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## Article

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## MANAGEMENT | RESEARCH ARTICLE

# Green human resource management and pro-environmental behaviour nexus with the lens of AMO theory

Tabeer Iftikar<sup>1</sup>, Saddam Hussain<sup>2\*</sup>, Muhammad Imran Malik<sup>1</sup>, Shabir Hyder<sup>1</sup>, Muhammad Kaleem<sup>2</sup> and Adeel Saqib<sup>1</sup>

**Abstract:** The purpose of this paper was to examine the extent to which green HRM impacts the pro-environmental behavior of employees via the mediation of Green Entrepreneurship and the moderation of Green Self-Efficacy in the hospitality sector of Pakistan. Research design included questionnaires and the study setting was cross-sectional. Respondents of the study were 4 and 5-star hotel employees of Islamabad city of Pakistan. However, a 205-sample size was taken from the population to collect primary data for deriving results. Data were collected from 205 hotel employees, and there were no incomplete data. Using SEM through Smart PLS 3.2.7, finally, 205 responses were analyzed. The results of the analysis showed that GHRM positively impacts the pro-environmental behavior of employees. Results show that there is a significant mediation of Green Entrepreneurship and a significant moderation of Green Self-Efficacy, respectively. This study fulfills the gaps in literature and provides pioneering inputs as there is a lack of studies in green HRM field, especially in the hospitality sector of Pakistan. This study enhances the knowledge in the green HRM field. Besides, this study also contributes practically and provides various inputs to hospitality sectors that how effective environmental performance can be enhanced by effectively incorporating green practices in the HR policies of organizations. This study is significant as it contributes to both theory and practice by providing fresh insights on green HRM.

**Subjects:** Finance; Business, Management and Accounting; Industry & Industrial Studies

**Keywords:** Green human resource management (GHRM); green entrepreneurship; green self-efficacy; pro-environmental behavior; ability-motivation-opportunity (AMO)

## 1. Introduction

Industrial pollution is causing different health and environmental issues all over the world. Different industries, i.e., agriculture-related, textile, leather, food, non-metallic minerals, pharmaceutical, electrical goods, leather, chemicals, paper, and board, are affecting the environmental performance (Mehdi, 2019). All these factors are contributing to lessening environmental performance and therefore require examination of the causes for the disastrous environmental conditions to get a solution for various environmental problems. Environmental issues are a greater challenge for organizations to maintain their goodwill and ultimately the performance of firms (Afsar et al., 2018). In this perspective, organizations are required to develop the interests of their employees regarding environmental activities. The pro-environmental behaviors of employees can play a vital role in enhancing the interests of employees regarding positive environmental

outcomes because it includes environmentally responsible activities. For this purpose, effective HR strategies and policies are needed to build the pro-environmental behavior of employees so it can lead to lessen the obstacles in environmental performance. Environmental performance includes the performance of both the natural environment and the financial performance of organizations (Saeed, Afsar, Hafeez, Khan, Tahir & Afridi, 2018).

According to the recent global environment performance index (EPI), Pakistan has been placed in the 40<sup>th</sup> position showing that there is poor air quality in the country and other causes including deforestation, carbon emissions, and polluted water (Kanwal, 2018, October 3). Industries use such sources of energy that are not eco-friendly, causing air pollution. Different sectors are working to bring green practices in the organizations. For example, PTCL has recently started e-billing in Pakistan to avoid paper usage that leads to environmental pollution (PTCL & Ministry of Climate Change collaborate for a Green Pakistan, 2019). Similarly, in universities and banks, and so on, green behaviors of employees can be encouraged to enhance the overall environmental performance, especially in Pakistan. Apart from these sectors, the most important sector that needs to include these green practices and the pro-environmental behavior of employees in the hospitality sector. Management strategies for environmental sustainability, in the hospitality sector, have become the most important in maintaining and gaining a competitive advantage as well as increasing environmental performance (TanTan et al., 2019). Pakistan's hospitality sector requires more attention and the need for environmentally friendly practices as tourists all around the world like to visit Pakistan often. Moreover, Pakistan has been placed and topped the list of "Best Holiday Destination for 2020" (Qureshi, 2019). Being at the top of the list, more is expected from the hospitality sector of Pakistan to be most involved in the practices that contribute to enhancing environmental performance.

Several studies were conducted by researchers in the field of environmental performance. Kraus et al. (2020) studied the relationship between corporate social responsibility (CSR) and environmental performance. The findings of the study showed that CSR has no direct significant impact on environmental performance; however, they are mediated with green innovation and environmental strategy. Studies also examined the impact of digital technologies for Industry 4.0 on economic and environmental performance. Results show that digital supply chain platforms mediate the effect of digital technologies on economic and environmental performance and there is also significant moderation of environmental dynamism (Li et al., 2020). Moreover, environmental performance was also examined with environmental investment. In this study, environmental investment was distinguished into pollution control investments and pollution prevention investments. Results of the study showed a significant positive impact of environmental investment on environmental performance, more specifically pollution prevention investment showed a stronger significant positive role as compared to pollution control investments that showed no significant effect on environmental performance. Moreover, results also confirm the significant moderating effects of institutional environment and foreign direct investments on the linkage between pollution prevention investments and environmental performance (Li et al., 2020).

