

# Green HRM Practices and Employee Satisfaction in the Hotel Industry of Saudi Arabia



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*Employee satisfaction is a significant issue for firms. As with other businesses, hotel management faces a critical issue with employee happiness. The study studied the influence of green human resource management (HRM) practices in enhancing employee satisfaction to address the issue. The relationship between green empowerment, green recruiting, green training, engagement in the creative process, green innovation, green value, and employee satisfaction is investigated for this aim. The data was gathered from Saudi Arabian hotel staff. The data gathering instrument was a questionnaire survey. 400 questionnaires were delivered to hotel staff in Saudi Arabia, and the data analysis included 210 legitimate responses. Partial Least Squares (PLS) analysis revealed the critical role of green human resource management in employee satisfaction. Green human resource management has been identified as a critical hotel strategy for increasing employee happiness.*

*Through green creative process involvement and innovation, green human resource management techniques such as green empowerment, green recruitment, and green training can increase employee happiness. Green creative processes and staff creativity convey the positive effect of green human resource management on employee happiness. Additionally, green value*

*strengthens the connection between green innovation and employee satisfaction. Finally, this study provides significant insights into how to increase employee satisfaction in hotels, which benefits practitioners.*

**Keywords.** Saudi Arabian hotel industry, green empowerment, green recruitment, green training, green creative process engagement, green innovation, green value, employee satisfaction.

## 1. Introduction

Human capital is the most influential part of organizations because the employees' skills and capabilities are essential elements to success (Li et al., 2021). Successful organizations always had better human capital, which led to making better human capital, which led to making influential strategies in all departments of an organization. Similar to other organizations, the human aspect has key importance in providing better services. The hotel industry is a major service industry that requires better human skills to deal with clients (Jeevanunta et al., 2018). In this way, the employee's satisfaction is important because to get benefit from the skills and capabilities of the employees, the satisfaction of employee is mandatory. The satisfied employee always works for the betterment of the organization rather than the unsatisfied employee.

Along with the other organizations, hotel industry's employee sensitization plays a key role. As in the hotel industry, the employees have direct coordination with the customers, and customer satisfaction is majorly based on the employee's skills and capabilities. A satisfied employee always deals with the customer in the right direction to enhance customer satisfaction. Therefore, employee satisfaction is vital for hotels (Peng et al., 2022).

However, employee satisfaction is one of the major issues among hotels (García-Almeida et al., 2015). Comparatively, employee satisfaction among the hotels is low as compared to various other industries. Low employee satisfaction among the organizations has adverse aspects in various forms. The employee's satisfaction level below the satisfactory level has a threat to the organization (Haque et al., 2019). As the unsatisfied employee may not perform to their full capabilities or do not use their skills and capabilities for the organization's welfare. Therefore, unsatisfied employees cannot perform to a certain level, which decreases the overall employee performance. A decrease in employee performance can significantly potentially decrease organizational performance. Hotel industry of Saudi Arabia also facing the similar issue. In various hotels, the employee satisfaction is low which is causing to decrease the hotel performance. Due to the low employee satisfaction, the performance of this industry is decreasing. Although, it has achieved significant growth in a few years, however, the performance of this industry is decreasing. If we compare the hotel industry performance of one major city, Riyadh, revenue decreases, as shown in Figure 1. Its revenue peaked in 2015 and then decreased each year from 2016 through 2020, a worrying trend for this industry. The hotel industry of Saudi Arabia has significant importance because this industry generates sufficient revenue to support the Saudi economy (Alhamad & Singh, 2021). This industry also provides a number of job opportunities to the national and international people. Similarly, this hotel industry facilitates several tourists each year. Therefore, it also supports the tourism industry. That is the reason, the employee satisfaction in the hotel industry of Saudi Arabia has key importance.

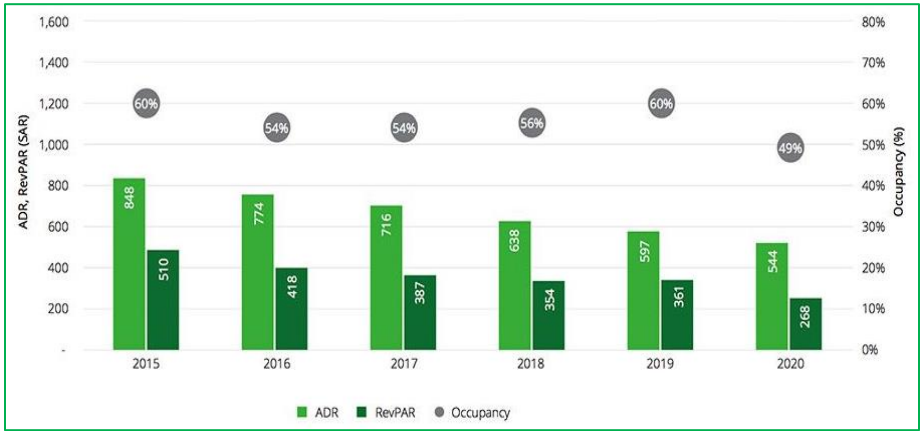


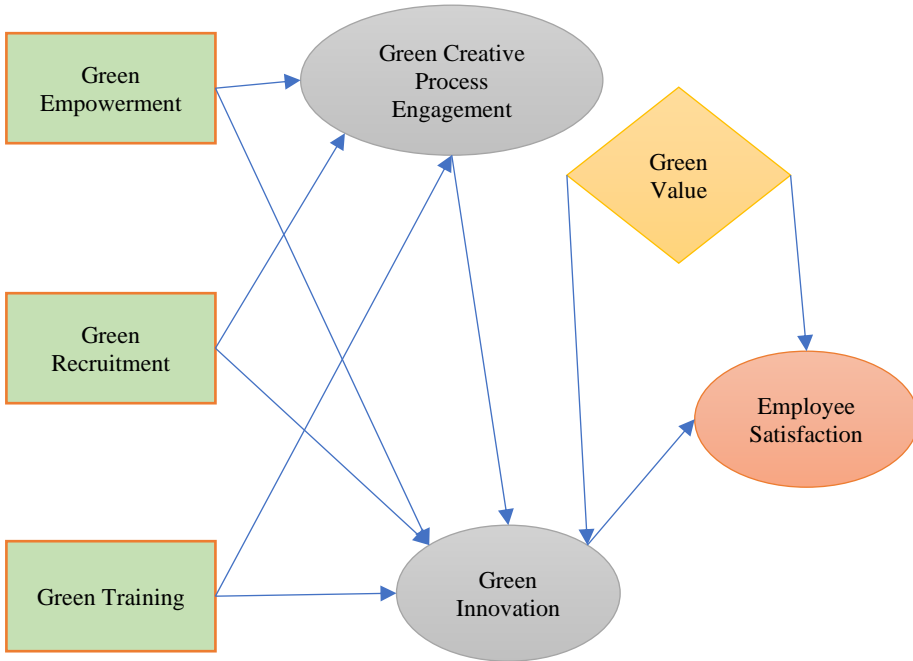
Figure 1. Riyadh Hotel Performance 2015 to 2020  
Source: STR Global

This study proposed that employee satisfaction among the hotels can be promoted through green human resource management (HRM) practices. The promotion of green HRM 'in the hotel can enhance employee satisfaction. Several previous studies have identified the important role of green HRM in hotels (Kim et al., 2019). Green HRM practices such as green empowerment, green recruitment, and green training have an influential role among the hotels. Green HRM practices indirectly influence employee satisfaction. According to this study, green HRM influences the green creative process engagement of employees. The improvement in green creative process engagement of employees can enhance the green innovation, which further leads to employee satisfaction.

