

# Green innovation mediates the relationship between green HRM practices (i.e., compensation and reward, green performance and appraisal, green training and development, and green recruitment and selection) and environmental performance.

Vikrant

Scholar of Singhania University , School of Management.

---

Date of Submission: 06-07-2023

Date of Acceptance: 18-07-2023

---

## I. Introduction

The term Green HRM has become popular word within the business field at present and its significance is increasing manifold with the passage of time. This term has also its secured position as a vivid topic in recent research works since the awareness on environmental management and sustainable development has been increasingly rising day by day all round the globe. Today the topic Green HRM not only includes awareness toward environmental affairs, but also stands for the social as well as economical well-being of both the organization and the employees within a broader prospect.

Different authors have given different definitions for this term such as—“Green HRM is the use of HRM policies to promote the sustainable use of resources within organizations and, more generally promotes the causes of environment sustainability”. GHRM is directly responsible in creating green workforce that understands, appreciates, and practices green initiative and maintains its green objectives all throughout the HRM process of recruiting, hiring, training, compensating, developing, and advancing the firms human capital. It refers to the policies, practices, and systems that make employees of the organization green for the benefit of the individual, society, natural environment, and the business.

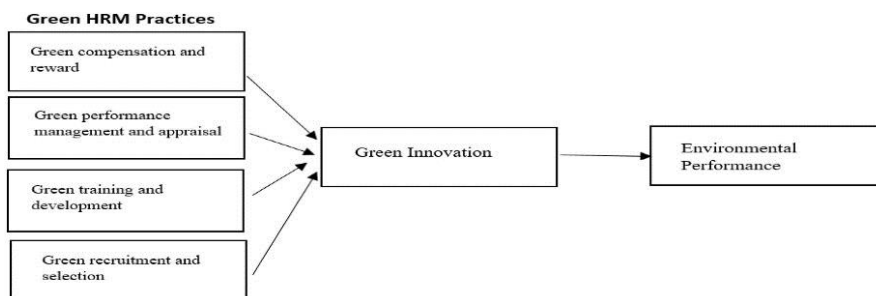
Keywords: green HR practices, innovation, environment, performance, human resource management

## II. Research Methodology

### Participants and Procedure

Based on a thorough literature analysis and theoretical groundings such as social learning theory and recourse-based perspective theory, a coherent conceptual framework has been developed, as shown in [Figure 1](#),

Figure 1



### Measures of the Study

1. A 23-item questionnaire was created to investigate the impact of environmental performance on green innovation and green HRM practices.
2. A 3-item scale was adopted to determine the green compensation and reward ([Haldorai et al., 2022](#)). Sample items include “Employees are rewarded for making suggestions for improvement on environmental programs”

and “Employees who have achieved or surpassed their environmental goals are rewarded with bonus pay or other monetary awards.”

3. A 3-item scale was adopted to determine the green performance and appraisal (Haldorai et al., 2022). Sample items include “Environmental goals and objectives are implemented in this organization for all employees” and “Contributions to environmental management are assessed.”

4. A 5-item scale was adopted to determine green training and development (Haldorai et al., 2022). Sample items include “This organization offers ecological training for all employees” and “In this organization, environmental training is a priority.”

5. A 4-item scale was adopted to determine green recruitment and selection (Haldorai et al., 2022). Sample items include “This organization is very particular about mainly recruiting and selecting employees with environmental concerns, knowledge, and attitude” and “In the recruitment process, our organization focuses on applicants with environmental insights, attitude, and concerns.”

6. A 3-item scale was adopted to determine green innovation (Tseng et al., 2013). Sample items include “Investment in green equipment and technology” and “Implementation of the comprehensive material saving plan.”

7. A 5-item scale was adopted to determine the environmental performance (Sobaih et al., 2020). Sample items include “Environmental activities significantly improved my organization’s reputation” and “Environmental activities significantly reduced waste within the entire value chain process.” In all the above scales, the responses were tapped on “a 5-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree.”

## Data Analysis and Results

### Measurement Model

SmartPLS3 was applied to assess the measurement and structural model. The simulation analysis in the study revealed that respondents’ gender, designation, and marital status positively impacted their perceptions about green innovation and environmental performance; therefore, all these three demographic characteristics were controlled during the study. The demographic detail of this study respondents is presented in [Table 1](#).