In recent years, the significance of the pro-environmental behaviors of employees has been recognized by the scholars because various researches have begun to emerge (Norton et al., 2015; Paillé et al., 2014). The environmental performance of the organizations has been investigated with the pro-environmental behaviors of employees (Roscoe et al., 2019). Despite previous studies, various issues remain unstudied and misunderstood. In this regard, Dumont et al. (2017) suggested that one interesting topic to be addressed is the role of green HRM to enhance the pro-environmental performance of employees. To enhance the environmental performance of the country, industries, service sectors, and hospitality sectors need to consider the pro-environmental behaviors of employees in association with their green HR practices. Companies improved the pro-environmental behaviors of employees by indulging green HR practices in organizations (Dumont et al., 2017). Likewise, Kim et al. (2019) concluded the results in the hospitality sector that green HR practices helped the employees in enhancing their eco-friendly

behaviors. However, a study has been conducted in an industrial sector in which the green HRM predicted the pro-environmental behavior of employees but another important mechanism, i.e., “green self-efficacy” of employees, still needed to explore (Saeed et al., 2018). As green HRM enhances the skills of employees and their behavior, this can lead to the improved green entrepreneurship of employees. Green entrepreneurship can further predict the pro-environmental behavior of employees (Afsar et al., 2018). This is the most interesting mechanism that still needs to be explored because green HRM along with green entrepreneurship can bring the most effective changes and improvements.

The study contributes to theory and practice by giving insights to policymakers on how to embed the green initiatives in all the strategic planning of the organization that can further contribute to enhancing the pro-environmental behavior of employees (Saeed et al., 2018). The current study is devoted to giving practical knowledge and insights into how the processes and functionality of the hospitality sector can be upgraded and changed to green HR practices.

AMO (Ability-Motivation-Opportunities) theory was developed by Appelbaum et al., (2000) who explained that high performance of employees is based on three important elements, i.e., Individual Abilities, Motivation, and Opportunities to participate. To enhance the performance, employees require some skills to perform specific tasks, motivation from leaders and managers, to complete the specific tasks and opportunities to develop their skills and participate in various decision-making processes and programs. Drawing on an AMO theory, it is expressed that HR practices play a key role in shaping the attitudes and overall performance of employees. The AMO model concerns and constitutes human behavior (Rayner & Morgan, 2017).

## **2. Literature review**

### **2.1. Green HRM**

In the new era, environmental goals are also considered with the organizational goals considering the emerging environmental issues (Renwick, Redman, Maguire et al., 2008b). Organizations need to be involved in ecological concerns and resolving such issues causing environmental harm. Hence, environmental management is linked with organizations' processes. Environmental management of organizations is associated with human resource management as all the processes and procedures within the organizations are based on the human resource management of the organization (Jabbour et al., 2010). Thus, when environmental management is integrated with human resources it leads to a new area of knowledge, that is, green human resource management (GHRM; Moraes et al., 2018). Green HRM theme was coined by Renwick, Redman, Maguire et al. (2008a), Jackson and Seo (2010), Renwick, Redman, Maguire et al. (2008a), and Renwick, Redman, Maguire et al. (2008b) defined green human resource management as “HRM activities, which enhance positive environmental outcomes” (p. 4).

HRM practices of recruitment, selection, training, empowerment, and reward management are used in Green HRM to create the green workforce at the workplace that is focused on fulfilling the green objectives of the organization (Mathapati, 2013). The HR of the organization can enhance the productive ecological behavior, values, and attitudes of the employees and thus can lead to environmentally friendly policies and practices (Saeed et al., 2018). However, green HR practices can contribute to influencing the pro-environmental behavior of employees. Green HR practices are necessarily required in endangering the pro-environmental behavior of employees as these HR practices play role in enhancing the abilities, creativities, and skills of employees (Provasnek et al., 2017; Sugita & Takahashi, 2015). Thus, greening initiatives and activities are associated with indulging the green HR policies and practices within the organizations.

### **3. Green recruitment and selection**

Green recruitment and selection involve attracting and selecting candidates that have an interest in environmental concerns and are committed to resolving the issues related to the environment

(Saeed et al., 2018). It is the most basic and specific HR practice that leads to enhancing the reputation and well-being of the organization as well apart from just improving the environmental performance. Organizations with a good reputation tend to attract more candidates. While considering the environmental concerns specifically, candidates are attracted to the organizations having goodwill related to environmental matters. Thus, the most talented candidates with interests in environmental matters are easily pooled for the organization (Bauer et al., 2012). Studies have found out that the green reputation of the organization is positively linked with the attraction of candidates for the job, i.e., employees are likely to be attracted and become a part of such organizations that are practicing green policies (Guerci et al., 2015). After attracting the potential candidates, the selection criteria must also be based on the greening criteria. In interviews, interviewees can be asked about the environment-related questions to access their beliefs, values, knowledge, and concern for environmental concerns and performance (Renwick, Redman, Maguire et al., 2008b). Recruiters must analyze the concern of candidates whether they will be able to meet greening goals in the future or not. Green recruitment and selection are thus vital HR practices that can benefit the organization by gaining employees having concern for environmental performance.

#### **4. Green training and development**

Green training and development include activities that enhance the skills of employees and motivate and prepare them for future environmental challenges and issues. Green training enhances the knowledge and abilities of employees and helps them to enhance their awareness regarding the ecological activities at the workplace. Previous studies have expressed the impacts of green training as it provides the awareness to employees about how to identify the environmental issues and knowledge about how to overcome those issues. It provides the understanding to managers and employees of how policies and practices and various activities at the workplace can influence the environment. Moreover, it enhances their critical abilities to analyze complex environmental problems and makes them responsible for achieving environmental goals (Pinzone et al., 2019).

Green training should be provided to all the employees along with other educational programs to enhance the awareness of pro-environmental behaviors of employees at the workplace. It builds confidence within the employees that they will be able to fulfill the greening objectives of the organization. Green training and development motivate employees for better decision-making related to greening within the organizations. Green training and development enable employees to be more conscious about the environmental protection and make employees able to collect data about waste and identify various pollution sources.

