

“Green Transformational Leadership and Green Training impact on Environmental Performance: mediating role of Green Innovation in hotel industry of Pakistan”



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Abstract

The relationship between Green Transformational Leadership (GTL), Green Training (GT), and Green Innovation (GI) and how they all affect Environmental Performance (EP) in Pakistani hotels is examined in this paper. This study makes use of quantitative research. With a sample size of 200 participants and analysis conducted with SPSS, the study clarifies the direct impact of GTL and GT on EP and investigates the mediation role of GI. The findings confirm the important beneficial linkages that exist between GTL, GT, and EP and support their contribution to improving environmental sustainability. The mediation analysis further emphasizes how important Green Innovation is as an intermediate, enhancing the impact of leadership and training programmes on Environmental Performance. This research provides insightful information about how to promote sustainability in the hotel industry and supports the use of innovative green methods to improve environmental results.

Keywords: Green Transformational Leadership, Green Training, Environmental Performance, Green Training, Hotel Industry, Sustainability, Pakistan

Chapter 01: Introduction

1.1 Background

Hotel industry is the backbone of the services industry because it is not only for the earning profit but also giving the employment to the people around the globe. Around 6.2% growth is recorded in the service sector due to hospitality industry (Iips, 2022). Over the years, Pakistan's hotel business has experienced substantial expansion and development, driven by a wide array of tourism attractions such as historical landmarks, cultural diversity, and breathtaking natural settings. This increase is due of its significant influence on civilization, culture, economy, and environment (Sohail et al.). The hotel industry in Pakistan faces the difficulty of incorporating green practices into its operations to maintain long-term viability while making a good environmental impact, given the growing emphasis on sustainability and environmental consciousness on a worldwide scale.

Transformation leadership always plays a vital role in promoting higher firm performances, but many things in between them are unresolved which can positively affect firm environment and firm performance and can give good results. Green leadership transformation is where the goal of leadership is to provide clear vision, motivation and inspiration to all employees and also analyze their development requirements to achieve their environmental goals towards the organization.

The hotel industry, especially Pakistani hotels, has seen a rise in the use of Green Transformational Leadership and Green Training in recent times. The term "green transformational leadership" describes a leadership approach that enthuses and encourages staff members to actively engage in environmental sustainability projects. It includes leaders advocating for a sustainable future, cultivating a mindset of environmental stewardship, and supporting creative ways to lessen environmental effect. Transformational leaders have the ability to craft an energizing vision that motivates their followers to take the initiative to finish their work and accomplish their goals (Sun et al., 2022). By elevating people and fostering an environment that fosters green creativity, green transformational leadership can greatly enhance workers' green creativity (Sidney et al., 2022). To evaluating or implementing any practice it is important have a complete knowledge about it therefore it is important to give proper training to the employees. As sustainable practices is only implemented when every individual will follow the practices and in hotel industry it is foremost

to give awareness about the sustainable environment and healthy environment because it affects the reputation of hotel. Green training program have become vital resources for providing hotel staff with the know-how and abilities they need to successfully adopt sustainable practices. Green training has been found to be essential for removing stand-alone obstacles to environmental conservation and encouraging workplace acceptance. This has a good impact on people and organizations alike (Yafi et al., 2021). With the help of training program, employees will learn about sustainable practices, become more conscious of environmental issues, and be equipped to make a good impact on the hotel's environmental performance. In the hotel business, environmental performance refers to the quantifiable results and actions hotels take to lessen their environmental effect. A hotel's dedication to sustainability is demonstrated by its emphasis on environmental performance. They strive to minimize adverse effects on the environment while optimizing beneficial contributions to the ecosystem by integrating environmentally conscious practices into every aspect of their operations. These eco-friendly hotels use a variety of tactics, including sustainable buying methods, waste management systems, and effective resource utilization. Employees that receive training gain information and abilities that are critical to accomplishing the many aims and objectives of the company, including improved performance (Yafi et al., 2021). Green transformational leadership and Green training not only improve environmental performances but also create gives knowledge and idea for green innovative culture. According to (García-Machado & Martínez-Ávila, 2019) green innovative culture demonstrates a dedication to sustainability and ecology to minimize environmental harm. Sustainability and corporate competitiveness both benefit from green innovation. This is because it has a favourable effect on the organization's output as well as on the business's financial success and environmental outcomes. The purpose of this research is to investigate both the immediate and subsequent impacts of green transformation leaders and green training on environmental performance through green innovative culture.

1.2 Problem Statement

In this era, there is a need of transformation leadership as marketplace evolving. Through transformation leadership one can influence more individuals of organization towards the better environment of that organization. And Green transformation is now a basic need of environmental growth of every organization. The hotel sector is acknowledged as a major contributor to

environmental degradation due to its large resource use and waste output. Environmental issues in this industry include excessive energy and water use, significant waste production, and carbon emissions, which calls for a thorough examination of sustainable procedures. The recent pandemic and floods had a negative impact on the hotel industry (Talib, 2023). Research on the connection between environmental performance of employees and leadership has primarily focused on leadership ideas that are important to business owners, like transformational leadership (Zong-Bo et al., 2020).

In the immersing world of green products and green environment, it is also an economic asset. In organizations and industries sustainable practices like renewable energy and eco-tourism will leads to generate jobs and increase economic growth. This will lead to the need of green transformation leadership in every organization, hotels and industrial areas.

In the face of environmental concerns, the hotel business in Pakistan must find a way to promote sustainable operations. Training initiatives can be crucial in helping staff members become more proficient and capable of meeting client needs in an effective manner. The market is becoming more competitive due to the rise in demand, which can only be met by effectively training workers in the hotel sector (Iips, 2022). The role of green transformational leadership toward influencing green organizational identity and its subsequent impact on green innovation in hotels (Rehman et al., 2021) . By looking at the mediating impact of green innovative culture, this study seeks to understand how green transformational leadership and green training affect environmental performance in Pakistani hotels. For the purpose of creating strategies to improve environmental sustainability in the nation's hotel business, it is vital to comprehend how these aspects interact.

1.3 Research Objectives

- To examine the impact of GTL on EP.
- To find out the impact of GT on EP.
- To examine the mediating effect of GI between GTL & EP.
- To examine the mediating effect of GI between GT & EP.

1.4 Research Questions

- What is the impact of GTL on EP?
- What is the impact of GT on EP?
- Does GI mediate the relationship between GTL and EP?
- Does GI mediate the relationship between GT and EP?

1.5 Research Contribution

By elevating people and fostering an environment that fosters green creativity, green transformational leadership can greatly enhance workers' green creativity (Sidney et al., 2022). Therefore, potential contributions to the field of green transformational leadership, green training, and their effects on environmental performance in Pakistan's hotel industry are substantial, especially when considering the mediating role of green innovative culture. Firstly, the purpose of this study is to close the gap in the literature by presenting empirical data on the ways in which Green Transformational Leadership techniques impact the uptake and promotion of eco-friendly practices, particularly in Pakistan's hotel industry. In addition, the research aims to provide valuable insights into developing training frameworks that are specifically suited to the needs of Pakistan's hospitality industry by assessing how well Green Training program perform in preparing hotel employees for sustainable techniques or for effective environmental performance.

1.6 Research Gap

The most important issue that needs to be addressed is the environment. Developing economies face challenges due to environmental difficulties, and the global community is affected by them (Sharif et al., 2021). Although transformational leadership can be crucial to attaining environmental sustainability, there is currently a lack of global focus on this field of study. A study conducted in China (Begum et al., 2021) discovered that green transformational leadership has a significant impact on green innovation. In a study conducted in India, (Mittal & Dhar, 2016) discovered that transformational leadership had a major and beneficial impact on green creativity. (Chen et al., 2014) state that performance, self-efficacy, and mindfulness are all positively impacted in Taiwan by green transformational leadership. In Pakistan, (Zafar & Mehmood, 2019)

conducted research the results showed that green performance is significantly and favourably impacted by green transformational leadership.