Table I  
Demographic profile of study samples

Demographic data	Frequency	Percentage (%)
Study 1 (N = 206)		
Total number of employees		
Less than 100	60	29.1
Between 100 and 149	130	63.1
Between 150 and 299	16	7.8
ISO 14001 EMS certification		
Yes	93	45.1
No	113	54.9
Hotel classification		
5-star	45	21.8
4-star	64	31.1
3-star	97	47.1
Type of hotel		
Non-chain hotel	68	33.0
International chain hotel	80	38.8
Local chain hotel	5	28.2
Gender of respondent		
Male	72	35
Female	134	65
Age		
21–30 years	29	14.1

<b>Demographic data</b>	<b>Frequency</b>	<b>Percentage (%)</b>
31–40 years	99	48.1
41–50 years	74	35.9
51–60 years	4	4.0
<b>Tenure in the current organisation</b>		
Less than 5 years	59	28.6
6–10 years	73	35.4
11–15 years	72	35
16–20 years	2	1.0
<b>Study 2 (N = 508)</b>		
<b>Age</b>		
30–35	187	36.8
36–40	156	30.7
41–45	96	18.9
46–50	69	13.6
<b>Education</b>		
Diploma or associate degree	79	15.6
Bachelor's degree	177	34.8
Master's degree	73	14.4
Doctoral degree	15	3.0
Graduate certificate or graduate diploma	111	21.9
Other	53	10.4
<b>Tenure in the current organisation</b>		
Less than 3 years	112	22.0
3–5 years	115	22.6
6–8 years	83	16.3
8–10 years	75	14.8
More than 10 years	123	24.2
<b>Current role</b>		
Managerial	242	47.6
Non-managerial	266	52.4

**Table II**  
Measurement model analysis (organisational and individual levels)

<i>Organisational level</i>	Cronbach's alpha
1. My hotel rewards employees for environmental performance	0.79
2. My hotel gives financial rewards to employees for good environmental performance	0.77
3. My hotel establishes clear and specific objective of environmental goals for each employee	0.86
4. My hotel assesses employees' contributions to environmental management	0.88
5. My hotel records individual environmental performance results	0.88
6. In my hotel, environmental training is continuous	0.60
7. In my hotel, environmental training is a priority	0.61
8. In my hotel, environmental training is considered as an investment	0.61
1. My hotel uses local products from the community	0.82
2. My hotel buys products from green vendors	0.78
3. My hotel uses green chemical products	0.72

*Green innovation mediates the relationship between green HRM practices (i.e., compensation ..*

4. My hotel implements waste separation program 3Rs	0.63
5. My hotel implements energy reduction	0.70
6. My hotel installs occupancy-based room unit controllers	0.68
7. In my hotel, air-conditioner is set to 23–24 degrees	0.74
8. My hotel practices regular maintenance of air-conditioner system	0.58
1. Environmental issues (e.g. energy consumption, water consumption, generation of waste) are considered as my hotel's priority	0.89
2. Continuous environmental improvement is part of my hotel's mission	0.92
3. Employees' environmental awareness is one of my hotel's objectives	0.92
<i>Individual level</i>	
1. My organisation has a continuous environmental training program	0.90
2. Environmental training is a priority for my organisation when compared to other types of training	0.92
3. In my organisation, environmental training is viewed as an important investment	0.90
4. My organisation establishes environmental objectives that each employee must accomplish	0.89
5. My organisation evaluates an employee's contributions to environmental management improvement	0.92
6. Employee environmental performance appraisals are recorded by the company	0.90
7. Employees in my organisation are financially rewarded for their performance in environmental management issues	0.85
8. Employees who contribute to environmental management improvements are publically recognised by the company	0.87
1. Overall, I am quite satisfied with my job	0.92
2. I Do not intend to work for a different company	0.79
3. I Like my job	0.92
1. The work I do in this organisation is very important to me	0.89
2. My job activities are personally meaningful to me	0.90
3. The work I do in this organisation is meaningful to me	0.91

TABLE 1. Demographic profile.

Furthermore, using the measurement model, “Cronbach’s (CA)” and “composite reliability (CR)” were computed to evaluate the measurements’ consistency (Henseler et al., 2015). CA and CR for all research constructs were greater than 0.7, indicating that they meet the required reliability criterion (Sarstedt et al., 2017). Then, to determine the constructs’ convergent validity, factor loadings and average variance extracted (AVE) were determined (Sarstedt et al., 2017). All factor loading of the study constructs was over the minimal criterion of 0.70 in both investigations, and AVE was above 0.50 (Henseler et al., 2015). A full description of the article’s validity and reliability measurements are given in Table 2.