Thus, training employees enhances their capabilities to understand various environmental related issues and leads them to adopt pro-environmental behaviors (Baumgartner and Winter, 2014).

#### **5. Green performance management and appraisal**

Green performance management and appraisal include the evaluation of performances of employees regarding environmental activities (Saeed et al., 2018). HR managers evaluate the performance of employees whether they have achieved the environmental objectives or not. Moreover, different pro-environmental performance indicators can also be introduced by HR managers (Marcus and Fremeth, 2009). Environmental performance indicators benefit HR managers and organizations in a way that employees become accountable and they have to maintain their performance related to environmental issues to meet the specific criteria thereby, they can improve their pro-environmental behaviors as well (Zibarras & Coan, 2015). Green performance management creates the green performance indicators to form a series of green criteria that include various topics like reduction of carbon emissions, environmental incidents, environmental responsibilities, and communication of environmental policies and concerns (Saeed et al., 2018). Employees that maintained their performance and achieved all the environmental objectives of the organization must be appraised to motivate them for

further initiatives (Likhitar & Verma, 2017). HR managers can interact with employees during performance appraisals regarding further improvements in waste reduction and enhancing environmental performance (Roscoe et al., 2019).

### **6. Green reward and compensation**

Green reward and compensation include the HR practice that includes awarding employees for further motivating them to be involved in improving environmental performance. Rewards in both monetary and non-monetary must be given to employees to encourage them for their pro-environmental behaviors (Likhitar & Verma, 2017). A blend of monetary and non-monetary incentives is much more effective as compared to just monetary awards (Jabbour et al., 2010; Renwick et al., 2013). These non-monetary awards may include green tax, green recognition, and green travel benefits instead of just monetary incentives to motivate employees (Saeed et al., 2018). Green travel benefits are the rewards for employees' travel and transport. To decrease their carbon pollution, they can be directed and have better knowledge of environmental sustainability. Green tax incentives include exemptions that enable employees to use bicycles instead of cars to avoid environmental pollutions. Green recognition includes such non-financial awards for employees that further direct employees to indulge themselves in green behaviors. These include paid vacations, green certificates, and company-wide public recognition. These green recognition rewards lead to a sense of pride among employees and also encourage pro-environmental behaviors (Veleva & Ellenbecker, 2001).

Studies have shown that environmental performance is associated with compensation provided to managers and employees (Roscoe et al., 2019). Fernandez, Junquera, and Ordiz (2003) expressed results that organizations in which top managers were being awarded on achieving organizational environmental targets tend to give more environmental performance than the organizations with just fixed salaries and no incentives and compensation for senior managers.

Green reward and compensation motivate employees to further be involved in greening activities. It acts as a catalyst in the greening process because when employees will be rewarded, they will do their greening activities without hesitation and with much joy. After all, their efforts have been appreciated by the organization.

### **7. Green empowerment**

Green empowerment involves giving the employees the authority to make decisions regarding environmental concerns (Moraes et al., 2018). Empowering employees motivates them in resolving environmental issues, thus can influence the performance of the environment as well. Managers and employees are empowered by giving them opportunity and voice to contribute to problem-solving and participating in environmental programs (Tariq et al., 2014). Employee empowerment involves decentralization which gives autonomy to employees in bringing creative and best ideas for enhancing environmental performance. Employees can be involved in a number of ways to enhance green performance. There are a number of processes of employee green involvement. Renwick et al. (2013) expressed the five important aspects of green involvement. These include green learning climate, clear green vision, various communication channels, offering green practices and encouraging green involvement. A clear green vision refers to a framework of principles and symbols that encourage environmental management and direct workers to participate in environmental issues. A green learning climate and various communication channels are used to share the various issues and situations of environmental practices at the workplace. A mutual green learning environment leads to an effective understanding of each other's environmental behaviors and awareness among employees. This leads to an atmosphere of supervision among employees and enhances their awareness of environmental issues. Various formal and informal communication channels enable a culture of sharing knowledge and information regarding environmental concerns and issues and thus awareness and pro-environmental behaviors of employees can be improved. Employees can be motivated to participate in



environmental management by offering green activities like developing problem-solving groups, writing newsletters, and setting up green teams for various projects (Vallaster, 2017). Green empowerment encourages employees to address environmental issues with the help of green teams where team members can share ideas and actively play a role in ecological issues (Roscoe et al., 2019).

### **7.1. Green HRM and pro-environmental behavior**

Pro-environmental behaviors are required to be a vital part of employees' job duties and responsibilities and can be guided with the HR practices especially in the industrial sector in which there is wastage of resources during manufacturing, carbon emissions that are responsible for air pollution and water wastage, and so on. The creation of jobs and work conditions that enable employees to learn about the environment and regular and consistent training on environmental management programmes increases the concern and encouragement of an individual to participate in pro-environmental behaviors (Tseng et al., 2013).

Green HRM influences the values, attitudes, and behaviors of employees at the workplace with the help of greening activities (Saeed et al., 2018). Green HR practices develop a culture of environmental conscientiousness that engages employees to be involved in ecological activities. Green HR practices design the values and pro-environmental behavior of employees (Tang et al., 2018). From the recruitment of employees to the employee empowerment, environmental issues and initiatives can be emphasized in a way that ultimately improves and builds the pro-environmental behavior of employees. Organizations must invest in green HR practices as they result in boosting the pro-environmental behavior (TanTan et al., 2019). Green HR practices thus play a significant role in instilling the pro-environmental behavior of employees (Luu, 2018).