The extant body of literature digs deeply into the distinct effects of Green Training and Green Transformational Leadership on environmental performance across a range of industries. However, there is a clear study gap on the combined influence of these characteristics and their mediated link through Green Innovative Culture in the particular context of Pakistan's hotel business. Because most studies have focused on Green HRM, research on green training, environmental performance are lacking (Memon et al., 2022). This is the major gap which needs to cover in previous research and this study focus on this gap by studying about the impact of green training impact on environmental performance and how green training create mindset for the green innovation that promotes the environmental performance.

On the contract, by reviewing past research's, researcher found out that only a few number of empirical research have examined the ways in which these two separate variables (green transformational leadership and green training) interact and affect hotels' environmental performance, especially in the setting of Pakistan. Within the hotel industry, knowledge on the interaction and mediation effect of green innovative culture in linking environmental performance, training, and leadership is yet largely unexplored. The purpose of this research is to focus on this gap by collecting data on these variables interaction and its impact on environmental performance.

1.7 Scope of Study

This study's focus on green transformational leadership, green training, and how these factors affect environmental performance in Pakistan's hotel industry through the mediation of green innovative culture includes a thorough examination of the interrelated dynamics. It entails looking at the tactics used by hotel executives to encourage sustainability, the effectiveness of training initiatives in providing employees with environmentally conscious knowledge and abilities, and the overall effects of these factors on hotels' environmental performance. The research will examine the distinct circumstances surrounding Pakistan's hotel industry, taking into account the diverse range of hotel kinds, sizes, and locations throughout the nation. Furthermore, the study's purview encompasses an analysis of the moderating function of Green Innovative Culture in

molding the correlation among leadership, training programs, and Environmental Performance. This provides valuable perspectives on cultivating a sustainable culture that is customized to meet the distinct requirements of the hotel sector in Pakistan.

Chapter 02: Literature Review

2.1 Independent Variable

2.1.1 Green Transformational Leadership

Transformational leadership inspires their follower to innovate something positive in the environment as well as in the results of organization (Razzaq et al., 2021) Transformation leadership also helps their followers to improve their capacity of work in a healthy organizational environment which can be beneficial for the individuals as well as for the organization. In fact, transformational leadership plays a very important part in achieving environmental sustainability.

Green transformation leadership and transformation leadership is interlinked with each other. In green transformation leadership, leaders generate green productive ideas and green environmental planning inside the organization, by promoting and appreciating individuals towards the mutual green environmental goals of organizations and all individuals working inside it. (Seeck et al., 2016)

Green Transformational leadership plays a vital role to influence the mindset of individuals, they might act as role model for their followers or employees through giving them idea and showing them a path for sustainability. A leader has always a power in their hands to motivate teams and their sub ordinates to improve themselves as well as the environment of the organization. According to research green transformational leaders are the leaders who encourages the behavior which focuses on the environmental performances and create goals of the organization which promotes sustainability (Al-Ghazali et al., 2022).

The future and current processing of an organization depends on the leadership nature of the leaders. If the leaders are transformative then results of organization will be highly positive and those leaders can lead their followers towards green environmental organization. Green performance is just like a software and hardware performance of the innovation process of an organization (Balouch et al., 2023). For their area of responsibility, green transformational leadership communicates a distinct and well-organized environmental vision. They act with devotion to solving environmental issues, sharing their environmental beliefs and talking about the significance of sustainability. They could inspire workers by presenting a picture of a time when

their jobs are more sustainable (Graves et al., 2013). Organizations have been under pressure from a variety of stakeholders, including governments, consumers, communities, and rivals, to address environmental issues, which has resulted in an obligation for them to do so. As a result, it is now necessary to develop leaders that are committed to the environment. In this sense, GTL facilitates the smoother and more efficient operation of facilities. As a matter of fact, GTL motivates individuals to strive towards a common vision for the environment's future (Suliman et al., 2023). The significance of GTL rises with individual and collective production. Environmentally friendly products and the green environment are important considerations for many industrial sectors. A number of managerial decisions and actions are included in the strategic steps to do this in order to provide a better corporate product. Developing strategic plans to use resources to create a stronger competitive edge requires transformational leadership. The fact that implementing green management has a favourable impact on the company's performance lends credibility to its performance (Suliman et al., 2023). Similar to task-oriented leaders, green transformational leaders are equally focused on fostering employee green behavior and integrating employees' green values with the organization's green values in order to achieve sustainable and feasible growth. Additionally, managers that model environmentally conscious behavior and encourage their staff to follow suit exhibit the green idealized impact (Sobaih et al., 2022). According to researcher, the theory of transformational leadership is extended and used in the area of environmental responsibility through the practice of "green transformational leadership." It primarily focuses on motivating people and organizations to take proactive environmental protection actions in order to develop environmental behaviours that go above and beyond expectations and accomplish environmental goals (Liu & Yu, 2023). A company's primary objectives when implementing green practices are to improve environmental performance. Consequently, GTL's job is to make it possible for the business to achieve its financial and sustainability goals (Özgül & Zehir, 2023). Green transformational leadership also helps in improving employee's green creativity, by promoting individuals and creating healthy and green creativity environment. (Sidney et al., 2022). GTL helps in improving employee's awareness of progressive ideas like independence, humanity and generating problems and finding their better solutions.

H1: Green Transformational Leadership positively related with environmental performance.

2.1.2 Green Training

Training is the key point to make a multi-talented employee which is concerned with the development of knowledge and skills which are required for innovation in an organization. Performance of any organization is also associated with the training and development of the employees. Employees must be equipped with the skills that are required to create green environment of an organization or hotels which is why green training is initiated. There is a huge need of research on the obstacles of the training parameters which are required to create green environment. In hotel management leaders must focus on the training of employees that focuses and encourages the environmental performances that stimulates the sustainable practices in the organization. Green training allows leaders to plan seminars, workshops, training, and other events that help their staff members become more knowledgeable about green practices and efficient environmental performance. Green training also refers to the process of on job training and continuous education intended to create corporate environmental targets and purposes (Teixeira et al., 2016). They can also provide instruction on energy conservation, waste management, recycling, and safety (Shah et al., 2022). By enhancing the knowledge, competencies, and abilities necessary for creativity, green training assisted in preparing diverse and multitalented personnel, which enhanced an organization's performance. More sustainability and consistency in the environmental management system's performance can be attained through the use of green training (Yafi et al., 2021). In hotel industry, staff needs a proper training for the better hygiene and to performance sustainable environment practices. (Hassan Jabbar and Muhammad Abid) emphasize that green training providing staff members the fundamental knowledge and abilities needed to gather waste statistics, increase environmental competency, and boost eco-literacy levels inside the company. Employee need to take an interest in initiatives that promote the environment requires environmental training. Employees receive the most recent information through training, which eventually inspires them to give effective environmental performance. In the effort to be green, companies embrace green training (GT) as a sustainable and environmental-friendly strategy. According to (Yafi et al., 2021) By enhancing the knowledge, competencies, and abilities necessary for creativity, green training assisted in preparing diverse and multitalented personnel, which enhanced an organization's performance. Furthermore, the workforce's degree of training has a big impact on how well an organization performs. Employees that receive green training gain information and abilities that are critical to accomplishing the many aims and objectives of the

company, including improved environment performance. Training produces the environmentally friendly knowledge, behaviors, attitudes, and abilities that affect an organization's performance, which is based on its environmental policies (Alam et al., 2023). Through green training, employees can increase their awareness of the environment and acquire knowledge regarding environment and focus on effective environmental performance (Memon et al., 2022).

