International Journal of Innovative Research and Scientific Studies, 8(2) 2025, pages: 2965-2976

IJIRSS
International Journal of Innovative Research & Scientific Studies

ISSN: 2617-6548

URL: www.ijirss.com

The impact of green HRM and intellectual capital on the environmental performance of the organizations: A mediating impact of green innovation

Zarmeena Anum[1], Aemin Nasir[2], Faisal Ejaz[3], Zita Júlia Fodor[4], Md Billal Hossain[5*]

[1]*Khwaja Fareed University of Engineering and Information Technology Rahim Yar Khan 64200, Pakistan.*
[2]*Department of Management, The Business School, RMIT University, Vietnam.*
[3]*Department of Economics, Universiti Tunku Abdul Rahman, Kampar, 31900, Malaysia.*
[3]*University of Okara, Pakistan.*
[4]*Institute of Economic Sciences, Hungarian University of Agriculture and Life Sciences, Godollo 2100, Hungary.*
[5]*Sustainability Competence Centre, Széchenyi Istvàn University, Győr 9026, Hungary.*

Corresponding author: Md Billal Hossain (*Email: shohan_bd13@yahoo.com*)

Abstract

This research elucidates the importance of Green HRM and Green Intellectual Capital in encouraging eco-friendly practices in the hospitality sector. Additionally, it highlights the value of Green Innovation as a tool to enhance the beneficial impacts of Green HRM and Green Intellectual Capital on environmental performance. A survey was conducted among 257 employees, and the collected data were analyzed using SPSS and Smart PLS. The findings reveal that GHRM and GIC significantly enhance environmental performance, demonstrating the positive effects of green practices on the environment. Furthermore, Green Innovation was found to mediate the relationship between GHRM, GIC, and environmental performance, underscoring the role of innovation in promoting environmental sustainability. This study investigates the impact of Green Human Resource Management (GHRM) and Green Intellectual Capital (GIC) on the environmental performance of firms in the Pakistani hotel industry, focusing on the mediating role of Green Innovation. These results highlight the importance of integrating green practices into HRM and intellectual capital management, as well as the value of innovation in amplifying these efforts. The study's implications are crucial for hospitality businesses, as they aim to implement sustainable strategies in an increasingly environmentally conscious market.

Keywords: Environmental performance, Green HRM, Green innovation, Green intellectual capital, Hotel industry, Mediation, Pakistan.

DOI: 10.53894/ijirss.v8i2.5935
Funding: This research received no external funding.
History: Received: 7 February 2025 / **Revised:** 10 March 2025 / **Accepted:** 13 March 2025 / **Published:** 4 April 2025

Authors' Contributions: Conceptualization, ZA, MBH and FE.; Methodology, ZA, MBH, and AN.; Software, AN, FE and ZJF.; Validation, MBH, and ZJF.; Formal analysis, ZA, AN and MBH., Investigation, ZA, FE and ZJF.; Resources, MBH, ZJF and AN.; Data Curation, FE, ZA, and ZJF.; Writing- original draft—ZA and AN.; Writing—review and editing, ZA, MBH, and FE.; Visualization, MBH, ZJF, and FE.; Supervision, MBH.; Project administration, ZA, and FE.; Funding acquisition, MBH. All authors have read and agreed to the published version of the manuscript."
Competing Interests: None to declare
Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study, that no vital features of the study have been omitted, and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.
Institutional Review Board Statement: The University of Okara, Pakistan's Ethical Committee granted approval for this study on

17.08.2023..... (Ref. No. 17727-26-UO)
Data Availability Statement: Data will be available on reasonable request.
Publisher: Innovative Research Publishing

1. Introduction

Green HRM results from the growing 'green movement,' based on four essential principles: sustainability, environmentalism, nonviolence, and social justice [1, 2]. Green human resource management is a set of environmental and worldwide standards that require organizations to implement formal ecological programs and strategies. These programs inspire employees to be environmentally conscious and empower them to carry out green management efforts. Natural resources have made organizations globally become responsible for the environment, not just for climate scarcity and conditions [3]. Organizations must focus on an innovative approach to environmental sustainability [4]. Organizations have realized that they can only run their operations by focusing on innovation to improve efficiency and effectiveness [4, 5].

In Malaysia, green intellectual capital has permeated small and medium-sized firms [6, 7]. The study of green intellectual capital favors the organization's performance [8, 9]. In the current business environment, green production is a critical weapon for superior performance, referred to as environmental manufacturing [7, 10]. The safety of workers and communities, less population, less energy, and privation of natural resources produce goods and services; green production reflects systems and processes [2].

The findings suggest that understanding GHRM is essential for employees' motivation and involvement in environmental activities to develop the organization's green abilities [11, 12]. Environmental issues have led to commercial change [13]. Businesses need to proactively address the environmental challenges highlighted by environmental acts and strategies. Green initiatives and practices help the organization improve its environmental performance by promoting green and reducing waste, increasing the efficiently utilized resources, and cost-saving [14]. Green HRM techniques are not used correctly in organizations, and there is a lack of effort to increase efficacy in this EM [15].

Researching green intellectual capital is vital for long-term goals. Researchers have highlighted the need to boost business sustainability scholarships and business firm beliefs in social and environmental sustainability elements [9, 16]. Human green capital positively affects green new research performance [17, 18]. For the organization to achieve environmental sustainability, they must use green innovation in their existing operations [19, 20].