The policies and practices of human resources greatly influence the green behavior of employees. Employees have to follow these policies and practices according to instructions. These policies and practices involve such activities that inevitably enable employees to do green behaviors, for example, green training provides knowledge and enhances the abilities of employees in conducting pro-environmental behaviors at the workplace (Srivastava & Shree, 2018). Green HRM has been involved in developing activities and programs to develop and enhance the green behaviors of employees (Bohlmann et al., 2018). Employees view the HRM activities of their company as a determinant of their attitudes and behaviors at work. Therefore, if a company integrates greening into its HR policy, workers can exhibit behaviors that resonate and conform to the green policies of the organization (Nishii et al., 2008).

The components of green HRM constitute the behavior of employees because it contains a continuous effort to enhance the environmental performance. By shaping the values and attitudes of employees, green HRM impacts the pro-environmental behavior of employees.

**Hypothesis 1:** Green HRM has a significant positive influence on the pro-environmental behavior of employees.

### **7.2. Green HRM and Green Entrepreneurship**

Green entrepreneurship can be defined as a tendency to use entrepreneurial opportunities for enhancing the economic and environmental benefits through green initiatives (Jiang et al., 2018). HR practices can increase the entrepreneurial abilities of employees to resolve specific issues such as involving employees in decision-making i.e., employee empowerment, can lead to creative solutions and innovative ideas. Research has expressed that highly committed HR practices can result in a creative and innovative culture within the organization (Chang et al., 2019). Green HR practices must be effective enough to enhance the green entrepreneurial skill



of employees. Green recruitment and selection builds the interest of employees in how they can resolve various complex issues in the future for the organization. Green training and development polishes the skills of employees that lead to the entrepreneurial abilities of the employees. Green performance management and appraisal motivates the employees that lead to their interests to be more creative and innovative in the future for resolving organizations' environmental issues. Green reward and compensation encourages employees to become green entrepreneurs and helps organizations in achieving green goals. Green empowerment gives employees the opportunities to implement any innovative solution to lessen the environmental problem that might be occurring within the organization. In this way, Green HRM impacts the green entrepreneurship of employees.

Green entrepreneurship of employees can play a significant role in all sectors because various innovative ideas are provided by green entrepreneurs in resolving specific environmental issues. For example, green entrepreneurs can come up with innovative ideas of manufacturing that are environmentally friendly and thus can provide green products to customers (Sher et al., 2019). HR practices encourage and motivate employees to further enhance their entrepreneurial orientation. Likewise, green HR practices can result in the green entrepreneurial abilities of employees. This mechanism is still unfolding and still needs to be explored specifically in Pakistan where environmental issues need to be solved creatively and hence it is assumed that green HR practices can result in the entrepreneurial abilities of employees that can be useful in all sectors. However, previous research study examined institution-based green entrepreneurship with green practices as one of its dimensions. Moreover, the influence of international venturing with green entrepreneurship was examined. Results showed that international venturing was positively linked with green practices (Aiqing et al., 2018).

**Hypothesis 2:** Green HRM practices are positively related to green entrepreneurship.

### **7.3. Green entrepreneurship and pro-environmental behavior**

The pro-environmental behavior of employees has been discussed in the literature in association with innovation and creative ideas within an organization (Jennifer & Robertson, 2015). Sometimes environmental issues can be so complex and may require some innovative solutions. Environmental innovations have been explained in the literature that there are various drivers of entrepreneurial intentions with the ultimate objective of understanding how to nourish the pro-environmental behavior within organizations (Ghisetti, 2018). Green entrepreneurship of employees shapes the attitudes and behaviors of employees. Entrepreneurial activities of employees lead to such behaviors and values that ultimately enhances the pro-environmental behavior of employees.

Green entrepreneurship of employees tends to resolve complex environmental issues with great green entrepreneurial opportunities. This engagement of employees in environmental entrepreneurship enables them to enhance their pro-environmental behaviors, and they are more focused on environmental concerns. Green entrepreneurship can play a predictive role in the pro-environmental behavior of employees (Afsar et al., 2018). Ramus (2001) found out that greening of the organization depends upon the innovativeness and creativity of employees on how employees will implement their ideas to resolve the critical issues. Entrepreneurial programs may include a new recycling program and a new cleaner diesel fuel program that can result in the greening of organizations. Creativity and innovation are as important to implement as other variables like organizational and supervisor support, HRM and commitment in endangering pro-environmental behaviors. Creative green employees can take environmental initiatives by themselves if they are empowered. This results in new ecological methods and programs. Moreover, it also results in the knowledge sharing of these green entrepreneurs to stimulate workplace pro-environmental behaviors (Robertson et al., 2012).

Studies have shown that in industries specifically, these innovative capabilities of employees are much useful and their skills are based on their knowledge and the way they share their knowledge (Paillé et al., 2014). Employees use their knowledge to understand various environmental concerns, i.e., pollution problems, understanding and reacting in emergencies developing new programs for controlling carbon emissions, and other preventing solutions. Apart from industries, other sectors, i.e., banks and university employees, can also share their knowledge by being empowered in the company decisions to resolve problems related to the environment. Studies have expressed that pro-environmental behaviors not only depend upon typical predictive variables but also on the creativity, innovativeness, and tacit skills of employees (Robertson et al., 2012).

**Hypothesis 3:** Green entrepreneurship is positively related to the pro-environmental behavior of employees.

Based on the argument that green human resource management results in green entrepreneurial skills of employees and green entrepreneurship's positive influence on the pro-environmental behavior of employees, it is hypothesized as;

**Hypothesis 4:** Green entrepreneurship mediates the relationship between Green HRM and the pro-environmental behavior of employees.