GT is the core of creating green environment in the organization and any management. It enables all staff whether they are senior or junior it will lead them to integrate the firm's performance with environmental issues (Teixeira et al., 2016). As according to the Ability-Motivation-Opportunity theory employees can perform well when organizations conducted their training sessions to create their abilities and motivation towards mutual goals in context to green training it will help employee to underpin several solutions to reduce environmental impacts (Pinzone et al., 2019).

Green trainings can help individuals to improve their self-efficiencies and self-confidence like they will find solutions to fight against global warming and they will find better solutions on their own, they will know that they can accomplish their most of the environmental goals. Green trainings also create personal initiatives as an inner drive of the employee or an individual to go beyond the scope or to do something which is basically not including their job role but they do to take the more proactive ways of work.

Past studies pinpoint those impacts that were created by the green trainings. (i) Awareness to the managers and employees to show how their daily life decisions can effect environment (Daily et al., 2011). (ii) Give them ability through which they can identify environmental challenges inside their organization as well as outside their organization. (iii) Give them ability to understand complexity of environmental topics and areas (Jabbour et al., 2010). (iv) Give them ability to resolve problems of environmental issues they are facing in their daily workings which are their environmental responsibilities as well as organizational goals (Daily et al., 2011).

Similarly, in hotel management green training plays a very important role as hotel waste materials can directly affect the environment and hotel managers must which decisions can take place on right time to avoid those circumstances which creates global warming. Green trainings can help them with better understanding of reusing waste materials which can be reused, adding up that equipment which are made to control polluted environment. Green training does not only mean to improve environmental areas outside the organization or hotel but also inside the hotel, if

employees are well educated and well trained in hotel they can also motivate daily guests towards the better environmental decisions. Green trainings can create green hotels.

As hotel industry is the one of the highest resource consumption industry, it also produces large amount of waste products especially in the food sector. By adopting green practices which are environment friendly will become a core pillar in many hotels to deal the environmental issues and their respective operational issues (Alreahi et al., 2023). One of the major example is Marriott Global Hotel they trained their staff to adopt green environment policies and programs to protect the environment and resulting in the reduction of waste materials like water and energy consumption by 14% (Karatepe et al., 2022). Green trainings overall increase green and healthy environment hotels as well as it is highly affective for hotel employees in terms of their self-confidence and their achievements regarding creating healthy and green environment which can automatically positively affects the benefits of the hotel.

H2: There is a positive relationship between green training and environmental performance.

2.2 Dependent Variable

2.2.1 Environmental Performance

Maintaining an organization's overall success and protecting the environment from harmful effects (such as pollution and trash) depend heavily on its environmental performance (Tosun et al., 2022). GTL and green training has an impact on the behavior of employees that focus on the environmental performances. The impact of GTL on the company's environmental policy and the eco-friendly behaviour of its personnel. (Brown et al., 2005). Green values and a transformational leader will influence his subordinates' green behaviour. He will inspire subordinates to overcome obstacles by focusing more on environmentally friendly aspects of the organization, consider sustainable organizational development, and find creative solutions to environmental problems. He will also build strong relationships with staff members to impact their environmental performance (Robertson & Carleton, 2017). Green training includes teaching employees how to do tasks in a way that protects energy, cuts down on waste, raises knowledge of environmental issues inside the company, and gives them the chance to get involved in finding solutions to environmental issues. The quantity, quality, efficacy, and assessment of training are all indicators

that determine how green a company is with its green initiatives (Jabbour & de Sousa Jabbour, 2016).

If we go through the resource-based view, organizations usually set their goals towards strategies that can create value to the firm environmental performance and produce improved productivity in order to get competitive advantage to their competitors (Schmitt, 2012). Environmental performance can be a gauge of the degree of the success of an organization as well as its employees which are engaged in the environmental programs for reducing the environmental problems like reducing the negative effect of manufacturing process of the company and waste on the natural environment on the minimum level (Wong et al., 2013).

Managerial procedures play vital role in environmental performance that assist a firm to organize its green initiative and practices by hiring green aware people (Karatepe et al., 2022). In hotel management it also plays a vital role as in hotel management managers should know green innovative ways to protect global environment and to solve environmental challenges within the hotel and outside the hotel.

Green training will increase green environmental awareness, green creativity and green environmental performance (Singh et al., 2020). Previous researches did research on these but still these areas need a lot of research and focus specially where organizational and hotel sector is evolving fast and firms are facing pressure from stakeholders to maintain eco-friendly management practices. Organizations and hotels should hire those personals who have potential by drawing upon their environmental beliefs with knowledge and productivity (Jackson et al., 2010).

Green training and green leadership management affect competitive advantage and the green image of organization and hotel and they also positively affect environmental performance. The major key factor in improvement of environmental performance is green managerial solutions, through it we can motivate employees and staff towards green solutions of environmental problems and in the procedures that are followed by the staff and employees (Chiou et al., 2013). When employees are empowered and well trained about the green innovations and they are fully confident to make their own decisions then they can positively create green environment. An employee of hotel and organizations should be empowered to identify and rectify the harmful procedures in daily life operations of their company. For example, they should be able to identify

the procedure of reducing raw materials and using recycled products in operations to make environment green. This will increase the environmental performance.

Green transformational leadership has direct impact on environmental performance as managers and leaders will create best practices for the employees to work in green environment with clear vision and motivation for them. Moreover, employees can be capable enough to arrange self-audits for their own processes and pin point those areas where environmental performance needs to be focused and improved (Pinzone et al., 2019). Therefore, GTL can influence individuals of the organization and hotel towards the awareness of environmental protection to improve environmental performance of hotel (Rehman et al., 2022). By turning the attention of employees and organizational operations towards green environmental procedures we can improve the environment performance of the hotel. It will reduce negative effects of operations in the environment and create a green environment within the hotel and outside the hotel.

There is another factor which can have impact on environmental performance that is environmental management (King et al., 2000). Hotels can manage their environmental problems like managing their wastes in many ways to differentiate between source reductions activities from pollution control treatment. We can consider two major ways in this first one is making full controls on hotel's waste products before they can create pollution and second one is awareness in staff so that they can identify procedures that can cause environmental pollution and rectify those areas which will improve environmental performance.

Green operational practices play a vital role in environmental performance. It will enhance the overall operations of hotel and generate green environment. According to (Yu et al., 2020) firms that implement green operational practices in effort to obtain stockholders approval can gain competitive advantages and better environmental returns. In the green operational practices managers are the main employees which will create green environmental management and implementing those decisions which will improve environmental performance.

2.3 Mediating Variable

2.3.1 Green Innovation

Green transformational leadership and green training bring the idea for green innovation which leads towards the environmental performance and promote sustainability. Green innovation performance is centered on process redesign that minimizes negative environmental effects through water and waste management (Shah et al., 2022). (Albort-Morant et al., 2016) states that creating environmentally friendly products and processes is referred to as green innovation. Green innovation's main objective is to enable businesses to fulfil evolving customer needs, add value, and improve innovative performance all while preserving the environment. Managers and internal stakeholders integrate human resources into green innovation initiatives developed by organizations to minimize their environmental consequences (Balouch et al., 2023). To promote green innovation and encourage employees' creativity green transformative leadership uses human resource management that is important. (Balouch et al., 2023). Green innovation is innovation with the potential to reduce negative environmental effects while still achieving a company's environmental goals and producing positive environmental effects. High environmental ability and awareness employees are better able to come up with original and advantageous environmental management goals, which boosts the company's green innovation. It is therefore important for organizations to choose employees who are dedicated to environmental responsibility in order to support and uphold green innovation (Fang et al., 2022).