Table 2

TABLE 2. Composite reliability, Cronbach’s alpha, and AVE values.

Moreover, to establish the discriminant validity of all the study constructs, Fornell and Larcker (1981) defined discriminant validity as “the extent to which a particular latent variable differs from other latent variables.” By analyzing the correlation between the latent construct and the square root of AVE, discriminant validity was determined (Sarstedt et al., 2017). According to Sarstedt et al. (2017), the use of latent variables retrieved with a value of 0.50 or more is recommended for determining discriminant validity. According to Sarstedt et al.

(2017), discriminant validity is indicated when the square root of AVE is greater than the value of latent variables. The PLS algorithm is presented in Figure 2. Similarly, the values of discriminant validity are presented in Table 3.

Figure 2

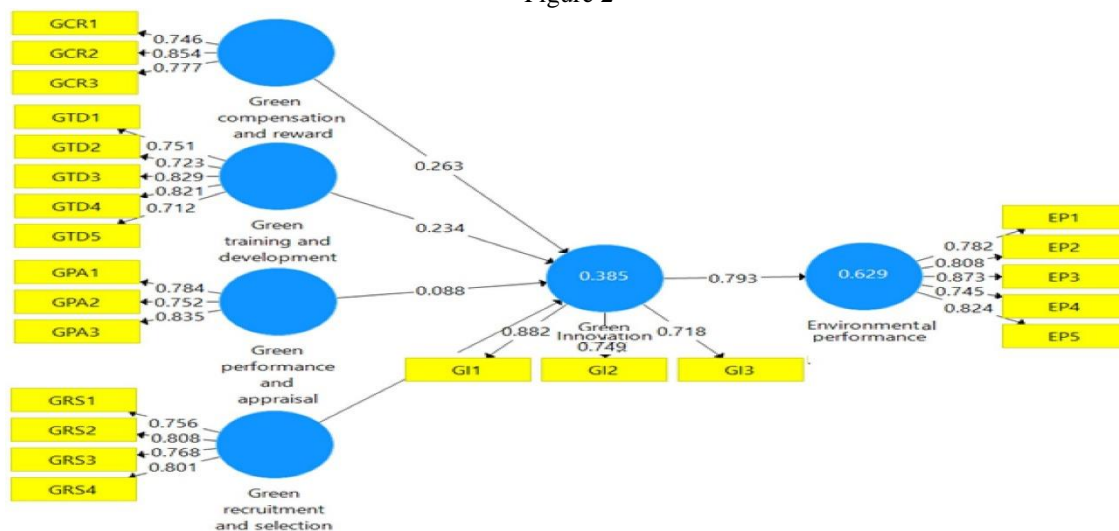


FIGURE 2. PLS algorithm.

Table 3

	EP	GI	GCR	GPA	GRS	GTD
EP	0.808					
GI	0.793	0.786				
GCR	0.505	0.476	0.794			
GPA	0.231	0.270	0.193	0.791		
GRS	0.535	0.468	0.367	0.183	0.786	
GTD	0.588	0.462	0.397	0.348	0.340	0.769

EP, environmental performance; GI, green innovation; GCR, green compensation and reward; GPA, green performance and appraisal; GRS, green recruitment and selection; and GTD, green training and development.

TABLE 3. Discriminant validity.

### Assessment of Structural Model Hypothesis Testing

Regarding the consideration of measurement model clear links, this part focuses on the structural model, as described by Sarstedt et al. (2017). A structural model is used in the hypothesized model to highlight the relationship's reliance on one another. The structural model in PLS gives an inner modeling study of the direct relationship between the proposed hypotheses and their *t*-values and regression coefficient. In regression analysis, an indirect effect is the same as a standardized beta value; according to (Henseler et al., 2015), *t*-values and beta values of the regression coefficient are used to determine significance. *T*-values larger than 1.64 are deemed statistically significant, according to Hair et al. (2017), which are then utilized to make choices on the purposed hypothesis. There are two main purposes of studying the model: examining direct relationships and testing predicted relationships between components using a structural model. Six hypotheses are examined in this study. According to Ramayah et al. (2018), SmartPLS 3.0 output findings include path coefficients, *t*-values, *p*-values, and standard errors. The researcher used them to determine whether the hypothesis was supported or not, and the results are presented in Table 4.