#### **7.4. Green self- efficacy as a moderator**

The confidence of one's self in its capabilities to complete an objective and goal by inculcating a particular behavior constitutes self-efficacy (Chen et al., 2014). Green HR practices involve green practices and provide a shared vision related to environmental activities within the organization. This shared vision can help employees to believe in themselves in overcoming challenges and building the behaviors that are beneficial for environmental outcomes. Moreover, green HR practices also motivate employees to perform beyond expectations. Shamir et al., (1993) explained that shared vision can influence the green self-efficacy of employees by the expectation of good performance and confirmation of best abilities to fulfill the desired objectives of the organization.

Green self-efficacy leads to the pro-environmental behavior of employees as the self-confidence builds the attitudes and behaviors that are ultimately beneficial for lessening the obstacles and improving the environmental performance.

Green self-efficacy can help in the perfect implementation of HR practices because it enables employees to believe in themselves and makes them confident that they can solve the environmental problems effectively and efficiently. Self-efficacy is positively influenced by different behavioral outcomes (Chen et al., 2014). Green self-efficacy of employees can also result in the pro-environmental behavior of employees. Having confidence in achieving organizational environmental targets can ultimately result in the green behaviors of employees. Moreover, management theories explain that an individual's belief in themselves influences whether they will be able to develop an observed behavior or not (Vinney, 2019, January 20).

**Hypothesis 5:** Green self-efficacy moderates the relationship between Green HRM and pro-environmental behavior such that a higher level of green self-efficacy would strengthen the positive relationship between Green HRM and pro-environmental behavior.

#### **8. AMO Theory**

Based on the AMO theory, each element of AMO can contribute to enhancing green behavior. For example, recruitment and selection of employees lead to their self-efficacy to use their specific skills,

i.e., green abilities. These abilities can be used in creative and innovative ways to improve environmental performance. These green abilities can also be because of green training within the organization. Enhanced abilities of employees can also result in improving their green entrepreneurial abilities, and they can come up with more innovative ideas for environmental problems. The motivation of employees results in improving their green behavior as well, i.e., developing habits that result in the improvement of environmental performance. Green performance management and appraisal and green reward for employees further motivate employees to be involved in greening activities for organizations. Opportunities include such systems and facilities that are available within the organization that is associated with or results in the pro-environmental behavior of employees, i.e., recycling goods in an innovative manner (Rayner & Morgan, 2017). Moraes et al. (2018) concluded the results in a research study that employees of the organizations were trained in environmental matters. This increased their motivation and encouraged them more to be involved in environmental initiatives. However, results also showed that there was a lack of opportunities within the organization regarding environmental problems. This lack of participation of employees in environmental matters can be solved with the teamwork of management that can empower employees that can result in providing opportunities to employees in solving environmental issues.

## 9. Methodology

This cross-sectional research sought a sample-frame of employees from the hospitality sector of Pakistan. The population of the study included 4 and 5-star hotels of Pakistan. Four-star and 5-star hotels have been selected based on the fact that green HR practices are followed in them and 1, 2, and 3-star hotels do not practice green efforts. However, by considering the time and cost constraints, 4- and 5-star hotels of Islamabad were planned to investigate. The total number of employees in these hotels was 2900 (Booking.com, 2020). Moreover, non-probability sampling was used. The convenience sampling technique was used to gather data from employees. Sample of 60 employees was taken from Islamabad Marriott Hotel, 50 from PC, 50 from Islamabad Serena Hotel, and 45 from Ramada, constituting 205 sample size. These samples are taken based on the availability of employees to fill questionnaires. Roscoe (1975) proposed a rule of thumb for determining sample size. However, for social sciences, the sample size must be 200 to 500. Thus, the sample size of this study was 205. The measurement instruments that have been used in the study are shown along with their sources in the following Table 1.

Data was collected from the employees of hotels via LinkedIn by sharing a link to a questionnaire from Google Forms along with physically visiting the hotels and distributing questionnaires to employees. No incomplete data was available and finally 205 responses were analyzed. Data was analyzed using SPSS software that can clearly explain the descriptive for the study and for discussing the measurement model and structural model, Smart PLS was used, with bootstrapping hypotheses are accepted or rejected, and then the results were analyzed and discussed in detail in the discussion section.

**Table 1. Measurement instruments**

Construct	Source	No. of Items
Green Recruitment And Selection	Saeed et al., 2018	6
Green Training And Development	Saeed et al., 2018	8
Green Performance Management And Appraisal	Saeed et al., 2018	5
Green Reward And Compensation	Saeed et al., 2018	5
Green Empowerment	Saeed et al., 2018	4
Pro-environmental Behavior	Saeed et al., 2018	11
Green Entrepreneurship	Pejman Ebrahimi & Mirbargkar, 2017	8
Green Self-Efficacy	Chen et al., 2014	6

**Table 2. Demographic profile of respondents**

Demographic Variables	Classification of Variables	Frequency	Percent
<b>Gender</b>	Male	143	69.7
	Female	62	30.3
<b>Age</b>	18–25	34	16.7
	26–30	88	42.9
	31–35	49	23.9
	36–40	30	14.6
	41 & above	4	1.90
<b>Education</b>	Intermediate	25	12.2
	BS	54	26.3
	MS	72	35.1
	Ph.D.	5	2.40
	Other	49	24.0
<b>Designation</b>	Higher Level Mgt	20	9.80
	Middle-Level Mgt	92	44.9
	First-line Mgt	93	45.3
<b>Type of Hotels</b>	5 Star Hotel	163	79.5
	4 Star Hotel	42	20.5