Additionally, the green values ve an influential rolein the hotels (Darvishmotevali & Altinay, 2022). Therefore, the combination of green HRM, green creative process engagement, green innovation, and green values can enhance hotel employee satisfaction. Therefore, the objective of this study is to examine the role of green HRM in employee satisfaction in hotels of Saudi Arabia.

## 2. Hypotheses Development

Green HRM includes undertaking environmentally friendly HR initiatives (AlZgool et al., 2021) follow-on in greater effectiveness and lower costs along with the better employee engagement retention of employees, which in turn, aid the organizations to decrease employee carbon footprints. The organizations follow the green practices to protect the environment, having several other benefits to the organization in relation to effectiveness, efficiency, employee benefits, and higher profitability. The focus of organizations is increasing towards green HRM practices with the increase in environmental issues. Although there are several green HRM practices followed by the companies, this study considered three practices: green empowerment, green recruitment, and green training. These green practices concerning the green creative process engagement, green innovation, green value, and employee satisfaction are hilighted in Figure 2.



**Figure 2.** The theoretical model shows the relationship between green empowerment, green recruitment, green training, green creative process engagement, green innovation, green value, and employee satisfaction

Green empowerments enable the employees to participate in various green activities. The employees working among the organizations are encouraged to participate in various green initiatives. The empowerment of employees means the organization has given them the right to take green initiatives, introduce various ideas and participate actively in environmentally friendly activities. Employees' contributions to these activities can provide various ideas to promote green initiatives. In hotels, employees can provide ideas to enhance hotels' focus and contribution to promoting green activities. A study carried out by [Ashraful et al. \(2021\)](#) also highlighted the major importance of green employment for employees.

Additionally, corporations are focusing on green recruitment to promote green practices through a green recruitment campaign. Businesses are increasingly achieving this goal through environmental protection initiatives and recruitment. This indicates that organizations prioritize environmental considerations during recruitment. As part of the recruitment process, environmental concerns are taken into account. Additionally, various jobs are created to advocate for environmental problems.

Additionally, it is regarded as the most critical component of organizations ([Mayangsari & Nawangsari, 2019](#)). Similarly, green training is another key green HRM practice having a major influence on unregimental issues ([Amrutha & Geetha, 2021](#)). Green training is based on the training activities carried out by the business organizations to promote environmental protection.

Green HRM has an important role in enhancing employee creativity. It can promote green creative process engagement. Creativity means the employees' generation of innovative and practical ideas concerning products, methods, and procedures at work, which is examined through goal orientation. Employee green creative process engagement shows the employee engagement in various processes of green management. Green HRM activities have the role of enhancing creativity. Green employment promotes the employees to participate in various green initiatives, decision-making, and environmental protection initiatives, leading them to enhance creativity.

Similarly, recruitment of employees for green initiatives also increases employee creativity toward green ideas. Additionally, training to enhance green practices also enhances the creative ideas among the employees. Similarly, previous studies also positively contribute to employee creativity (Al-Ghazali & Afsar, 2021; Haldorai et al., 2022; Luu, 2021; M. S. Malik et al., 2021). Therefore, it is proposed that;

**Hypothesis 1.** Green empowerment has a relationship with green creative process engagement.

**Hypothesis 2.** Green recruitment has a relationship with green creative process engagement.

**Hypothesis 3.** Green training has a relationship with green creative process engagement.

Moreover, along with the positive role of green HRM in the employee creative process, it also has a positive role in promoting green innovation. Green innovation can be described as all qualities of innovation associated with green products and processes, energy saving initiatives, pollution management activities, waste recycling management, product design, and environmental management. Organization's activities to enhance employee green empowerment help them participate in green management activities, leading them to develop various ideas which cause to bring innovation. Similarly, green recruitment to promote green activities and the training for environmental protection enhances the innovation among the organizations. Similarly, these activities among the hotels also lead to the innovation to protect the environment. Additionally, the literature also demonstrated the key contribution of green HRM to green innovation (Ahmeda et al., 2020; Al-Hawari et al., 2021; M. S. Malik et al., 2021; Mishra et al., 2014). Hence, the following hypotheses are proposed;

**Hypothesis 4.** Green empowerment has a relationship with green innovation.

**Hypothesis 5.** Green recruitment has a relationship with green innovation.

**Hypothesis 6.** Green training has a relationship with green innovation.

Additionally, employee engagement in green creative processes fosters green organizational innovation. Employee creativity has always resulted in innovation, as past research has demonstrated (Chaubey et al., 2019; Hassan et al., 2013). Employee engagement denotes the worker's level of interest and commitment to their job. Employee engagement could be more important to a company's success, given its connections to job satisfaction as well as employee morale. Engaged organizational employees are more likely to be beneficial through higher performance achievements. Similarly, employee green engagement denotes the level of interest and commitment,

which positively influences green innovation.

Additionally, green innovation has a positive role in employee satisfaction. Green innovation among the organizations encourages the employees, which leads to increased satisfaction. Hence, it is posed that;

**Hypothesis 7.** Green creative process engagement has a relationship with green innovation.

**Hypothesis 8.** Green innovation has a relationship with employee satisfaction.

Moreover, this study also proposed the role of green value. Green value is the totality of the various financial, environmental benefits, social benefits, information, and functional benefits of a green product along with the service. These green values have a major role in enhancing employees. In the current study, green values are based on individuals' values and norms towards the environment. The individuals having more concern about the environment shows better green values. Green values influence oninfluences environment in relation to the green HRM (Al-Ghazali & Afsar, 2021). Therefore, this study proposed the positive role of green values in employee satisfaction along with the moderating role. In addition to the direct and moderation effect, this study also proposed the mediating effect of green creative process engagement between green HRM and employee satisfaction. Thus, flowing hypotheses are proposed;

**Hypothesis 9.** Green values have a relationship with employee satisfaction.

**Hypothesis 10.** Green creative process engagement mediates the relationship between green empowerment and green innovation.

**Hypothesis 11.** Green creative process engagement mediates the relationship between green recruitment and green innovation.

**Hypothesis 12.** Green creative process engagement mediates the relationship between green training and green innovation.

**Hypothesis 13.** Green values moderate the relationship between green innovation and employee satisfaction.

### 3. Methodology

#### 3.1 Research Design

The current study investigated the relationship between green empowerment, green recruitment, green training, green creative process engagement, green innovation, green value, and employee satisfaction. The nature of this relationship is based on the primary data. Research on green HRM practices and employee satisfaction is carried out through primary data. Therefore, by following the previous studies and the nature of the relationship, this study considered quantitative research by using a cross-sectional research design in which a questionnaire survey is carried out. The population of the study is hotels working in Saudi Arabia.