Table 4

	B-value	Sample mean	Standard deviation	T-value	p	
GI→EP	0.793	0.796	0.014	6.664	0.000	Accept
GCR→GI	0.263	0.261	0.057	4.616	0.000	Accept
GPA→GI	0.288	0.290	0.054	2.162	0.001	Accept
GRS→GI	0.274	0.275	0.056	4.908	0.000	Accept
GTD→GI	0.234	0.235	0.065	3.586	0.000	Accept

EP, environmental performance; GI, green innovation; GCR, green compensation and reward; GPA, green performance and appraisal; GRS, green recruitment and selection; and GTD, green training and development.

TABLE 4. Hypothesis testing.

**Assessment of R<sup>2</sup>**

The second stage in analyzing a structural model is determining the coefficient of determination (Hair et al., 2011). The variance in endogenous constructs caused by external constructs is represented by the coefficient of determination (Hair et al., 2011). Rigdon (2012) stated that the coefficient of determination is also recognized as a sample’s predictive power. If the coefficient of determination is greater, the predictive power of the sample is also greater. The value of R<sup>2</sup> ranges from zero to one. Moreover, Chin (1998) recommended that the R<sup>2</sup> of 0.13 is considered weak, 0.33 is considered moderate, and 0.67 is considered strong. The coefficient of determination for endogenous constructs is given in Table 5. The PLS bootstrapping is presented in Figure 3.

Table 5

	R <sup>2</sup>
Environmental performance	0.629
Green innovation	0.385

TABLE 5. Assessment of R square.

Figure 3

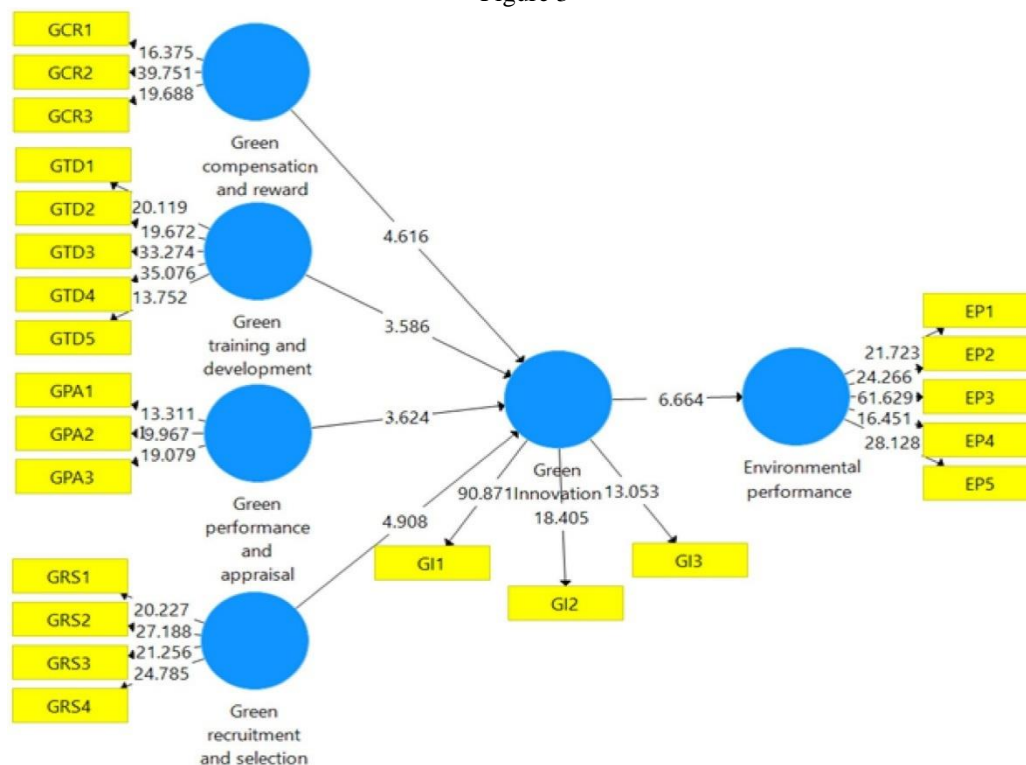


FIGURE 3. PLS bootstrapping.