## 10. Analysis and results

### 10.1. Descriptive statistics

The majority of the respondents in the study belonged to the age group 26–30 (see, Table 2), consisting of 88 (42.9%) respondents, whereas the minimum respondents in the study belonged to the age group 41 & above consisting of only 4 (1.90%) respondents, 34 (16.7%) were age group 18–25, 49 (23.9%) were age group 31–35, 30 (14.6%) were age group 36–40. Gender distribution of the respondents showed that the majority of the respondents were male ( $n = 143$ ) representing 69.7% of the sample, while females were ( $n = 62$ ) constituting 30.3% of the total sample. Education-wise distribution of respondents showed that majority of the respondents have MS education ( $n = 72$ ) representing 35.1% of the sample, respondents having education of BS were ( $n = 54$ ) representing 26.3% of the sample, respondents having education Intermediate were ( $n = 25$ ) representing 12.2% of the sample, respondents having Ph.D. degree were ( $n = 5$ ) representing 2.40% of the sample, while the respondents having other degrees and educational level were ( $n = 49$ ) representing 24.0% of the sample, lower first-line managers were 93 (22.9%), middle-level managers were 92 (22.6%), and top-level managers were 20 (4.9%). Moreover, most of the respondents were from 5-star hotels 163 (40.0%), while respondents from 4-star hotels were 42 (10.3%).

Doane and Seward (2011) explained “skewness is used to measure the degree of asymmetry of distribution and kurtosis is used to check whether data is peaked or flat as per normal distribution”. The standard values of skewness and kurtosis are below 1.5 and above –10. Skewness and kurtosis are showing significant values in descriptive results.

### 10.2. Measurement model

The results from the initial model analysis in SMART-PLS revealed that all factors have good Cronbach’s Alpha value, Composite Reliability, and AVE (see, Table 3). Analyzing factor loadings for each of the constructs in the study revealed that some of the items had loadings less than the

**Table 3. Reliability analysis and AVE of the constructs**

	Cronbach's Alpha	Composite Reliability	AVE
GE	0.902	0.922	0.596
GEM	0.912	0.939	0.793
GHRM	0.970	0.972	0.553
GPMA	0.910	0.933	0.736
GRC	0.907	0.931	0.729
GRS	0.918	0.936	0.710
GSE	0.931	0.945	0.743
GTD	0.934	0.946	0.686
PEB	0.950	0.957	0.668

**Table 4. HTMT**

	GE	GEM	GPMA	GRC	GRS	GSE	GTD	PEB
GE								
GEM	0.677							
GPMA	0.638	0.770						
GRC	0.680	0.886	0.788					
GRS	0.735	0.731	0.711	0.719				
GSE	0.765	0.440	0.385	0.454	0.561			
GTD	0.638	0.762	0.778	0.801	0.736	0.426		
PEB	0.750	0.499	0.454	0.513	0.568	0.792	0.486	

required value of .70 (Hair et al., 2011). Although some of the items still have loadings less than .70, however, since adequate reliability and convergent validity are attained, the items have been retained for further analysis as deleting items could significantly harm the content validity of the constructs. Table 4 shows the HTMT ratio of the constructs. It can be seen that all the values are significant and discriminant validity is established.

### 10.3. Structural model evaluation

Smart PLS is used to analyze the structural model of the study, i.e., to assess whether there is acceptance of the hypothesis of the study or there is a rejection of the hypothesis of the study. It reflects the paths hypothesized in the research framework. A structural model is assessed based on the  $R^2$  and the significance of paths. The goodness of the model is determined by the strength of each structural path determined by  $R^2$  value for the dependent variable, the value for  $R^2$  should be equal to or over 0.1 (Falk & Miller, 1992). The results in Table 5 show that all  $R^2$  values are over 0.1. Hence, the predictive capability is established.

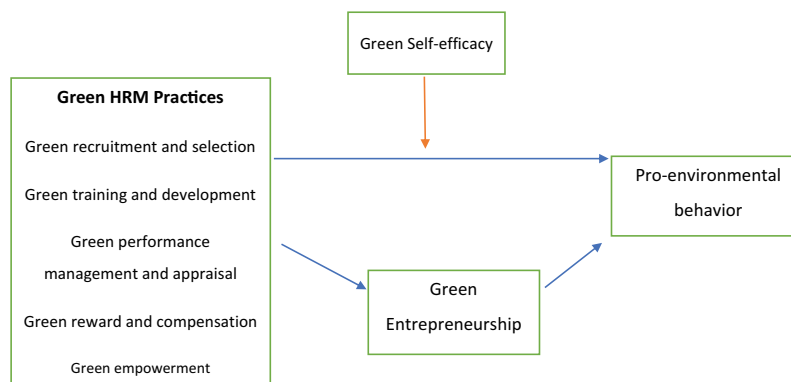
**Table 5. Structural Model Evaluation**

Hypothesis	Original Sample	Standard Deviation	T Statistics	P Values
GHRM -> PEB	0.147	0.064	2.286	0.022
GHRM -> GE	0.705	0.040	17.731	0.000
GE -> PEB	0.218	0.080	2.731	0.006
	$R^2$			
GE	0.497			
PEB	0.628			

**Table 6. Mediation analysis**

	Total effect			Direct effect	
Relationship	Coefficient	p-value	Relationship	Coefficient	p-value
GHRM -> PEB	0.300	0.000	GHRM -> PEB	0.147	0.022

**Figure 1. Research framework.**



### 10.3.1. Hypothesis testing

For the further assessment of the goodness of fit, hypotheses were tested to ascertain the significance of the relationship. Hypothesis test reveals Table 5 that GHRM has a significant positive influence on PEB ( $\beta = 0.147$ ,  $t = 2.286$ ,  $p = 0.05$ ). Hence, H1 is accepted. However, GHRM has a significant positive influence on GE ( $\beta = 0.705$ ,  $t = 17.731$ ,  $p = 0.000$ ). Hence, H2 is accepted. Moreover, GE has a significant positive impact on PEB ( $\beta = 0.218$ ,  $t = 2.731$ ,  $p = 0.006$ ). Hence, H3 is accepted.