#### 3.2 Questionnaires Development

The questionnaire is developed by using already revealed measures in previous studies. Green empowerment is measured by using four scale items. These items include: "1) Our organization has introduced communication channels and helplines to support green initiatives, 2) Top managers use teamwork to successfully manage and produce awareness of the environmental issues of the company, 3) Our organization offers

workshops or forums for staff to improve environmental behavior and exchange their tacit knowledge, 4) Employees are involved in green suggestion schemes and joint consultations for environmental problem-solving." Green recruitment is measured by using four items which include: "1) Job description specification includes environmental concerns, 2) Applicants' awareness about green practices is an important criterion in selection, 3) Recruitment messages include environmental behavior/commitment criteria, 4) Jobs positions are designed to focus on environmental management aspects of the organizations." Green training is measured by using four items which include: "1) My company provides environmental awareness training for the employees, 2) My company considers environmental issues when analyzing the training requirement, 3) My company provides induction training on environmental issues for the new employees, 4) All training materials are available online for employees to reduce paper cost." The scale items for green HRM are adopted from [Al-Ghazali and Afsar \(2021\)](#). Furthermore, green creative process engagement is measured by using five items; "1) I spend considerable time trying to understand the nature of the problem related to environment, 2) I generate a significant number of alternatives to the same problem before I choose the final solution, 3) I try to devise potential solutions that move away from established ways of doing things, 4) I search for information from multiple sources (e.g., personal memories, others' experience, documentation, Internet, etc., 5) I decompose a difficult problem/assignment into parts to obtain greater understanding." These items are adopted from [Zhang et al. \(2020\)](#). Three scale items of green innovation are used in this study: "1) Our organization chooses the materials of the product that produce the least amount of pollution for conducting the product development or design, 2) The manufacturing process of our organization reduces the use of raw materials, 3) Our organization uses the fewest amounts of materials to comprise the product for conducting the product development or design." These items are adopted from [Zhang et al. \(2020\)](#). Green value is measured by using four items: "1) I feel a personal obligation to do whatever I can to prevent environmental degradation, 2) I feel obliged to save environment from degradation, regardless of what others do, 3) People like me should do whatever they can to protect environment from degradation, 4) I feel guilty when I contribute to environmental degradation. These scale items are adopted from [Al-Ghazali and Afsar \(2021\)](#)." Finally, the employee satisfaction is examined by using five scale items: "1) my hotel is committed to issues of equal employment opportunities and diversity, 2) my pay is right for the type of work I do, 3) when things go well in my job, my contributions are recognized, 4) I feel that my work makes a real contribution to the success of the hotel, 5) it is safe to speak up in the hotel for rights." These scale items are adopted from [Spinelli and Canavos \(2000\)](#).

### 3.3 Data Collection

The data were gathered from hotels in Saudi Arabia, and respondents were assumed to be workers of these establishments. Two types of data are collected from respondents: demographic information about the respondents and information about the main variables: green empowerment, green recruiting, green training, green creative process involvement, green innovation, and green value. 400 questionnaires were delivered to hotel staff in Saudi Arabia, and the data analysis included 210 legitimate responses. Self-visits to hotels are used to collect data.

## 4. Findings

Data screening is the most significant part of any data analysis. Data analysis is needed to remove the errors in the data. These errors may include missing values (Yang et al., 2020) and the data's outlier. Both the errors can change the results; therefore, it is important to remove the errors in the data. Table 1 shows the data statistics in which the missing value and the outlier are given. The minimum value and maximum values show that data has no outlier.