Green innovation fosters economic expansion and progress, being a relevant aspect in overcoming the current environmental crisis (Yang & Zhu, 2022). (Tseng et al., 2013) states that Sustainable development requires green innovation as a prerequisite. This type of innovation entails altering products, procedures, and technologies to minimize harm to the environment and optimize resource usage, which, among other advantages, enables companies to reduce production costs and lead times (Xie et al., 2019). Green innovations increase the productivity and profitability of businesses by attracting new customers who are prepared to spend more money on environmentally friendly goods and services (Ali et al., 2020). Innovation in green products and processes not only reduce the company's detrimental environmental effects, but they also boost the company's social and financial performance by cutting costs and waste (Weng et al, 2015). Environmental performance is contingent upon the quality of products that are environmentally

friendly, innovation of green processes and products, and the integration of ecological sustainability considerations into business operations and product development (Oliva et al., 2019).

Green innovation can be classified in to green product and green process innovations. Green product means those products which made through the proper implementations of green product designs and manufacturing process (Chan et al., 2012). In product design, green innovation includes the processing of modifying the existing product design to reduce any negative impact on environment during its stages of product lifecycle. And if product is made through green manufacturing process then product will be environment friendly as well as the manufacturing process itself will be the green process. In these both factors green managerial processes play important role because green managerial innovation will generate green environment and green products by making green policies that will positively affect firm performance and green environment.

According to (Zhu et al., 2004) the commitment from top to middle level management there is a significant influence about green environment found in the most of the organizations. And these managers motivate their subordinates to come towards green practices. Therefore, green innovation is consisting of three major green product, green manufacturing and green managerial process.

As environmental issues are rapidly increasing and most of the customers, buyers required their suppliers to offer products and services which can be made after the consideration of environmental issues. Therefore, suppliers are the key individuals, and its necessary to work with them in the initial stages of product development process to reduce material and packaging which can create harmful environment. It can also be effective if managers allow suppliers in generation process of product to follow green environment processes and to improve overall compliance with environmental regulations. Green innovation is one of the important factor to increase the corporate competitive advantage. Using more environmental regulations this is necessary to the whole product life cycle while making of the product and designing process decisions. As green processes and products not only increase green environment but they are also play a role in achieving competitive advantages.

Green innovation is further categorized in more aspects that are technology, management functions, product manufacturing process and design (Chiu et al., 2013). For green innovation another key factor is green innovation strategy which is about to make a strategy to reduce waste materials and preventing pollutions.

H3: There is direct positive effect of GTL on EP through green innovation.

H4: There is direct positive effect of GT on EP through green innovation

H5: There is indirect positive effect of GTL on EP through green innovation.

H6: There is indirect positive effect of GT on EP through green innovation.

2.4 Theory and Theoretical Framework

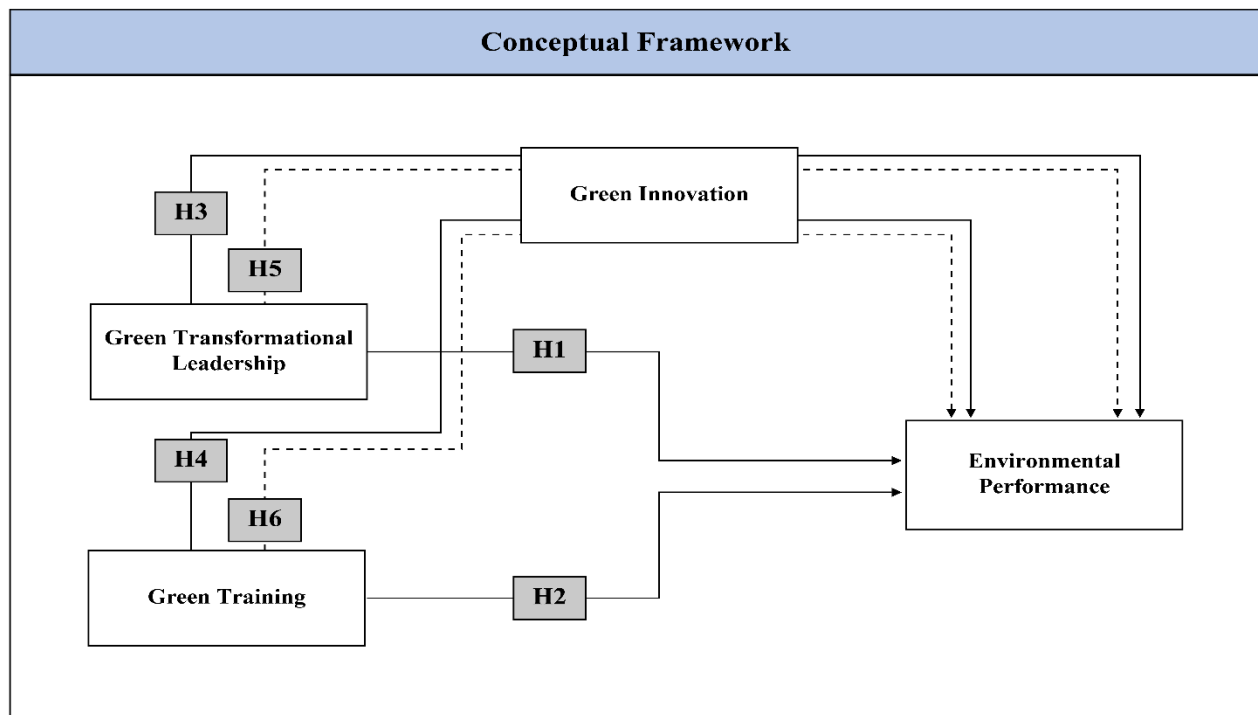
The research model is based on Resource-based view (RBV) and Ability-motivation-opportunity theory (AMO). Drawing upon these theories, researcher create a connection between the green transformational leadership (GTL), green training, green innovation, and environmental performance. According to (Takeuchi et al., 2007) the HRM literature demonstrates the strong connection between the idea of human capital and innovation. According to the RBV, a company's competitive edge, market position, reputation, and goodwill are all dependent on its strategic resources, which are essential and difficult to duplicate (Sun et al., 2022).

The AMO hypothesis states that HPWS are a collection of HR procedures organized around three primary axes: opportunity, motivation, and ability (AMO) (Harrell-Cook, 2001). In terms of abilities, certain techniques are used to guarantee that employees exhibit the skills and expertise required to carry out a particular task, such as training and development initiatives and recruiting and selection procedures. Motivation is also predicated on performance evaluation and the use of monetary and non-monetary rewards to encourage individuals to meet their performance objectives (Sun et al., 2022).

Lastly, an opportunity is a collection of rules that promote worker engagement in diverse endeavors by means of heightened engagement, information sharing, and individual freedom. In our opinion, leadership and staff are just as vital as any other company resource, and the major goals of GHRM practices are to advance, inspire, and provide chances for employees to perform

extra hours so that businesses can maintain their competitive edge and achieve extraordinary performance. Moreover, supplier and customer cooperation is essential to developing employees' capacity for green training (Yu et al., 2020; Ding et al., 2022; Sun et al., 2022). Similar to this, the relationship between the company and its employees is one of its most important resources. The primary objective of the company's GHRM is to generate and offer opportunities for development along with the right kind of motivation, which may enable them to give the company a competitive edge and raise performance to a new level (Al-Ghazali et al., 2022; Sun et al., 2022).

As a result, the basic framework of this study is built upon the fundamental RBV principle that uses human resources to give businesses a competitive advantage and a favourable market position. Furthermore, the human capital that really transforms the policies and practices into the implementation and outcomes that allow the firm to defeat its competitors is highly tied to the structure and procedures of the business. (Singh et al., 2020; Khan et al., 2021; Sun et al., 2022).



Figure#1: Conceptual Framework

Chapter 03: Methodology

3.1 Research Design

The main objective of developing a research design is to gather and evaluate data on the chosen variables in a study in an organized and methodical manner. It acts as the study's blueprint, offering an organized and thorough plan that guarantees a precise and dependable framework for carrying out the investigation. In order to obtain reliable data and assess the causal linkages between the independent and dependent variables under investigation, this methodology is essential.