### 10.3.2. Mediation analysis

Mediation analysis was performed to assess the mediating role of GE on the linkage between GHRM and PEB. The results (see, Table 6) reveals that the total effect of GHRM on PEB was significant ( $\beta = 0.300$ ,  $t = 6.130$ ,  $p = 0.000$ ). With the inclusion of the mediating variable GE, the impact of GHRM on PEB was reduced and found significant ( $\beta = 0.147$ ,  $t = 2.286$ ,  $p = 0.022$ ). The indirect effect of GHRM on PEB through GE was found significant ( $\beta = 0.153$ ,  $t = 2.673$ ,  $p = 0.008$ ). This shows that the relationship between GHRM and PEB is partially mediated by GE.

### 10.3.3. Moderation Analysis

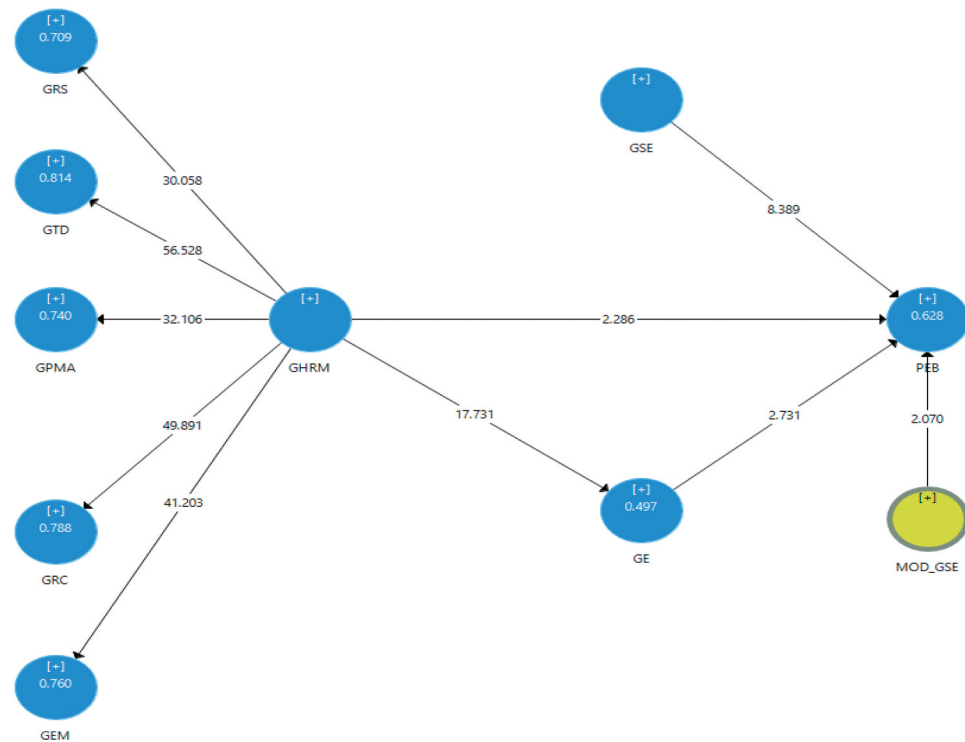
As per Figure 1, it was hypothesized that Green self-efficacy moderates the relationship between Green HRM and pro-environmental behavior such that a higher level of green self-efficacy would strengthen the positive relationship between Green HRM and pro-environmental behavior. The hypothesis sought to ascertain the moderating role of GSE between GHRM and PEB. The results revealed that GSE moderates the relationship between GHRM and PEB ( $\beta = -0.063$ ,  $t = 2.070$ ,  $p = 0.038$ ). However, the results reveal (see, Figure 2), that at higher GSE, the GHRM fails to impact PEB. The results revealed that at lower GSE, GHRM was found to have a stronger impact on PEB.

## 11. Discussion

The purpose of this study was to test a model to understand whether Green HRM impacts the pro-environmental behavior of employees in a particular setting or not. This study developed and tested a model in which the green HRM positively influenced employees' pro-environmental behavior, and green entrepreneurship and green self-efficacy mediate and moderate the relationship between green HR practices (green recruitment and selection,



**Figure 2. Structural model.**



green training and development, green performance management and appraisal, green reward and compensation, and green empowerment) and pro-environmental behavior. The general findings of the study supported the proposed framework. Green HRM positively impacted the pro-environmental behavior of employees. Hence, H1 is accepted. This finding was in line with the findings of Saeed et al. (2018) showing how green HRM played a role in improving the pro-environmental behavior of employees in diverse industrial sectors. The present result shows that there is an indirect impact of green HRM on pro-environmental behavior, i.e., through green entrepreneurship. Hence, H2, H3, and H4 are accepted. Green entrepreneurship has been used in the previous study as a mediator between green innovation and SME development but this model was not supported by the general findings of the study (Pejman Ebrahimi & Mirbargkar, 2017). However, considering the green entrepreneurship as a mediator between green HRM and pro-environmental behavior, insufficient empirical evidence addresses this association. In the present study, the results revealed the moderation of green self-efficacy on the relationship between green HRM and pro-environmental behavior. Hence, H5 is accepted. Previous studies have shown the significant mediating effect of green self-efficacy between green shared vision and green creativity in different study settings (Chen et al., 2014). However, studies are scarce for green self-efficacy as a moderator between green HRM and pro-environmental behavior.