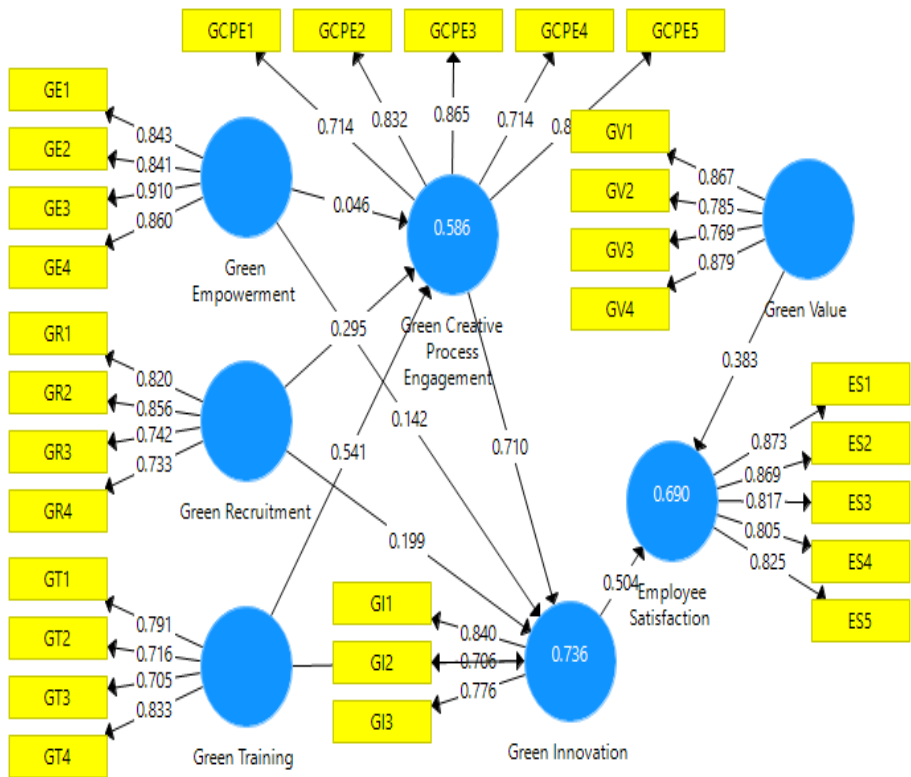
**Table 1.** Data Statistics

	No.	Missing	Mean	Median	Min	Max	SD	Kurtosis	Skewness
GE1	1	0	2.078	1	1	5	0.96	2.701	2.073
GE2	2	0	1.952	2	1	5	0.93	-1.855	1.031
GE3	3	0	1.8	2	1	5	1.387	-0.493	1.085
GE4	4	0	1.92	2	1	5	2.022	-1.591	1.067
GR1	5	0	2.05	2	1	5	0.902	1.63	1.214
GR2	6	0	2.583	2	1	5	1.351	-1.767	0.661
GR3	7	0	1.94	2	1	5	0.937	0.056	0.909
GR4	8	0	2.167	2	1	5	0.962	1.018	0.956
GT1	9	0	2.28	2	1	5	1.358	-0.207	1.005
GT2	10	0	2.488	2	1	5	1.291	-0.636	0.571
GT3	11	0	2.054	2	1	5	1.098	-0.44	0.764
GT4	12	0	2.25	2	1	5	1.322	-0.121	1.044
GCPE1	13	0	1.988	2	1	5	1.17	0.855	1.306
GCPE2	14	0	2.119	2	1	5	1.214	0.498	1.119
GCPE3	15	0	2.268	2	1	5	1.275	-0.259	0.929
GCPE4	16	0	2.036	2	1	5	1.101	1.121	1.277
GCPE5	17	0	2.006	2	1	5	1.168	0.292	1.121
GI1	18	0	1.952	2	1	5	0.999	1.397	1.289
GI2	19	0	2.107	2	1	5	1.258	0.108	1.098
GI3	20	0	2.054	2	1	5	0.953	0.201	0.809
GV1	21	0	2.256	2	1	5	1.323	-0.256	0.951
GV2	22	0	1.94	2	1	5	0.93	0.739	1.014
GV3	23	0	1.923	2	1	5	1	1.45	1.31
GV4	24	0	2.262	2	1	5	1.301	-0.213	0.942
ES1	25	0	2.185	2	1	5	1.183	0.492	1.093
ES2	26	0	1.839	2	1	5	0.984	1.26	1.312
ES3	27	0	1.97	2	1	5	1.131	0.476	1.105
ES4	28	0	2.095	2	1	5	1.087	1.097	1.184
ES5	29	0	2.173	2	1	5	1.282	0.115	1.093

Note: GE = Green Empowerment; GR = Green Recruitment; GT = Green Training; GCPE = Green Creative Process Engagement; GI = Green Innovation; GV = Green Value; ES = Employee's Satisfaction



Confirmatory factors analysis (CFA) is carried out using Partial Least Square (PLS). PLS is grounded on Structural Equation Modeling (SEM) (Guerin et al., 2018; J. F. Hair et al., 2013; J. F. Hair et al., 2012), a most significant data analysis technique recommended by several previous studies while examining the primary data. CFA was carried out to examine the internal consistency through factor loadings. The factor loadings must be higher than 0.7 to retain the scale items. PLS measurement model is given in Figure 3, and all the factor loadings are given in Table 2. The green environment has factor loadings between 0.841 to 0.910, green recruitment has factor loadings between 0.733 to 0.856; green training has factor loadings between 0.705 to 0.833, green creativity process engagement has factor loadings between 0.714 to 0.865, green innovation has factor loadings between 0.706 to 0.840 and green value has factor loadings between 0.769 to 0.879.



Note: GE = Green Empowerment; GR = Green Recruitment; GT = Green Training; GCPE = Green Creative Process Engagement; GI = Green Innovation; GV = Green Value; ES = Employee's Satisfaction

Figure 3. Measurement Model

Table 2. Factor Loadings, Cronbach Alpha, CR and AVE

Variables	Items	Loadings	Alpha	CR	AVE
Employee Satisfaction	ES1	0.873	0.894	0.922	0.703
	ES2	0.869			
	ES3	0.817			
	ES4	0.805			
	ES5	0.825			
Green Creative Process Engagement	GCPE1	0.714	0.847	0.892	0.624
	GCPE2	0.832			
	GCPE3	0.865			
	GCPE4	0.714			
	GCPE5	0.813			
Green Empowerment	GE1	0.843	0.886	0.922	0.746
	GE2	0.841			
	GE3	0.91			
	GE4	0.86			
Green Innovation	GI1	0.84	0.668	0.818	0.601
	GI2	0.706			
	GI3	0.776			
Green Recruitment	GR1	0.82	0.799	0.868	0.623
	GR2	0.856			
	GR3	0.742			
	GR4	0.733			
Green Training	GT1	0.791	0.76	0.847	0.582
	GT2	0.716			
	GT3	0.705			
	GT4	0.833			
Green Value	GV1	0.867	0.844	0.896	0.683
	GV2	0.785			
	GV3	0.769			
	GV4	0.879			

Note: GE = Green Empowerment; GR = Green Recruitment; GT = Green Training; GCPE = Green Creative Process Engagement; GI = Green Innovation; GV = Green Value; ES = Employee’s Satisfaction

Furthermore, this study addressed the reliability with the help of Cronbach alpha and composite reliability (CR). Alpha must not be less than 0.7 and CR to achieve minimum reliability. Table 2 denotes the CR values, and it is observed that; green empowerment, green recruitment, green training, green creative process engagement, green innovation, green value, and employee satisfaction has CR above 0.7 and Alpha is also above 0.7 which confirmed the reliability of the data. In addition to reliability, this study examined the validity of the instrument. While examining the validity, discriminant validity (Henseler et al., 2015) and convergent validity are examined. Discriminant validity is examined by using cross-loadings which are reported in Table 3.

On the other hand, convergent validity is examined through CR and average variance extracted (AVE). According to J. Hair et al. (2017), CR should be above 0.7, and AVE should be above 0.5 to achieve convergent validity. It is given in Table 2; all the variables have achieved the minimum level.

**Table 3.** *Cross-Loadings*

	Employee Satisfaction	Green Creative Process Engagement	Green Empowerment	Green Innovation	Green Recruitment	Green Training	Green Value
ES1	0.873	0.718	0.667	0.751	0.708	0.689	0.605
ES2	0.869	0.634	0.646	0.666	0.743	0.65	0.674
ES3	0.817	0.635	0.591	0.615	0.517	0.668	0.597
ES4	0.805	0.677	0.398	0.676	0.487	0.545	0.701
ES5	0.825	0.712	0.383	0.589	0.464	0.599	0.596
GCPE1	0.635	0.714	0.53	0.544	0.48	0.655	0.409
GCPE2	0.575	0.832	0.51	0.641	0.624	0.633	0.639
GCPE3	0.808	0.865	0.492	0.727	0.564	0.658	0.578
GCPE4	0.528	0.714	0.322	0.684	0.469	0.454	0.596
GCPE5	0.62	0.813	0.531	0.734	0.638	0.559	0.569
GE1	0.631	0.488	0.843	0.451	0.644	0.634	0.397
GE2	0.498	0.485	0.841	0.503	0.692	0.661	0.225
GE3	0.6	0.545	0.91	0.48	0.742	0.74	0.374
GE4	0.496	0.573	0.86	0.396	0.675	0.619	0.409
GI1	0.714	0.686	0.448	0.84	0.59	0.533	0.7
GI2	0.631	0.684	0.462	0.706	0.528	0.671	0.403
GI3	0.449	0.577	0.294	0.776	0.43	0.378	0.634
GR1	0.621	0.581	0.686	0.607	0.82	0.725	0.582
GR2	0.613	0.627	0.697	0.542	0.856	0.805	0.443
GR3	0.483	0.399	0.649	0.391	0.742	0.566	0.241
GR4	0.48	0.578	0.497	0.557	0.733	0.489	0.373
GT1	0.557	0.582	0.731	0.557	0.	0.791	0.439
GT2	0.59	0.532	0.537	0.508	0.473	0.716	0.48
GT3	0.397	0.498	0.578	0.457	0.624	0.705	0.479
GT4	0.718	0.662	0.514	0.593	0.624	0.833	0.457
GV1	0.678	0.665	0.398	0.674	0.51	0.636	0.867
GV2	0.57	0.567	0.279	0.563	0.325	0.325	0.785
GV3	0.555	0.556	0.353	0.546	0.482	0.497	0.769
GV4	0.692	0.554	0.311	0.665	0.452	0.515	0.879