To validate the current research findings in the context of this study, the researcher has opted to use quantitative analysis. This strategy is in line with positivism and deductive analysis, which allow the researcher to carry out a quantitative study in an efficient manner. In order to validate a prior assumptions, which are frequently expressed quantitatively, positivism uses the hypothetical-deductive technique, which allows for the derivation of functional relationships between causal and explanatory factors (independent variables) and outcomes (dependent variables) (Yoon Soo Park.) The researcher can align the study with a quantitative character by following positivist principles and deductive reasoning. Developing a hypothesis (or hypotheses) based on existing theory, and then designing a research strategy to test the hypothesis is the goal of a deductive approach (Wilson, J. 2010). This will make it easier to obtain numerical data, which can then be analyzed using SPSS software. Data collection was done by the self-administrated questionnaire.

Since the majority of the data used in the study is numerical, the nature of data collecting makes the research itself quantitative. The quantitative methodology is further supported by the use of SPSS software, which facilitates thorough assessment and statistical analysis. (Shah and Corley 2006) defined quantitative research as the methodical collection and examination of numerical data. It is a methodical strategy that uses statistical methods and tools to investigate natural events in a methodical manner.

The research's quantitative methodology highlights the study's empirical and systematic nature, as well as its commitment to finding correlations and drawing accurate conclusions from numerical data. The research adheres to the principles of objectivity by using deductive analysis and a

positivist methodology, which emphasize the importance of facts and numerical data in identifying links among variables.

3.2 Time Horizon

Data were acquired by means of a cross-sectional methodology, which entails a simultaneous evaluation of several unique subjects (or objects) at a particular moment in time, with each observation pertaining to a separate subject. The researcher simultaneously measures the study participants exposures and outcomes at the same time in a cross-sectional study. In a cross-sectional study, participants are chosen solely on the basis of the inclusion and exclusion criteria established for the research (Setia, 2016). Because the data is only gathered once during a given period of time, it can be concluded from this that the research is cross-sectional in nature.

3.3 Population and Size

The study aims to identify 200 respondents who work in Pakistan's hotel business, the data was collected mainly from twin cities and Lahore. In order to guarantee a sufficient representation of diverse hotel establishments across different regions and operational scales within the nation, this sample size has been selected. The 200 sample size was selected on the bases of Morgan's table. Krejcie & Morgan (1970) developed a table for calculating sample size for a given population for convenient reference which states that if the population size is around 400 the sample size should be 196 (Bukhari, 2021). The study aims to obtain a comprehensive understanding of how green transformational leadership, green training, and green innovation affect environmental performance by choosing 200 respondents, who are managers, workers, and environmental officers from a variety of hotels. Due to the diverse and inclusive nature of the dataset provided by this population, a more thorough examination of the relationships and dynamics under study within the framework of Pakistan's hotel business is possible.

3.4 Sampling Technique

According to (Elfil & Negida, 2017) there are two main types of sampling techniques: probability sampling techniques, in which each member of the target population has an equal chance of being chosen for the sample. Non-probability sampling techniques, in which the target population is selected by a non-systematic procedure that does not ensure that every subject has an equal chance of being included. There are different types of sampling that researchers used to in their research according to their time frame. In this study, researcher use convenient sampling technique. When using convenient sampling, researchers enlist participants based on their accessibility and

availability. As a result, this approach is easy, affordable, and rapid (Gravetter & Forzano, 2012).

3.5 Measurement Instrument

A self-administered questionnaire will be the main tool used to collect data in order to examine the impact of Green Transformational Leadership (GTL) and Green Training (GT) on environmental performance in Pakistan's hotel industry, as well as the mediating role of Green Innovation (GI). The scales and items on the questionnaire will be established and validated by previous research conducted in similar circumstances. The measurement instrument will comprise multiple sections.

Variables	No. of Items	Sources
Green Transformational Leadership	5	(Mittal, 2016)
Green Training	4	Mousa and Othman (2020)
Environmental Performance	4	(Oreja-Rodríguez & Armas-Cruz, 2012)
Green Innovation	4	A. El-Kassar (2019)

The final questionnaire has strong content validity and structural validity. Likert's five-level scoring system is used in all questionnaires; 1–5 indicates Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree. The Statistical Package for the Social Sciences (SPSS) tool was used in this study as a data analysis tool based on the type of data. Furthermore, the descriptive Statistics was utilized to ascertain whether the data were normal or abnormal, and the reliability test was employed to assess the questionnaire's reliability. In addition, correlation analysis was performed to ascertain the relationship between the variables, and linear regression was employed to ascertain if the linear hypothesis was accepted or rejected. In the end, Preaches and Hayes method is used to test mediation between the variables. A popular statistical technique known as the "Process macro" and is used extensively in social science research to analyze conditional process models, moderation, and mediation. Using this approach, researchers can investigate the processes and circumstances that determine how different variables interact and impact one another in a model (Hayes, 2012).

Chapter 04: Results and Findings

4.1 Demographic Analysis

The participant demographics for age, gender, job level, and education. The demographic data, which includes the distribution of participants by age, gender, work experience, education, and job level, has been provided by the researcher in tables. The percentages and numerical counts in these tables show the breakdown of participants by category.

Gender Analysis

Gender	Number of Participants	Percentage
Male	156	78
Female	44	22
Total	200	100

Table No. 4.1(A) Gender Analysis of Participants

A statistical analysis of the demographics of the responders reveals that, out of the 200 participants, men are overwhelmingly represented. In particular, 156 of these respondents were men, comprising 78% of the sample, while 44 of them were women, or 22% of the total. As a result, the distribution indicates that there were somewhat more men in the sample under study.

Age Group Analysis

Age Group	Number of Participants	Percentage
18 - 25 Years	35	17.6
26 – 34 Years	48	24.1
35 – 42 Years	50	25
43 – 50 Years	55	27.6
Above 50 Years	12	6
Total	200	100

Table No. 4.1(B) Age Group Analysis of Participants

A detailed breakdown of the ages of the respondents in the survey is provided in Table 4.1 (B), which provides important information about how the participants were distributed across different age groups. With 27.6% of the sample, the greatest contingent is made up of people who are between the ages of 43 and 50. As a result, individuals between the ages of 26 and 34 make up 24.1% of the participants, and those between the ages of 35 and 42 make up 25%. In addition, 17.6% of the respondents are between the ages of 18 and 25, while 6% of the participants are above the age of 50. This thorough analysis offers a clear picture of how research participants were distributed across various age groups.

Respondent’s Education Analysis

Education	Number of Participants	Percentage
Undergraduate	50	25.1
Graduate	93	46.5
Post Graduate	57	28.6
Total	200	100

Table No. 4.1(C) Education Analysis of Participants

The current study's Table 4.1(C) shows how the sample was categorized according to their educational backgrounds, providing insight into the wide range of educational backgrounds among the targeted employee group. The data indicates that 46.5% of the sample, or the greatest share, had graduate-level qualifications. After this, there are 57 workers with postgraduate degrees, or 28.6% of the sample as a whole. Employees with less than a bachelor's degree make up 25.1% of the sample, or 50 respondents.

Job Level Analysis

Job Level	Number of Participants	Percentage
Senior-level	50	25
Middle-level	102	51
Junior-level/ subordinate	48	24
Total	200	100

Table No. 4.1(D) Job-Level Analysis of Participants

The distribution of respondents grouped by job level is shown in Table 4.1(D), which provides an insightful overview of the organizational diversity in the sample population. The data indicates that the majority of the participants, or 51% of them, hold mid-level roles in their respective organizations. Senior-level roles, on the other hand, draw about 28% of the sample population. Junior employees also make up roughly 11% of the sample as a whole.