Green HRM enhances the pro-environmental behavior of employees as green recruitment and selection access the environmental concerns of the employees selected in the organization. Green training and development further help out in building skills to achieve the environmental goals of the organization. Green performance management and appraisal evaluate whether the environmental goals are achieved or not, further driving employees to build pro-environmental behaviors. Green reward and compensation motivate the employees to further work on achieving the environmental objectives of the organization, Green empowerment empowers employees to participate and suggest the measures to further enhance the environmental performance of the organizations. These components of green HRM played role in enhancing the pro-environmental behavior of employees. On the premise that green entrepreneurship and

green self-efficacy mediated and moderated the relationship between green HRM and pro-environmental behavior of employees in the hospitality sector of Pakistan, this study puts forward an implication that green HRM research and practice would benefit from considering green entrepreneurship and green self-efficacy.

This study has several theoretical contributions. First, this article tests and analyzes the factors that drive the employees' intentions towards green practices, which is more important in achieving the environmental objectives of the organization. Second, the green HRM concept has not much been studied and the research is scarce in this field. So, the present study explains the green HRM concept and its impact on the pro-environmental behavior of employees which has received little attention. Third, the present study provides solutions for environmental problems occurring in the hospitality sector of Pakistan. Pakistan as being top in the tourism list must be environmentally oriented, so the present study fills that gap and provides solutions. Fourth, green entrepreneurship, which has recently attracted considerable attention in the literature, has been studied in the hospitality setting and needs further investigations in other organizational settings. Fifth, green self-efficacy is found to impact green creativity as a mediator (Chen et al., 2014), but the present study explores how green self-efficacy moderates the relationship between green HRM and the pro-environmental behavior of employees. Sixth, this study provides the knowledge of employees' pro-environmental behaviors and explained its importance in achieving environmental goals. Lastly, based on the AMO theory, each element of AMO contributes to enhancing green behavior. For example, recruitment and selection of employees enable them to have self-efficacy to use their green abilities. Employees use these abilities creatively to overcome environmental problems. Green training also enhances the abilities and skills that result in improving their green entrepreneurial abilities, and they can come up with more innovative ideas for environmental problems. Green performance management and appraisal and green reward for employees further motivate employees to be involved in greening activities for organizations. Opportunities in the organization contain such practices or systems that ultimately lead towards the pro-environmental behavior, i.e., recycling goods in an innovative manner (Rayner & Morgan, 2017). These opportunities empower employees to have their decision-making related to environmental objectives within the organizations.

### **11.1. Conclusion**

This study emphasizes the important role of green HRM in organizations, considering the environmental conditions throughout the world. The hospitality sector of Pakistan requires green HRM to be incorporated as being the top tourist destination in the world. The pro-environmental behaviors of employees within the organizations result in the effective environmental performance of the organization. Therefore, the impact of green HRM on the pro-environmental behavior of employees is studied with the help of underlying mechanisms, as green practices lead towards green organizations. Results supported the hypotheses that green HRM has a significant positive impact on the pro-environmental behavior of employees with a significant role of green self-efficacy as a moderator and green entrepreneurship as a mediator. AMO theory further supported the model by explaining that green HRM can make organizations green and results in employees' pro-environmental behavior. This study contributes to narrowing the research-practice gap in the field. These results provide a basis for developing further knowledge about green HRM and its role in environmental performance.

### **11.2. Limitations**

In the present study, simple random sampling is used in the methodology, and another sampling technique, i.e., systematic sampling, can be used in the future to get better results. Data has been collected from 4 and 5-star hotels of Islamabad because of accessibility issues. Four- and 5-star hotels of other cities of Pakistan can be used in the future to better generalize the study. The single-dimensional scale is used in the present study. Future researchers might use multi-dimensional scales.

### 11.3. Future research directions

Various research directions should be considered by future researchers in the green HRM concept. Green HRM impacts pro-environmental behavior through underlying mechanisms. Future researchers might include other variables, i.e., green lifestyle, green commitment, job satisfaction, and green creativity as mediators. However, other moderators, i.e., green innovation and green shared vision, can further be used to further explain the relationship between green HRM and the pro-environmental behavior of employees. Moreover, qualitative research can be used by researchers to better understand the concept and to better explain green HRM.

### 11.4. Practical implications

The present study has various practical implications for managers of organizations as well. Green HRM practices must be integrated into the long-term strategy of the organizations. To enhance environmental performance and to encourage environmental behaviors at the individual level, green HRM practices must be included in the policies of the organizations. Researchers like Dumont et al. (2017) have suggested that all types of organizations, i.e., manufacturing, as well as services, must practice green HRM to successfully implement the greening policy and to enhance the environmental performance. The environmental commitment must be realized to employees with the help of green HRM. Organizations must include environmental concerns in their recruitment messages, Green training and development are most important in fostering the concerns of employees regarding greening. Training needs must be identified first and then employees must be trained and developed to fulfill the environmental objectives of the organization and enhance the pro-environmental behavior of employees. There must be a proper evaluation of employees whether environmental targets are being achieved or not. Moreover, financial and non-financial awards must be given to the employees who have achieved their environmental targets and to further motivate them. To further motivate employees, employees must be empowered with decision-making regarding the environmental policies of the organization. These mechanisms of green practices will ultimately shape the values and attitudes of employees and thus lead to their improved pro-environmental behaviors. Employees can come up with innovative environmental ideas to further enhance the greening concept and environmental behaviors in organizations. In this way, green entrepreneurship leads in adopting pro-environmental behaviors. Moreover, green self-efficacy of employees builds up the enough capabilities of employees to accomplish the green objectives. These capabilities and self-confidence form the standards and ultimately shape the green behavior of employees.

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