### **III. Discussion, Implications, Limitations, and Future Research Directions**

#### **Findings of the Study**

The results of the current study reveal that positive associations of green compensation and reward, green recruitment and selection, green performance and appraisal, and green training and development influence environmental performance through green innovation impact on environmental performance. Results showed the significant effect of green performance and appraisal on environmental performance. These results are in line with the findings of [Govindarajulu and Daily \(2004\)](#) who provided timely information about socially desirable behaviors that helps improve employee environmental performance. Green training and development have a significant impact on environmental performance. In green HRM practices, training includes providing staff with core competencies such as teaching them how to gather trash information and increasing the company's standard of efficiency and environmental competency ([Jabbar and Abid, 2015](#); [Ojo et al., 2020](#)). Another result showed that green compensation and reward significantly impact environmental performance. Employee satisfaction with green rewards and compensation in establishing environmental performance is stressed in green ability to do the job ([Jabbar and Abid, 2015](#)). Green recruitment and selection significantly impacted environmental performance in this study results. By recruiting and keeping resembling employees, green recruitment highlights an organization's willingness to cooperate for the benefit of the environmental performance ([Masri and Jaaron, 2017](#)). The results further show positive associations between green compensation and reward, green recruitment and selection, green performance and appraisal, and green training and development, which influence environmental performance, with green innovation influencing environmental performance.

Furthermore, the findings of mediation results revealed strong support for the purposed hypotheses that green innovation mediated between green HRM practices and environmental performance. These findings were consistent with similar mediated research explorations in recent literature and also in similar context ([Islam et al., 2021a, 2022](#)).

#### **Theoretical Implications**

There are several theoretical implications of the current study. First, as established in the theories such as social learning theory and recourse-based view theory, the current study suggests that positive associations of green compensation and reward, green recruitment and selection, green performance and appraisal, and green training and development influence environmental performance through the mediated link of green innovation. Second, much of the academic research on the RBV has been conducted in industrialized countries, but little is recognized about the RBV beyond this environment ([Vargas-Halabí et al., 2017](#)). This research is incremental due to its choice of study context and RBV approach to environmental performance and green innovation. Another major theoretical contribution of this study is combining HRM practices with green innovation and environmental performance. Such studies are rare in the literature related to innovation and HRM practices. Thus current research opened several new avenues of theoretical integration for future scholars in innovation management, HRM, and environmental science. Integration of theories from all three domains together to come up with solid theoretical foundations is the major advance of this research that will help bridge the theory gap among these three domains of research. The use of social learning theory and its integration with RBV as well as green HRM concepts along with green innovation and environmental performance is a major contribution and theoretical advance pitched by current research.

#### **Practical Implications**

The current study also brings valuable insights for policymakers and practitioners in multiple ways. First, the current study shows that green innovation is the most important factor used in this study to elaborate the concept of environmental performance with green HRM practices. It brings key insights to HR managers and top management of environmentally conscious sectors and consumer markets. These days, organizations continuously seek ways to influence environmentally conscious consumers through their environmentally friendly campaigns. In such a competitive environment, practitioners may learn from the approach discussed in this research. Second, environmental performance becomes a priority for top management and authorities, so developing industries' environmental performance methodological approach to minimize waste, contamination, pollutants, preserve freshwater, electricity, and non-sustainable minerals contributes to improved environmental performance. Finally, they improve environmental performance by reducing chemicals wastage, avoiding polluted water draining into oceans and rivers, and controlling polluted air of industry. Industry human resource managers may set goals and exemplary measures to accomplish green goals to empower their workers. Green campaigns with motivation could be a wonderful way to encourage people to go green. Green HRM might be a more visible aspect of a company's responsibilities and CSR measures.

### **Limitations and Future Research Directions**

As environmental consciousness has grown, the notion of “going green” has been a major focus of several organizations. For obtaining a high degree of environmental performance, green factors such as support from management and green intangible resources are critical. In addition to various strengths, the current study also has some limitations that must be addressed in the future. First, the current research has been conducted among the users of a chemical industry located in Lahore, Pakistan, making the findings specific to the chemical industry. Future studies may consider a comprehensive sample from other industries and may also include users/consumers of other industries, like food, fabric, hotels, etc., to come up with findings that can be generalized. Second, although this study was conducted to examine the cross-sectional method, the data were collected at one point in time. Future scholars may adopt longitudinal research design for better causality. In the current study, researchers could not tap the moderating effect of several key constructs due to time and resource constraints. Researchers are encouraged to focus on moderating effects for more significant results toward theory and practice in future studies. Third, this study outcome was only environmental performance mediated by green innovation. In the future, researchers may also add sustainable economic and social performance and environmental performance. Finally, current research only uses a selected population from a developing country context. In the future, researchers may collect data from many employees in a developed country context. A comparative approach toward green HRM practices in developing and developed setting maybe another significant area of future research. Green HRM was not considered as dimensional in this study is a limitation due to theoretical conceptualization of this research focused more on green innovation and environmental performance. Thus future studies may consider it as dimensional construct and test mediation accordingly.