4.2 Reliability Analysis

Reliability analysis in research plays a vital role by using approaches to assess the consistency and dependability of a measurement tool. Its main objective is to determine whether the tool measures the target construct consistently and reliably in different scenarios. The consistency of the scale items is examined in this analysis in order to determine whether or not they add up to a complete assessment of the construct. Cronbach's alpha was used to test internal consistency and establish the instrument's reliability. A Cronbach's alpha value of more than 0.6, acceptable between 0.6 and 0.8, indicates the reliability of the item (Hajjar, S. T. 2018)

Reliability Analysis

Variables	Number of Items	Alpha Value
Green Transformational Leadership	5	0.725
Green Training	4	0.688
Environmental Performance	4	0.724
Green Innovation	4	0.735

Table No. 4.2 Reliability Analysis of Variables

The data displayed in Table 4.2 outlines the conclusions drawn from the reliability analysis carried out for the different variables on the scale. The alpha coefficients for each construct show dependable metrics for internal consistency. In particular, the Green Transformational Leadership construct had an alpha value of 0.725, which is an excellent indication of the consistency of its component parts. Likewise, the Green Training construct demonstrated internal consistency, as seen by its alpha coefficient of 0.688. The constructs of Green Innovation and Environmental Performance, each consisting of four items, also demonstrated good internal consistency, with alpha values of 0.724 and 0.735, respectively. These alpha coefficients highlight the consistency of assessment for these elements by confirming the coherence and reliability of the items within their respective constructs.

4.3 Descriptive Statistics

Using instantaneous processes such as mean, standard deviation, skewness, and kurtosis to provide an impression of a dataset is known as descriptive statistics in SPSS. By outlining the relationship between the variables in a sample or population, descriptive statistics help to organize and summarize data. When conducting research, calculating descriptive statistics is an essential initial step that should always be completed before performing inferential statistical comparisons. Therefore, in order to lower the possibility of presenting false results, it is crucial as part of good research practice to provide the most relevant descriptive statistics using a systematic approach. Given the significant role that statistical analysis will play in shaping the hotel industry's future, green transformational leaders and managers can more accurately assess how green innovation will affect environmental performance by utilizing descriptive statistics appropriately. This study offers brief and useful information that facilitates clear understanding and communication. Moreover, researcher use statistical analysis to evaluate value distributions, spot trends, and clearly communicate their conclusions.

Descriptive Analysis

Variables	Mean	SD	Kurtosis
Green Transformational Leadership	7.62	3.730	2.22
Green Training	6.10	3.129	2.21
Environmental Performance	5.95	3.194	2.77
Green Innovation	5.79	3.132	3.51

Table No. 4.3 Descriptive Analysis of Variables

An examination of the different variables is shown in Table 4.3. In this case of Green Transformational Leadership, the standard deviation (SD) is 3.730 and the mean score is 7.62. With a computed kurtosis value of 2.22, the distribution is almost like a normal curve. Similar results are shown for Green Training, where the mean score is 6.10, the standard deviation is 3.129, and the kurtosis value is 2.21, suggesting a distribution that is roughly normal. With respect to Environmental Performance, the mean score is 5.95, and the corresponding standard deviation is 3.194. With a kurtosis value of 2.77, the distribution appears to have properties similar to a normal curve. Regarding Green Innovation, the average score is 5.79, with a 3.132 standard deviation. In contrast to a typical normal distribution, which has a kurtosis value of 3.0, the distribution with the greater kurtosis value of 3.51 is slightly taller than the normal curve, indicating larger tails. These descriptive statistics provide insightful information about each variable under investigation's distribution, variability, and central tendency.

4.4 Correlation Analysis

Correlation analysis is used in the context of SPSS to ascertain the direction and strength of a linear relationship between two variables. This statistical technique is applied to both the identification of observable data patterns and the establishment of correlations between different variables. Determining the direction of the outcomes and assessing the relationship's strength are the main goals of this analysis. The degree and direction of the relationship between variables are measured using the Pearson correlation coefficient. The variables have a positive association when the Pearson correlation value is positive, which suggests that when one variable rises, the other also

tends to rise. A negative Pearson correlation value, on the other hand, denotes a negative association and implies that one variable tends to decrease as the other grows.

A critical component of statistical analysis is the definition of correlation strength based on correlation coefficient magnitude. A correlation that is extremely weak or inconsequential falls between -0.1 and 0.1. A weak correlation is indicated by coefficients between 0.1 and 0.3, which could indicate a moderate and possibly inconsistent association between the variables. A moderate degree of correlation is denoted by correlation coefficients between 0.3 and 0.5, which show a discernible but not absolute relationship between the variables. Strong correlations, or values falling between 0.5 and 1, indicate a clear and consistent association between the variables.

Correlation Analysis

Item	Variables	1	2	3	4
1	Green Transformational Leadership	1	.515**	.348**	.365**
2	Green Training		1	.516**	.507**
3	Environmental Performance			1	.732**
4	Green Innovation				1

Table No. 4.4 Correlation Analysis of Variables

Green Transformational Leadership, Green Training, Environmental Performance, and Green Innovation all show significant correlations when the variables are analyzed through correlation analysis. Green Training ($r = 0.515$), Environmental Performance ($r = 0.348$), and Green Innovation ($r = 0.365$) are the factors with which Green Transformational Leadership has comparatively positive associations. Green Transformational Leadership ($r = 0.515$) and Environmental Performance ($r = 0.516$) show strong positive associations with Green Training, indicating that these dimensions are related. Green Transformational Leadership ($r = 0.348$) and Green Training ($r = 0.365$) exhibit moderately positive correlations with Environmental Performance, suggesting additional connections between these elements. Additionally, there is a propensity for these variables to co-vary as evidenced by the very strong positive correlations of

Green Innovation exhibits with Green Transformational Leadership ($r = 0.365$), Green Training ($r = 0.507$), and Environmental Performance ($r = 0.732$).

4.5 Regression Analysis

A statistical method used to investigate and measure the relationship between one or more independent variables and a dependent variable is regression analysis. Predicting the dependent variable's result mostly depends on the independent factors' ability to support the dependent variable. This analytical technique is widely used to understand the relationships between variables and generate accurate predictions in a variety of domains, including economics, social sciences, and natural sciences.

Regression model validity acceptance criteria are frequently based on statistical tests that guarantee reliability. For example, one frequently used criterion is the F-test, where a value of at least 4 is desired to determine the overall significance of the regression model. Another frequently used criterion is the T-test, which is used to assess the significance of individual coefficients and a value of at least 2 is deemed acceptable.

Moreover, a crucial element in assessing the strength of the link between the compared variables is the significance level, which is frequently expressed as a p-value. An extremely low possibility that the observed association is the result of chance is shown by a p-value of 0.000, which implies a substantial statistical significance between the variables being examined. It's crucial to remember that although these thresholds (F-test 4, T-test 2, significance level = 0.000) are frequently used as accepted standards, their applicability can vary based on the study's objectives, sample size, and particular field of study. To achieve a thorough grasp of the interactions between variables, researchers frequently take into account other aspects such as effect size, confidence intervals, and practical significance when evaluating regression analysis results.

Regression Analysis of H1

Hypothesis	IV	DV	R2	Beta	F	T	Sig.	Action
H1	GTL	EP	.121	.348	27.293	5.224	.000	Accepted

Table No. 4.5(A) Regression Analysis of H1

There is a statistically significant correlation between GTL (Green Transformational Leadership) and EP (Environmental Performance), according to the findings of the regression analysis conducted to support *Hypothesis H1*. Regression analysis indicates a significant relationship between the factors under consideration, even if it only explains a small percentage of the variability in environmental performance ($R^2 = 0.121$). The standardized effect size of GTL on EP, represented by the beta coefficient (Beta = 0.348), has strong statistical significance ($F = 27.293$, $p < 0.001$).