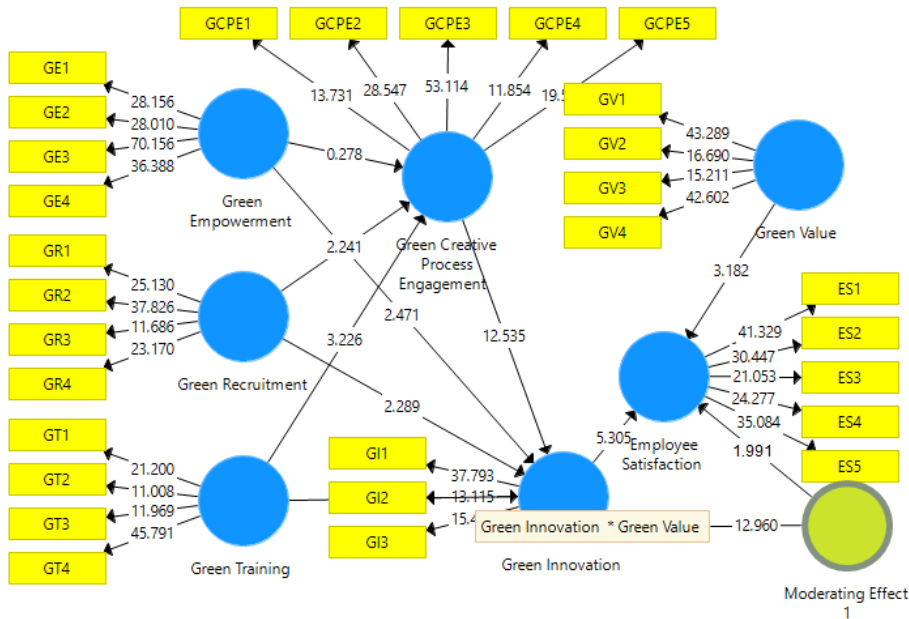
Note: GE = Green Empowerment; GR = Green Recruitment; GT = Green Training; GCPE = Green Creative Process Engagement; GI = Green Innovation; GV = Green Value; ES = Employee's Satisfaction

Assessment of the measurement model led to the assessment of the structural model. To examine the relationship between variables, the PLS structural model is most appropriate which is carried out by the PLS structural model is most appropriate and is carried out using PLS bootstrapping (F. Hair Jr et al., 2014; Hamid et al., 2020; Henseler et al., 2014). In this data analysis process, t-statistics and beta value are considered to examine the relationship between green empowerment, green recruitment, green training, green creative process engagement, green innovation,

green value, and employee's satisfaction. The t-value shows the significance of the study, and the beta value shows the direction of the study. The PLS structural model is presented in Figure 4 and results in Table 4.

The results of the data analysis show nine direct hypotheses. Green empowerment has an insignificant relationship with green creative process engagement with a t-value of 0.278 and beta value of 0.046. Green recruitment significantly affects green creative process engagement with a t-value of 2.241 and beta value of 0.0295. Furthermore, green training found a significant relationship with green creative process engagement with a t-value of 3.226 and a beta value of 0.541. Green creative process engagement has a significant relationship with green innovation, with a t-value of 12.535 and a beta value of 0.71.

Moreover, green empowerment significantly affects green innovation with a t-value of 2.471 and a beta value of 0.142. Green recruitment also significantly affects green innovation with a t-value of 2.289 and a beta value of 0.199. The relationship between green training and green innovation was insignificant, with a t-value 1.449 and a beta value of 0.11. The direct effect between green innovation and employee satisfaction is significant, with a t-value of 5.305 and a beta value of 0.484. There is no direct relationship between green training and green innovation. Furthermore, there is no direct relationship between green empowerment and green creative process engagement.



Note: GE = Green Empowerment; GR = Green Recruitment; GT = Green Training; GCPE = Green Creative Process Engagement; GI = Green Innovation; GV = Green Value; ES = Employee's Satisfaction

Figure 4. Structural Model

Table 4. Direct Effect Results

	$\beta$	Mean	SD	T Statistics	P Values	Decision
GCPE -> Green Innovation	0.71	0.712	0.057	12.535	0	Supported
Green Empowerment -> GCPE	0.046	0.036	0.167	0.278	0.781	Not Supported
Green Empowerment -> Green Innovation	0.142	0.143	0.058	2.471	0.014	Supported
Green Innovation -> Employee Satisfaction	0.484	0.492	0.091	5.305	0	Supported
Green Recruitment -> GCPE	0.295	0.318	0.132	2.241	0.025	Supported
Green Recruitment -> Green Innovation	0.199	0.193	0.087	2.289	0.023	Supported
Green Training -> GCPE	0.541	0.51	0.168	3.226	0.001	Supported
Green Training -> Green Innovation	0.11	0.116	0.076	1.449	0.148	Not Supported
Green Value -> Employee Satisfaction	0.324	0.316	0.102	3.182	0.002	Supported
Moderating Effect 1 -> Employee Satisfaction	0.062	0.064	0.033	1.991	0.047	Supported

After evaluating the direct effect, the indirect effect is examined by following Preacher and Hayes's instructions. Three mediation effects are examined based on green creative process engagement. The first mediation effect of green creative process engagement is examined between green empowerment and green innovation. The second mediation effect of green creative process engagement is examined between green recruitment and green innovation. The third mediation effect of green creative process engagement is examined between green training and green innovation.

Along with the direct effect, the indirect effect is also examined by considering the t-value to check the significance. Results are reported in Table 5. The mediation effect of green creative process engagement between green empowerment, and green innovation is insignificant, with a t-value of 0.274 and a beta value of 0.033. The mediation effect of green creative process engagement between green recruitment and green innovation is significant, with a t-value of 2.192 and a beta value of 0.21. The mediation effect of green creative process engagement between green training and green innovation is significant, with a t-value of 3.115 and a beta value of 0.384.