### **IV. Conclusion**

Grounded in the RBV approach, this study integrated constructs from three different research fields: environmental science, innovation management, and human resource management. This integration based on theoretical grounding is a major advance to the body of knowledge. Besides this unique conceptualization, the current study adopted a study context of a developing country and the organizational context of the chemical industry, which is more sensitive to green innovation and consumer resistance to hazardous environmental products. Thus making this research a unique contribution from a contextual point of view. The findings also confirmed how green HRM practices significantly influenced green innovation and, in turn, predicted the organization’s environmental performance. These findings bring key policy insights for researchers in consumer resistance to innovation, consumer adoption to innovation that how green innovation may help the companies gain sustainable competitive advantage by investing in their human resources. This research helped bridge the gap between various research domains and opened several new avenues for future research.

### **Data Availability Statement**

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

### **References**

- [1]. Ahmad, S. (2015). Green human resource management: policies and practices. *Cogent Bus. Manag.* 2:1030817. doi: 10.1080/23311975.2015.1030817
- [2]. Ahmad, A. (2021). Antecedents and outcomes of innovation capability: a case of European automotive organizations. *J. Digitovat. Inf. Syst.* 1, 1–14. doi: 10.54433/JDIIS.2021100001
- [3]. Ahmad, S., Islam, T., Sadiq, M., and Kaleem, A. (2021). Promoting green behavior through ethical leadership: a model of green human resource management and environmental knowledge. *Leadersh. Organ. Dev. J.* 42, 531–547. doi: 10.1108/LODJ-01-2020-0024
- [4]. Ardiza, F., Nawangsari, L. C., and Sutawidjaya, A. H. (2021). The influence of green performance appraisal and green compensation to improve employee performance through OCBE. *Int. Rev. Manag. Mark.* 11, 13–22. doi: 10.32479/irmm.11632
- [5]. Bilal, S., and Zia-ur-Rehman, M. (2017). The role of employee’s mindfulness and human resource development climate towards public leadership behavior-analyzing the moderating impact of emotional capital. *J. Adm. Bus. Stud.* 3, 248–254. doi: 10.20474/jabs-3.5.4
- [6]. Billig, M., Badwan, A., Ankona, E., and Anker, Y. (2022). Charcoal production in Palestinian villages: the paradox of resistance to innovation driving rural development. *J. Rural. Stud.* 89, 25–34. doi: 10.1016/j.jrurstud.2021.11.009
- [7]. Berrone, P., and Gomez-Mejia, L. R. (2009). Environmental performance and executive compensation: an integrated agency-institutional perspective. *Acad. Manage. J.* 52, 103–126. doi: 10.5465/AMJ.2009.36461950
- [8]. Chen, Y.-S., Lai, S.-B., and Wen, C.-T. (2006). The influence of green innovation performance on corporate advantage in Taiwan. *J. Bus. Ethics* 67, 331–339. doi: 10.1007/s10551-006-9025-5
- [9]. Chen, Y., Tang, G., Jin, J., Li, J., and Paillé, P. (2015). Linking market orientation and environmental performance: the influence of environmental strategy, employee’s environmental involvement, and environmental product quality. *J. Bus. Ethics* 127, 479–500. doi: 10.1007/s10551-014-2059-1
- [10]. Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Mod. Methods Bus. Res.* 295, 295–336.
- [11]. Darnall, N., Jolley, G. J., and Handfield, R. (2008). Environmental management systems and green supply chain management: complements for sustainability? *Bus. Strateg. Environ.* 17, 30–45. doi: 10.1002/bse.557
- [12]. Darvishmotevali, M., and Altinay, L. (2022). Green HRM, environmental awareness and green behaviors: the moderating role of servant leadership. *Tour. Manag.* 88:104401. doi: 10.1016/j.tourman.2021.104401



