance in the hotel industry. The mediating role of green human resource management and environmental outcomes. *Journal of Business Research*, 123, 57-69.