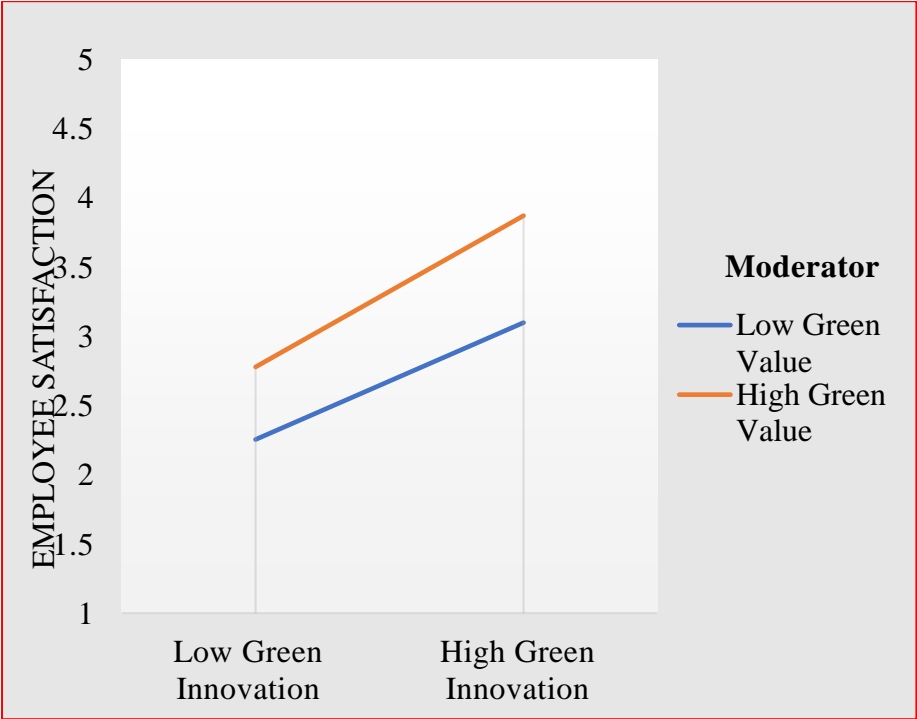
Along with these indirect effects, the framework of the study also has various other indirect effects. The analysis of the study highlighted several indirect effects given in Table 5. For instance, green innovation is a mediating variable between the green creative process and employee satisfaction. Green innovation is a mediating variable between green empowerment and employee satisfaction. Green innovation is also a mediating variable between green recruitment and employee satisfaction.

**Table 5. Indirect Effect Results**

	$\beta$	Mean	SD	T Statistics	P Values	Decision
Green Empowerment -> GCPE -> Green Innovation -> Employee Satisfaction	0.017	0.016	0.062	0.268	0.789	
Green Recruitment -> GCPE -> Green Innovation -> Employee Satisfaction	0.106	0.116	0.051	2.063	0.04	
GCPE -> Green Innovation -> Employee Satisfaction	0.358	0.369	0.068	5.282	0	
Green Training -> GCPE -> Green Innovation -> Employee Satisfaction	0.194	0.194	0.076	2.562	0.011	
Green Empowerment -> Green Innovation -> Employee Satisfaction	0.072	0.073	0.034	2.108	0.036	
Green Recruitment -> Green Innovation -> Employee Satisfaction	0.1	0.098	0.046	2.194	0.029	
Green Training -> Green Innovation -> Employee Satisfaction	0.055	0.061	0.046	1.209	0.227	
Green Empowerment -> Green Creative Process Engagement -> Green Innovation	0.033	0.031	0.12	0.274	0.784	Not Supported
Green Recruitment -> GCPE -> Green Innovation	0.21	0.225	0.096	2.192	0.029	Supported
Green Training -> Green Creative Process Engagement -> Green Innovation	0.384	0.373	0.123	3.115	0.002	Supported

Additionally, after assessing the mediation effect and moderation effect, this study examined the moderation effect of green value. The moderation effect of green value is examined between green innovation and employee satisfaction. The moderation effect of the green value is significant, with a t-value of 1.991 and a beta value of 0.062. Therefore, green values influence the relationship between green innovation and employee satisfaction. The moderation effect is presented in [Figure 5](#). It is also given in PLS structural model, [Figure 4](#).

Additionally, this study examined the Predictive Relevance ( $Q^2$ ) to check the model quality. Literature demonstrated that the model's quality could be examined through Predictive Relevance ( $Q^2$ ) and the Predictive Relevance ( $Q^2$ ) should not be less than zero. [Table 6](#) shows that the Predictive Relevance ( $Q^2$ ) value is higher than zero. Thus, the model has achieved the minimum level of quality required to get accurate results.



**Figure 5.** Green Value as moderating variable strengthens the relationship between green innovation and employee satisfaction

**Table 6.** Predictive Relevance ( $Q^2$ )

	SSO	SSE	$Q^2 (=1-SSE/SSO)$
Employee Satisfaction	840	483.915	0.424
Green Creative Process Engagement	840	570.992	0.32
Green Empowerment	672	672	
Green Innovation	504	307.67	0.39
Green Recruitment	672	672	
Green Training	672	672	
Green Value	672	672	

5. Discussion and Conclusion

The current study proposed 14 hypotheses to examine the relationship between green empowerment, green recruitment, green training, creative process engagement, green innovation, green value, and employee satisfaction. This relationship is examined by using primary data collected with the help of a survey questionnaire from the hotel industry of Saudi Arabia and was analyzed through statistical software. This study considered three green HRM practices: green empowerment, green recruitment, and green training. Of the total hypotheses, 10 are based on the direct effect, three are based on indirect effect, and one is based on direct effect.

The importance of green empowerment in engaging in green creative processes was hypothesized in Hypothesis 1. This hypothesis demonstrates no correlation between green empowerment and engagement in creative processes. Increased green empowerment among hoteliers will not affect hoteliers' creative process engagement. The association between green recruiting and creative process participation is demonstrated in Hypothesis 2. As with green empowerment, green recruiting contributes significantly to creative process involvement. As a result of the hotel's commitment to green recruitment, the degree of inventiveness among its employees increased. Hypothesis 3 established a link between green training and engagement in the creative process. This hypothesis demonstrates a beneficial association between green training and engagement in the creative process. Increased green training among hotels has been shown to boost creative process participation. These findings are consistent with prior research, which has demonstrated the critical role of green human resource management strategies on employee creativity (Al-Hawari et al., 2021; Al-Ghazali & Afsar, 2021; Zhang et al., 2020).

Additionally, the effect of green human resource management techniques on green innovation is investigated. The relationship between green empowerment and green innovation is demonstrated in Hypothesis 4. This is a significant and positive link, indicating that an increase in green empowerment results in an increase in green innovation. Additionally, the literature emphasized the good relationship between green human resource management and green innovation (M. S. Malik et al., 2021; Singh et al., 2020). The effect of green training on green innovation is demonstrated in Hypothesis 5. According to the findings, green recruitment practices among hotels can help accelerate the pace of green innovation.

Similarly, the literature demonstrates the beneficial effect of green recruitment on the innovation process (S. Y. Malik et al., 2020). Thus, the findings of this study demonstrate the beneficial effect of green human resource management in innovation, which is consistent with past research. However, hypothesis 6 is unimportant since it links green training and green innovation. There is no correlation between green training and green innovation in Saudi Arabian hotels. Additionally, hypothesis 7 examines the effect of the green creativity process on green innovation. The association between green creativity and green innovation is positive, indicating that increasing hotel employee engagement in green creative processes increases green innovation. Hypothesis 8 examines the role of green innovation in employee satisfaction. It demonstrates that by promoting green creative practices among employees, the level of happiness would also grow. Research has established a significant association between green innovation and employee satisfaction (Iranmanesh et al., 2017).