- [13]. Dubey, R., Gunasekaran, A., and Ali, S. S. (2015). Exploring the relationship between leadership, operational practices, institutional pressures and environmental performance: a framework for green supply chain. *Int. J. Prod. Econ.* 160, 120–132. doi: 10.1016/j.ijpe.2014.10.001
- [14]. Ecer, F., Pamucar, D., Mardani, A., and Alrasheedi, M. (2021). Assessment of renewable energy resources using new interval rough number extension of the level based weight assessment and combinative distance-based assessment. *Renew. Energy* 170, 1156–1177. doi: 10.1016/j.renene.2021.02.004
- [15]. Fornell, C., and Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *J. Market. Res.* 18, 39–50. doi: 10.1177/002224378101800104
- [16]. Gill, A., Ahmad, B., and Kazmi, S. (2021). The effect of green human resource management on environmental performance: the mediating role of employee eco-friendly behavior. *Manag. Sci. Lett.* 11, 1725–1736. doi: 10.5267/j.msl.2021.2.010
- [17]. Govindarajulu, N., and Daily, B. F. (2004). Motivating employees for environmental improvement. *Ind. Manag. Data Syst.* 104, 364–372. doi: 10.1108/02635570410530775
- [18]. Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., and Thiele, K. O. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *J. Acad. Market Sci.* 45, 616–632. doi: 10.1007/s11747-017-0517-x
- [19]. Hair, J. F., Ringle, C. M., and Sarstedt, M. (2011). PLS-SEM: indeed a silver bullet. *J. Mark. Theory Pract.* 19, 139–152. doi: 10.2753/MTP1069-6679190202
- [20]. Haldorai, K., Kim, W. G., and 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. *Tour. Manag.* 88:104431. doi: 10.1016/j.tourman.2021.104431
- [21]. Henseler, J., Ringle, C. M., and Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Market Sci.* 43, 115–135. doi: 10.1007/s11747-014-0403-8
- [22]. Islam, T., Hussein, D., Ahmed, I., and Sadiq, M. (2021a). Ethical leadership and environment specific discretionary behaviour: the mediating role of green human resource management and moderating role of individual green values. *Can. J. Adm. Sci.* 38, 442–459. doi: 10.1002/cjas.1637
- [23]. Islam, T., Khan, M. M., Ahmed, I., and Mahmood, K. (2021b). Promoting in-role and extra-role green behavior through ethical leadership: mediating role of green HRM and moderating role of individual green values. *Int. J. Manpow.* 42, 1102–1123. doi: 10.1108/IJM-01-2020-0036
- [24]. Islam, T., Ahmad, S., and Ahmed, I. (2022). Linking environment specific servant leadership with organizational environmental citizenship behaviour: the roles of CSR and attachment anxiety. *Rev. Manag. Sci.* doi: 10.1007/s11846-022-00547-3
- [25]. Jabbar, M. H., and Abid, M. (2015). A study of green HR practices and its impact on environmental performance: a review. *Manag. Res Rep* 3, 142–154.
- [26]. Johar, S. S., Lestari, L., and Awada, N. (2020). The art of leadership qualities in human governance of human capital. *J. Manag. Soc. Sci. Humanit. Soc. Sci.* 4, 12–15. doi: 10.33152/jmphss-4.1.3
- [27]. Kammerer, D. (2009). The effects of customer benefit and regulation on environmental product innovation: empirical evidence from appliance manufacturers in Germany. *Ecol. Econ.* 68, 2285–2295. doi: 10.1016/j.ecolecon.2009.02.016
- [28]. Kraus, S., Rehman, S. U., and Garcia, F. J. S. (2020). Corporate social responsibility and environmental performance: the mediating role of environmental strategy and green innovation. *Technol. Forecast. Soc. Chang.* 160:120262. doi: 10.1016/j.techfore.2020.120262
- [29]. Li, D.-W., Xiang, R., Wu, Q., and Kao, S.-J. (2019). Planktic foraminifera-bound organic nitrogen isotopic composition in contemporary water column and sediment trap. *Deep-Sea Res. I Oceanogr. Res. Pap.* 143, 28–34. doi: 10.1016/j.dsr.2018.12.003
- [30]. Maderazo, M. A. (2016). The change management in an academic institution: an organizational perspective. *J. Adv. Humanit. Soc. Sci.* 2, 310–320. doi: 10.20474/jahss-2.6.3
- [31]. Mandago, R. J. (2018). Influence of green reward and compensation practice on environmental sustainability in selected service based state corporations in Kenya. *Eur. J. Bus. Strategic Manag.* 3, 1–12.
- [32]. Nayak, S., and Mohanty, V. (2017). Green HRM for business sustainability. *Indian J. Sci. Res.* 7, 102–106.
- [33]. Obaid, T. F., and Alias, R. B. (2015). The impact of green recruitment, green training and green learning on the firm performance: conceptual paper. *Int. J. Appl. Res.* 1, 951–953.
- [34]. Ojo, A. O., Tan, C. N.-L., and Alias, M. (2020). Linking green HRM practices to environmental performance through pro-environment behaviour in the information technology sector. *Soc. Responsib. J.* 18, 1–18. doi: 10.1108/SRJ-12-2019-0403
- [35]. Pacheco, M. M., and Newell, K. M. (2018). Learning a specific, individual and generalizable coordination function: evaluating the variability of practice hypothesis in motor learning. *Exp. Brain Res.* 236, 3307–3318.
- [36]. Prakash, A. V., and Das, S. (2022). Explaining citizens' resistance to use digital contact tracing apps: a mixed-methods study. *Int. J. Inf. Manag.* 63:102468. doi: 10.1016/j.ijinfomgt.2021.102468
- [37]. Pham, N. T., Hoang, H. T., and Phan, Q. P. T. (2019). Green human resource management: a comprehensive review and future research agenda. *Int. J. Manpow.* 41, 845–878. doi: 10.1108/IJM-07-2019-0350
- [38]. Pimonratanakan, S., and Pooripakdee, S. (2017). The human resource development in the learning organization for the organizational development. *Int. J. Bus. Econ. Affairs* 2, 183–192. doi: 10.24088/ijbea-2017-23003
- [39]. Ramayah, T., Cheah, J., Chuah, F., Ting, H., and Memon, M. A. (2018). Partial Least Squares Structural Equation Modeling (PLS-SEM) Using SmartPLS 3.0. Kuala Lumpur: Pearson.
- [40]. Rani, S. O., and Mishra, K. (2014). Green HRM: practices and strategic implementation in the organizations. *Int. J. Recent Innov. Trends Comput. Commun.* 2, 3633–3639.
- [41]. Rawashdeh, A. (2018). The impact of green human resource management on organizational environmental performance in Jordanian health service organizations. *Manag. Sci. Lett.* 8, 1049–1058. doi: 10.5267/j.msl.2018.7.006
- [42]. Renwick, D., Redman, T., and Maguire, S. (2008). Green HRM: A Review, Process Model, and Research Agenda. University of Sheffield Management School Discussion Paper, 1, 1–46.
- [43]. Sarstedt, M., Ringle, C. M., and Hair, J. F. (2017). Partial least squares structural equation modeling. *Handbook Market Res.* 26, 1–40. doi: 10.1007/978-3-319-05542-8\_15-1
- [44]. Silaharoglu, G., and Vardarler, P. (2016). A novel data mining study to spot anomalies in organizations: a human resources management case. *Int. J. Bus. Adm. Stud.* 2, 89–95. doi: 10.20469/ijbas.2.10001-4
- [45]. Silva, H. M. S. V., and Madushani, R. A. I. (2017). The impact of human resource competencies of front line employees on tourist arrivals of unclassified hotels in Western Province, Sri Lanka. *J. Adv. Res. Soc. Sci. Humanit.* 2, 9–16. doi: 10.26500/jarssh-02-2017-0102
- [46]. Vargas-Halabí, T., Mora-Esquivel, R., and Siles, B. (2017). Intrapreneurial competencies: development and validation of a measurement scale. *Eur. J. Manag. Bus. Econ.* 26, 86–111. doi: 10.1108/EJMBE-07-2017-006