These results indicate that Green Transformational Leadership has a beneficial and noticeable impact on Environmental Performance in the organizational setting, especially in sectors like the hospitality industry, where hotels are found. As a result of the validated results, H1 is accepted, highlighting the critical function that diligent GTL plays in enhancing environmental performance in organizational contexts. This emphasizes how proactive and environmentally responsible leadership techniques can promote better environmental outcomes in particular industries, such as the hotel industry, and hence support sustainable practices and favourable organizational outcomes.

Regression Analysis of H2

Hypothesis	IV	DV	R2	Beta	F	T	Sig.	Action
H2	GT	EP	.266	.516	71.853	8.477	.000	Accepted

Table No. 4.5(B) Regression Analysis of H2

Regression analysis results for *Hypothesis H2*, which examines the link between GT (Green Training) and EP (Environmental Performance), show a significant correlation. While accounting for a moderate amount of the variability in Environmental Performance ($R^2 = 0.266$), the regression model clarifies a significant relationship between the variables that are being studied. The standardized impact of GT on EP, represented by the beta coefficient (Beta = 0.516), exhibits a statistically significant level of variation ($F = 71.853$, $p < 0.001$). These results clearly suggest that green training program have a beneficial impact on a hotel's environmental performance.

As a result, these validated findings support the adoption of Hypothesis H2, which states that hotels that incorporate strong green training program for their staff typically demonstrate higher environmental performance than their rivals. This means that in the highly competitive hotel sector, businesses who priorities thorough environmental training program for their employees have a higher chance of achieving outstanding environmental performance outcomes. A company that places this much focus on green training not only encourages environmentally conscious behaviour among its employees, but it may also help them stand out from the competition.

Regression Analysis of H3 & H5

Total, Direct and Indirect Effect of GTL on EP through green innovation

Total Effect of X on Y						
	Effect	se	t	p	LLCI	ULCI
	.3724	.0713	5.2242	0.0000	.2319	.5130
Direct Effect of X on Y						
	Effect	se	t	p	LLCI	ULCI
GI	.2995	.0553	1.7985	0.0000	.2555	.2087
Indirect Effect(s) of X on Y						
	Effect		BootSE		BootLLCI	BootULCI
GI	.2729		.1011		.0562	.4524

Table No. 4.5(D) Regression Analysis of H3 & H5

Through the mediating element of green innovation (GI), the data presented shows the overall, direct, and indirect benefits of green transformational leadership (GTL) on environmental performance (EP). Comprehending these impacts illuminates the complex interplay among GTL, GI, and EP, particularly in relation to their interaction in the hospitality sector. A significant t-value of 5.2242 ($p < 0.0000$) indicates that the overall impact of GTL on EP, taking into account both direct and indirect pathways through GI, is 0.3724. After GI's mediating effect and direct influence are taken into consideration, the total effect represents the combined effect of GTL on EP. GTL has a direct effect of 0.2995 on EP through GI. This direct effect suggests that GTL has an impact on EP with GI acting as a mediator. The finding implies that, even in the case of the

direct channel alone, there is a measurable direct influence, but not one that reaches statistical significance. GTL's indirect impact on EP via GI is computed as 0.255. This effect illustrates how GI mediates the impact of GTL on EP. Given that zero is excluded from the confidence interval (BootLLCI = 0.0562, BootULCI = 0.4524), which indicates a significant mediation effect, the indirect pathway has a statistically significant effect.

Although there is a clear relationship between GTL and EP, the data show that this relationship is not statistically significant on its own. However, the effect of GTL on EP becomes statistically significant when taking into account the entire effect, which includes both the direct and indirect channels through GI. This demonstrates how important Green Innovation is as a mediator in the link between GTL and EP in the hotel sector. The importance of Green Innovation as a mediator in converting the influence of GTL into improved Environmental Performance is shown by the noteworthy indirect effect of GTL on EP through GI. It implies that a crucial channel for realizing the effect of GTL on EP in hotel operations is Green Innovation. Hotel industry leaders may prioritize and invest in innovative green practices by knowing and utilizing this mediation effect. It emphasizes how crucial it is to create an atmosphere that promotes and facilitates the adoption of environmentally friendly ideas, improving environmental performance all around. For hotel management looking to strengthen their sustainability programmes and lessen their environmental effect, this knowledge can act as a strategic guide.

Regression Analysis of H4 & H6

Total, Direct and Indirect Effect of GT on EP through green innovation

Total Effect of X on Y						
	Effect	se	t	p	LLCI	ULCI
	.5267	.0621	8.4766	0.0000	.4042	.6492
Direct Effect of X on Y						
	Effect	se	t	p	LLCI	ULCI
GI	.1992	.0557	3.5758	0.0000	.0893	.3090
Indirect Effect(s) of X on Y						
	Effect		BootSE		BootLLCI	BootULCI
GI	.3275		.0705		.1713	.4487

Table No. 4.5(E) Regression Analysis of H4 & H6

Through the mediating component of green innovation (GI), the data presented illustrates the overall, direct, and indirect benefits of green training (GT) on environmental performance (EP). These impacts highlight the mediating function of Green Innovation in this setting within the hotel business and provide insightful information about the link between GT, GI, and EP. When the direct impact and the mediated influence through GI are taken into consideration, the total effect of GT on EP is 0.5267, with a very significant t-value of 8.4766 ($p < 0.0000$). This combined effect, which incorporates both the direct pathway and the indirect action through GI, shows the overall impact of GT on EP. According to GI, the direct impact of GT on EP is 0.1992, with a p-value of 0.0004 that is very significant. The statistical significance indicates that GT has a clear direct impact on EP with the need for Green Innovation to act as an intermediary. According to GI, the direct impact of GT on EP is 0.1992, with a p-value of 0.0004 that is very significant. The statistical significance indicates that GT has a clear direct impact on EP without the need for Green Innovation to act as an intermediary. Using GI, the indirect impact of GT on EP is computed as 0.3275. This effect illustrates how GI mediates the impact of GT on EP. The confidence interval (BootLLCI = 0.1713, BootULCI = 0.4487) not including zero, which denotes a significant mediation effect, supports the result's considerable indirect effect.

The information emphasizes how important it is for Green Innovation to act as a mediator in the interaction between GT and EP in the hotel sector. Although GT has a significant direct impact on EP, the mediation analysis shows that GI has an equally significant indirect impact. The statistically substantial indirect effect emphasizes how crucial Green Innovation is as a route for channeling and realizing the impact of GT on EP in hotel operations. This highlights how important cutting-edge green practices are to converting the impact of green training into improved environmental performance. Stakeholders in the hotel sector should prioritize investments and activities meant to develop an innovative culture of sustainable practices by realizing and understanding this mediation effect. In order to improve overall Environmental Performance within the hotel industry, it highlights how important it is to incorporate and promote environmentally friendly innovations as a strategic strategy. Making use of this knowledge can help business executives develop focused plans that take advantage of the interplay between Green Training, Green Innovation, and Environmental Performance. This will help them achieve sustainability goals and gain a competitive edge in the marketplace.

Chapter 05: Discussion and Conclusion

5.1 Discussion of the finding

Significant implications arise when one considers the potential mediating role of Green Innovation (GI) in the observed positive relationships between Green Transformational Leadership (GTL), Green Training (GT), and their impact on Environmental Performance (EP) in the context of Pakistan's hotel industry. Given the obvious benefits of the relationship between GTL and GT and the impact that these relationships have on EP, it appears that hotels in Pakistan that exhibit good GTL practices prioritize staff green training program. This focus improves these institutions' environmental performance in addition to being consistent with the organizational culture.

Furthermore, a promising possibility is revealed when Green Innovation is included as a possible mediator in this interaction. Green innovation, which includes integrating eco-friendly procedures, practices, and technologies into hotel operations, is probably going to be crucial. When mediated by green innovation, the positive connection between GTL, GT, and EP implies that hotels that actively promote eco-friendly practice innovation may further improve their environmental performance.