Additionally, green satisfaction is influenced by green value. It demonstrates that increasing the green value of a hotel boosts employee satisfaction, as hypothesized in hypothesis 9. Thus, green human resource management and green value (Zhu et al., 2022) synergize employee satisfaction.

Additionally, this study examined three mediating effects between green human resource management strategies and green innovation. Hypothesis 10 demonstrates the mediation effect of green creative process engagement on the relationship between green empowerment and green innovation, demonstrating that green creative process engagement does not transmit the beneficial effects of green empowerment to green



innovation because this indirect effect is negligible. Hypothesis 11 highlights the mediation effect of green creative process engagement between green recruiting and green innovation. It demonstrates that the good effect of green recruitment is transferred to green innovation via the green creative process. Hypothesis 12 examines the ultimate mediation effect of green creative process involvement between green training and green innovation. As with green recruitment, green creative process involvement ensures that the beneficial effects of green training are transferred to the green invention. Nonetheless, hypothesis 13 indicates that green values have a moderating influence on the link between green innovation and employee satisfaction, indicating that green values strengthen the relationship between green innovation and employee contentment. Thus, by promoting green ideals in hotels, green innovation can increase employee satisfaction.

### **5.1 Theoretical Implications**

The current study has filled several gaps in the literature which were not considered by the previous investigation in the field of green HRM and employee satisfaction in the hotel industry of Saudi Arabia. Due to the key contribution, this study has important implications for the literature. Most importantly, this study examined green empowerment, green recruitment, green training, green creative process engagement, green innovation, green value, and employee's satisfaction, which is a unique relationship and not addressed in previous studies. In this relationship, this study addressed mediating and moderating effects rare in literature and first time considered. For instance, this study proved two indirect effects of green creative process engagement between green HRM and green innovation among hotels. Green creative process engagement proved to be mediating variable between green recruitment and employee satisfaction.

Furthermore, green creative process engagement is a mediating variable between green training and green innovation. Both these mediating effects are the first time addressed in the literature. Therefore, this study highlighted new area of research in the hotel industry field, including green HRM and employee's employee satisfaction. Additionally, the moderating role of green value is important for the hotels to enhance the satisfaction level of employees. However, this moderation effect is not highlighted by previous researchers. Therefore, this study has vital importance to contribute theoretically.

### **5.2 Practical Implications**

This study provided several implications for the hotels working in Saudi Arabia. Particularly, this study provided implications concerning employee satisfaction and how employee satisfaction can be promoted by using green HRM activities. This study proved that green HRM is a major element for hotels to enhance employee satisfaction. Particularly, green recruitment has central importance for employee satisfaction. Therefore, the management of hotels should promote green recruitment while implementing green HRM.

Furthermore, along with green recruitment, green training also increases employee satisfaction. Thus, it is recommended that the hotel management promote green training and recruitment. Like the green HRM, practitioners should enhance

green creative process engagement among the employees working in hotels. Green creative process engagement is most influential for the employee satisfaction concerning the green innovation. The hotels should highlight green innovation and green creativity to promote employee satisfaction. Therefore, the relationship between green HRM, employee creative engagement, and green innovation has a vital role in enhancing employee satisfaction, which the hotel management should focus on.

### 5.3 Limitations and Future Directions

The association found in this study makes a substantial contribution to the literature and also to practice. However, this study had certain limitations, as it focused exclusively on green empowerment, green recruiting, green training, green creative process involvement, green innovation, green value, and employee happiness. This study investigated three green human resource management approaches green empowerment, green recruitment, and green training. However, the current study does not address a variety of additional green human resource management techniques. Other green human resource management methods include sustainable organizational culture, sustainable remuneration, sustainable rewards, and sustainable performance management. As a result, future research should include these critical green human resource management approaches.

Additionally, green behavioral intention is a critical element to develop while advocating green activities. Green inventiveness cannot be promoted until employees commit to green conduct. As a result, the framework must incorporate the role of green behavioral intention to analyze the effect on green creative process management while also examining staff happiness.

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### References

1. Ahmeda, U., Mozammelb, S., & Zamanc, F. (2020). Green HRM and green innovation: Can green transformational leadership moderate: Case of pharmaceutical firms in Australia. *Systematic Reviews in Pharmacy*, 11(7), 616-617. <http://dx.doi.org/10.31838/srp.2020.7.86>
2. Al-Hawari, M. A., Quratulain, S., & Melhem, S. B. (2021). How and when frontline employees' environmental values influence their green creativity? Examining the role of perceived work meaningfulness and green HRM practices. *Journal of Cleaner Production*, 310, 127598. <https://doi.org/10.1016/j.jclepro.2021.127598>
3. Al-Ghazali, B. M., & Afsar, B. (2021). Retracted: Green human resource management and employees' green creativity: The roles of green behavioral intention and individual green values. *Corporate Social Responsibility and Environmental Management*, 28(1), 536-536. <https://doi.org/10.1002/csr.1987>

4. Alhamad, I. A., & Singh, H. P. (2021). Predicting Key Factors Impacting Online Hotel Ratings Using Data Mining Approach: A Case Study of Makkah of Saudi Arabia. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 12(2), 1-12. <http://doi.org/10.14456/ITJEMAST.2021.35>
5. AlZgool, M., Ahmed, U., Shah, S., Alkadash, T., & AlMaamary, Q. (2021). Going green during COVID-19: Examining the links between green HRM, green supply chain and firm performance in food Industry of Bahrain: The moderating role of lockdown due to COVID-19. *Uncertain Supply Chain Management*, 9(1), 79-88. <http://dx.doi.org/10.5267/j.uscm.2020.11.007>
6. Amrutha, V., & Geetha, S. (2021). Linking organizational green training and voluntary workplace green behavior: mediating role of green supporting climate and employees' green satisfaction. *Journal of Cleaner Production*, 290, 125876. <https://doi.org/10.1016/j.jclepro.2021.125876>
7. Ashraful, A. M., Niu, X., & Rounok, N. (2021). Effect of green human resource management (GHRM) overall on organization's environmental performance: The mediating role of green employee empowerment. *International Journal of Research in Business and Social Science* (2147-4478), 10(4), 99-116. <https://doi.org/10.20525/ijrbs.v10i4.1230>
8. Chaubey, A., Sahoo, C. K., & Khatri, N. (2019). Relationship of transformational leadership with employee creativity and organizational innovation: A study of mediating and moderating influences. *Journal of Strategy and Management*, 12(1), 61-82. <https://doi.org/10.1108/JSMA-07-2018-0075>
9. Darvishmotevali, M., & Altinay, L. (2022). Green HRM, environmental awareness and green behaviors: The moderating role of servant leadership. *Tourism Management*, 88, 104401. <https://doi.org/10.1016/j.tourman.2021.104401>
10. F. Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2), 106-121. <https://doi.org/10.1016/j.jfbs.2014.01.002>
11. García-Almeida, D. J., Fernández-Monroy, M., & De Saá-Pérez, P. (2015). Dimensions of employee satisfaction as determinants of organizational commitment in the hotel industry. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 25(2), 153-165. <https://doi.org/10.1002/hfm.20539>
12. Guerin, R. J., Toland, M. D., Okun, A. H., Rojas-Guyler, L., & Bernard, A. L. (2018). Using a modified theory of planned behavior to examine adolescents' workplace safety and health knowledge, perceptions, and behavioral intention: A structural equation modeling approach. *Journal of youth and adolescence*, 47(8), 1595-1610. <https://doi.org/10.1007/s10964-018-0847-0>
13. Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial management & data systems*, 117(3), 442-458. <https://doi.org/10.1108/IMDS-04-2016-0130>
14. Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long range planning*, 46(1-2), 1-12. <https://ssrn.com/abstract=2233795>

15. Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications. *Long range planning*, 45(5-6), 320-340. <https://doi.org/10.1016/j.lrp.2012.09.008>
16. Haldorai, K., Kim, W. G., & Garcia, R. F. (2022). Top management green commitment and green intellectual capital as enablers of hotel environmental performance: The mediating role of green human resource management. *Tourism Management*, 88, 104431. <https://doi.org/10.1016/j.tourman.2021.104431>
17. Hamid, R., Ong, M. H. A., Razak, I. R. A., Jamil, J., Ramli, N., Mohi, Z., & Shukur, S. A. M. (2020). The Effect of Core Competencies as a Moderator between Perceived Value and Destination Image in Green Hotel: An Assessment using Structural Equation Modeling Technique with Partial Least Square (ie PLS-SEM). *Journal of Supply Chain Management*, 9(3), 315-321. <https://www.researchgate.net/profile/Zurinawati-Mohi/publication/345358419>
18. Haque, A. U., Nair, S. L. S., & Kucukaltan, B. (2019). Management and administrative insight for the universities: High stress, low satisfaction and no commitment. *Polish Journal of Management Studies*, 20(2), 236-255. <https://doi.org/10.17512/pjms.2019.20.2.20>
19. Hassan, M. U., Malik, A. A., Hasnain, A., Faiz, M. F., & Abbas, J. (2013). Measuring employee creativity and its impact on organization innovation capability and performance in the banking sector of Pakistan. *World Applied Sciences Journal*, 24(7), 949-959. [https://www.academia.edu/download/34289765/Employee\\_creativity\\_and\\_innovation2.pdf](https://www.academia.edu/download/34289765/Employee_creativity_and_innovation2.pdf)
20. Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., . . . Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational research methods*, 17(2), 182-209. <https://doi.org/10.1177/1094428114526928>
21. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
22. Iranmanesh, M., Zailani, S., Moeinzadeh, S., & Nikbin, D. (2017). Effect of green innovation on job satisfaction of electronic and electrical manufacturers' employees through job intensity: personal innovativeness as moderator. *Review of managerial science*, 11(2), 299-313. <https://doi.org/10.1007/s11846-015-0184-6>
23. Jeenanunta, C., Chumnumporn, K., Pooprapai, K., Kasornsukhon, J., Wairit, N., Srivervaskul, J., & Lamaipan, T. (2018). INFLUENCE OF INTERNAL CAPABILITY ON SERVICE INNOVATION PERFORMANCE THROUGH KNOWLEDGE MANAGEMENT CAPABILITY IN HOTEL INDUSTRY. *Panyapiwat Journal*, 10(2), 75-88. <https://so05.tci-thaijo.org/index.php/pimjournal/article/view/142857>
24. Kim, Y. J., Kim, W. G., Choi, H.-M., & Phetvaroon, K. (2019). The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance. *International Journal of Hospitality Management*, 76, 83-93. <https://doi.org/10.1016/j.ijhm.2018.04.007>

25. Li, Z., Yu, Z., Huang, S. S., Zhou, J., Yu, M., & Gu, R. (2021). The effects of psychological capital, social capital, and human capital on hotel employees' occupational stress and turnover intention. *International Journal of Hospitality Management*, 98, 103046. <https://doi.org/10.1016/j.ijhm.2021.103046>
26. Luu, T. T. (2021). Can green creativity be fostered? Unfolding the roles of perceived green human resource management practices, dual mediation paths, and perceived environmentally-specific authentic leadership. *The International Journal of Human Resource Management*, 1-28. <https://doi.org/10.1080/09585192.2021.1986107>
27. Malik, M. S., Ali, K., Kausar, N., & Chaudhry, M. A. (2021). Enhancing environmental performance through green hrm and green innovation: Examining the mediating role of green creativity and moderating role of green shared vision. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 15(2), 265-285. <http://hdl.handle.net/10419/237078>
28. Malik, S. Y., Cao, Y., Mughal, Y. H., Kundi, G. M., Mughal, M. H., & Ramayah, T. (2020). Pathways towards sustainability in organizations: Empirical evidence on the role of green human resource management practices and green intellectual capital. *Sustainability*, 12(8), 3228. <https://doi.org/10.3390/su12083228>
29. Mayangsari, R. E., & Nawangsari, L. C. (2019). The Effect Of Green Recruitment, Green Training On Environmental Performance In Pt Wira Cipta Perkasa Using Employee Green Behavior As Mediation Variable. *Dinasti International Journal of Management Science*, 1(2), 217-231. <https://doi.org/10.31933/dijms.v1i2.58>
30. Mishra, R., Sarkar, S., & Kiranmai, J. (2014). Green HRM: innovative approach in Indian public enterprises. *World Review of Science, Technology and Sustainable Development*, 11(1), 26-42. <https://dx.doi.org/10.1504/WRSTSD.2014.062374>
31. Peng, J., Yang, X., & Huan, T.-C. (2022). The effects of empowering leadership on employee adaptiveness in luxury hotel services: Evidence from a mixed-methods research. *International Journal of Hospitality Management*, 101, 103113. <https://doi.org/10.1016/j.ijhm.2021.103113>
32. Singh, S. K., Del Giudice, M., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological Forecasting and Social Change*, 150, 119762. <https://doi.org/10.1016/j.techfore.2019.119762>
33. Spinelli, M. A., & Canavos, G. C. (2000). Investigating the relationship between employee satisfaction and guest satisfaction. *Cornell Hotel and Restaurant Administration Quarterly*, 41(6), 29-33. <https://doi.org/10.1177%2F001088040004100604>
34. Yang, F., Du, J., Lang, J., Lu, W., Liu, L., Jin, C., & Kang, Q. (2020). Missing value estimation methods research for arrhythmia classification using the modified kernel difference-weighted KNN algorithms. *BioMed research international*, 2020, 1-9. <https://doi.org/10.1155/2020/7141725>
35. Zhang, W., Xu, F., & Wang, X. (2020). How green transformational leadership affects green creativity: Creative process engagement as intermediary bond and green innovation strategy as boundary spanner. *Sustainability*, 12(9), 3841. <https://doi.org/10.3390/su12093841>
36. Zhu, S., Wu, Y., & Shen, Q. (2022). How Environmental Knowledge and Green Values Affect the Relationship between Green Human Resource Management and Employees' Green Behavior: From the Perspective of Emission Reduction. *Processes*, 10(1), 38. <https://doi.org/10.3390/pr10010038>