- [47]. Waqas, M., Honggang, X., Ahmad, N., Khan, S. A. R., and Iqbal, M. (2021). Big data analytics as a roadmap towards green innovation, competitive advantage and environmental performance. *J. Clean. Prod.* 323:128998. doi: 10.1016/j.jclepro.2021.128998
- [48]. Weng, H.-H. R., Chen, J.-S., and Chen, P.-C. (2015). Effects of green innovation on environmental and corporate performance: a stakeholder perspective. *Sustainability* 7, 4997–5026. doi: 10.3390/su7054997
- [49]. Xie, X., Hoang, T. T., and Zhu, Q. (2022). Green process innovation and financial performance: the role of green social capital and customers' tacit green needs. *J. Innov. Knowl.* 7:100165. doi: 10.1016/j.jik.2022.100165
- [50]. Zhu, Y., Mottaghi, R., Kolve, E., Lim, J. J., Gupta, A., Fei-Fei, L., et al. (2017). "Target-driven visual navigation in indoor scenes using deep reinforcement learning." in 2017 IEEE International Conference on Robotics and Automation (ICRA). IEEE, 3357–3364.

Vikrant. "Green innovation mediates the relationship between green HRM practices (i.e., compensation and reward, green performance and appraisal, green training and development, and green recruitment and selection) and environmental performance." *International Journal of Engineering and Science*, vol. 13, no. 7, 2023, pp. 52-61.