The significance of Green Innovation suggests that hotels in Pakistan have a significant opportunity. These organizations have the potential to foster a culture that not only promotes eco-conscious behaviour but also fosters a spirit of continuous innovation in sustainable practices when led by visionary Green Transformational Leadership. This innovation could take many different forms, such as integrating resource-conserving procedures, implementing effective waste management plans, or adopting renewable energy sources. When taken as a whole, these program have a favourable effect on hotels' environmental performance.

The collaborative relationship between GTL and GT, as well as the effect on EP that follows through the use of Green Innovation, provide a comprehensive strategy for sustainable growth in the hotel sector of Pakistan. It suggests that hotels can make a substantial contribution to lowering their environmental footprint while still being competitive and appealing to environmentally conscious customers by fostering a culture of environmental awareness through leadership and training initiatives and further complementing it with creative sustainable practices.

The potential for Pakistan's hotel industry to embrace sustainability as a core value and a key driver of success in both environmental conservation and market competitiveness is highlighted by these overall positive interrelationships among Green Transformational Leadership, Green Training, and their impact on Environmental Performance, mediated by Green Innovation.

5.2 Conclusion of the Study

The complex interactions between Green Transformational Leadership (GTL), Green Training (GT), Green Innovation (GI), and their combined impact on Environmental Performance (EP) in Pakistan's hotel industry provide a detailed picture of the dynamics of sustainability in this field. Profound insights are revealed by the mediation study that focuses on GTL and GT's impact on EP through the mediating mechanism of GI. It is clear that, even while GTL and GT by themselves show a direct beneficial influence on EP in hotels, Green Innovation's mediation effect increases their impact on Environmental Performance. The report concludes that Green Innovation plays a crucial role in bridging the gap between staff training, leadership initiatives, and the ultimate influence on Environmental Performance in Pakistan's hotel business. By enhancing and directing the beneficial benefits of green transformational leadership and green training into concrete advancements in environmental sustainability within hotel operations, green innovation acts as a catalyst.

This conclusion emphasizes how important it is for stakeholders and hotel management to understand the value of creating an environment that continuously promotes and fosters innovation in sustainable practices. The results highlight the significance of funding programmes that support and apply environmentally friendly technology, procedures, and approaches. Incorporating Green Innovation with GTL and GT into the organizational structure allows hotels to improve their environmental performance, reduce their environmental impact, and follow the trends in global sustainability. Furthermore, recognizing Green Innovation's mediating role provides a strategic roadmap for Pakistan's hotel sector. In order to stand out in a crowded market and satisfy the growing demands of environmentally concerned guests, it necessitates a deliberate effort to adopt cutting-edge approaches to sustainability. Essentially, the last observations emphasize the complementary nature of GTL, GT, and Green Innovation, highlighting the necessity of a comprehensive strategy for sustainability projects in Pakistan's hotel sector. Adopting this triadic link promotes environmental responsibility and boosts market competitiveness, establishing hotels

as leaders in sustainable operations and favourably impacting both economic expansion and ecological preservation.

5.3 Implications for Practice

5.3.1 Practical Implications

The integration of green transformational leadership, green training, and the mediating role of green innovation in the hotel industry in Pakistan offers a wide range of useful ramifications that can have a big impact on sustainability practices, operational effectiveness, market positioning, and general business success.

Developing a Sustainability Mindset: The results highlight how crucial it is to help hotel organizations develop a sustainable culture. Facilitating an atmosphere where environmental consciousness is embedded in the organizational ethos is achieved through empowering and encouraging leaders to demonstrate and model Green Transformational Leadership behaviours. In a similar vein, encouraging workers to participate in Green Training programmes fosters the awareness, knowledge, and abilities needed to put sustainable practices into effect.

Investment in Comprehensive Green Training projects: Based on real-world experience, it appears that funding such projects is essential. These initiatives foster a workforce that is in line with the organization's sustainability objectives in addition to improving employee capabilities. In order to adjust to new sustainable practices and technology, the emphasis should be on lifelong learning and skill development.

Strategic Adoption of Green Innovation: Green innovation should be strategically adopted and promoted by organizations. To find and apply cutting-edge, ecologically friendly technology and practices, this entails funding research and development. Hotels ought to set up forums where staff members can share ideas and innovations aimed at achieving sustainable objectives.

Leading Change: It is impossible to overestimate the impact that leaders play in bringing about long-lasting change. In order to establish the direction, values, and vision for sustainability, GTL is essential. It entails developing sustainability champion's at all organizational levels in addition to senior management.

Measuring and Reporting Sustainability Metrics: It is imperative to put in place mechanisms for tracking and reporting sustainability metrics. Setting up environmental impact-related Key Performance Indicators (KPIs) and periodically comparing results to these benchmarks enables stakeholders to see that the organization is committed to sustainability and makes well-informed decisions.

Improved Guest Experience and Brand Differentiation: Putting sustainable principles into practice has a favourable effect on guest experiences. By using marketing methods to communicate eco-friendly plans and activities, a business can potentially gain a competitive edge by drawing in eco-conscious customers and standing out from the competition in a crowded market.

Operational Efficiency and Cost Savings: Over time, implementing green innovation frequently results in increased operational efficiency and lower costs. While minimizing their negative effects on the environment, energy-efficient technologies, waste reduction plans, and sustainable sourcing methods can drastically cut operating expenses.

Corporate Social Responsibility (CSR) and Community Engagement: Including CSR efforts and interacting with local communities is in line with sustainable practices. The organization's dedication to sustainability is further demonstrated by its support of neighborhood projects, partnerships with neighborhood organizations, and donations to environmental charities.

Cooperation and Industry Impact: The real-world ramifications go beyond specific companies. Fostering a sustainable ecosystem within Pakistan's hotel business involves industry collaboration, sharing of best practices, and influencing policy decisions towards sustainability.

Continuous Improvement and Adaptation: Lastly, the real-world applications highlight how important these processes are. Since the sustainability landscape is ever-changing, businesses must be quick to embrace and incorporate any new sustainable practices, innovations, and technology that come along.

5.4 Limitation and Future Recommendation

Several limitations emerged during the investigation of the relationship between Green Transformational Leadership (GTL), Green Training (GT), and Environmental Performance (EP) in the hotel industry of Pakistan, with GI serving as a mediating factor. These limitations present opportunities for future researchers to deepen and improve our understanding of this intricate relationship. A noteworthy constraint pertains to the study's scope. The primary emphasis of the research was Pakistan's hotel business, which limited the generalizability of the findings to other industries or geographical areas. To give a more thorough knowledge of how GTL, GT, and GI interact and effect EP across various organizational settings and cultural backgrounds, future research might examine a variety of industries or worldwide contexts.

The utilization of cross-sectional data is a possible restriction that could impede the capacity to definitively prove causality. To further understand the dynamic nature of these interactions in the hotel business and to infer causal linkages between GTL, GT, GI, and EP over time, longitudinal research or experimental designs may provide a stronger basis. Furthermore, even though the mediating role of GI was investigated in this study, it's possible that other mediators were not fully considered. To fully understand the mechanisms by which GTL and GT influence EP, future research could go deeper into examining other mediating variables, such as organizational culture, staff engagement, or consumer behaviour.

Furthermore, the study may have run into issues with data gathering techniques or measurement equipment. Further investigations could enhance measuring tools, apply mixed-method approaches, or apply qualitative methodologies to get a more comprehensive comprehension of the intricate interactions among GTL, GT, GI, and EP within the hotel sector setting. The inherent difficulties in identifying and measuring the complex constructs of GTL, GT, GI, and EP may have presented challenges for the study. To improve accuracy and comprehension of the connections and interplay between these factors, future studies may investigate more complex modelling methods or use different analytical frameworks.

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