Green innovation is defined as the formulation and development of operations, including products, services, and processes, to reduce environmental degradation compared to alternatives available [21, 22]. The researcher posits that an organization must enhance its environmental performance and allocate sufficient attention to it through the use of environmental management accounting. In this edition, green HRM differs from traditional HRM in that standard HRM deals only with efficiently managing organizations' internal processes.

However, GHRM has the advantage of benefiting external stakeholders [23, 24]. In GHRM, only potential candidates are attracted and selected due to significant issues [25, 26]. Green training includes promoting and creating employee awareness for environmental management and prevention of pollution as much as possible [27].

Green intellectual capital consolidates theoretical capital and concerns the environment at the organizational and individual levels, viewed as intangible assets, such as knowledge, expertise, and interactions [16, 28]. Researchers are examining green intellectual capital due to its importance to long-term goals. As a result, we highlighted the rise in professional scholarship since businesses or organizations' ideas are essential, and sustainability necessitates combining the environmental, social, and economic components of sustainability [29].

Ecological capacity and understanding generate beneficial and innovative concepts for environmental management, thus increasing green innovation. Environmental applications foster and sustain green transformation or innovation [30]. Even though eco-friendly innovation is a condition of nature environment administration, which directly addresses environmental management, ecological capacity, and understanding, generating beneficial and innovative concepts thus increases green innovation [31]. Firms need to hire employees who actively participate in the challenge of the environment, and green performance management is an influential factor in the progress of workers' eco-friendly responsibility [32].

Therefore, we thought about three proportions of GHRM implementations that dare be devoted to the green revolution. GHRM practices foster employees' expertise, inspiration, and opportunities, thereby enhancing their unique learning experience in process innovation. According to researchers, the firm's specific proactive and environmental strategies focus on developing ecological technologies that cause betterment in finance issues [33]. Organizations earn many profits at the cost of environmental depletion. Therefore, this study aims examine the influence of green human resource management and green intellectual capital on the environmental performance of organizations, using green innovation as a mediating factor. “In this paper, we revealed that neither the GIC nor GHRM is conventionally related to environmental exhibition. We explain this finding in the light of the proposed reinterpretation of the relationship between GIC and GI."

2. Theoretical Background

2.1. Environmental Performance

Environmental performance measures the results of the environmental management system, interconnected to controlling ecological aspects [34, 35]. Say the company's performance creates a positive atmosphere. Since 2002, the government has measured environmental performance. They also reward employees for healthy environmental performance and commitment to environmental responsibility [35]. Regularly providing reviews to workers regarding the environment or circumstances assists in improving men's and women's expertise, potential, and knowledge about environmental handling [36]. The organization must recognize environmental concerns [37, 38]. Managing the human

resource environment proactively is also helpful so that they comply with approaches and initiatives taken by their respective organization [39]. The literature emphasizes the significance of incorporating environmental practices into organizational operations as a crucial goal, which can be achieved with the aid of human resource management practices. Environmental practices and development programs are vital for improving employees' expertise and attitudes concerning management surroundings [40, 41].

2.2. Green Human Resource Management

Practices of basic Human resource in an organization are enlisted to secure their environment and defend the rules of up-to-date compensation, which stem from the human-resource management sector, also known as GHRM. This grinning involves HR's several practices and policies for shielding an organization's labor force to preserve their copious learning assets cost-efficiently and naturally [42, 43].

Therefore, it is essential to conduct a systematic literature review to explore the potential outcome of implementing GHRM practices in an organization [44]. Department of HR shows importance in greening trials and police processes, from start to end, for the new members and selection, from entrance to leaving, like employment and assortment, tutoring and the growth, assessment, remuneration, and retired polices, collectively named as GHRM practices, ABILITY MOTIVATION OPURTUNITY (AMO) of the framework [45]. According to this theory, the structure suggested by scientists [46] further the review of literature pursued by workers like relationships, discipline maintenance, green groups, future professional planning and their formulation, job descriptions, specifications, workers engagement, and security insurance involved in the bundle of GHRM practices. In this type, the prominence of the human resource policies and their practices applied the theory of AMO relating to environmental safety, which increases individual capabilities, showing suitable results that expand the environmental values and human capital. The literature provides a systematic review of the results of AMO, which GHRM implements.

2.3. Green Intellectual Capital

As a micro-level dynamic, the aggregate process recognizes its impact on market's value. Changing in the public and economy-driven period in this information ecological plan, the exit from the existing issue of climate has arisen GIC [47]. Chen has discussed the sponsorship of GIC (Green Intellectual Capital) upsides of firms and the upper hand [16]. A green procedure helps organizations make plans that decidedly sway the climate [48]. Green intellectual capital addresses the prerequisites of natural administration [49].

2.4. Green Innovation

Organizations might utilize green development to support their valuable assets and stay aware of rising ecological expenses. Moreover, market pioneers will benefit from being first to market, enabling them to charge higher prices for environmentally friendly products, enhance their corporate image, promote their ecological services and innovations, and even establish new business sector [50]. Recently examined contamination is strong proof of insufficient pay applications [51]. Greater interest in eco-technique advancement will decrease asset wastage and develop asset proficiency. Green transformation is separated into green items and practices, which include new hardware that guides energy protection, populace decreases, waste reusing, green item plans, and corporate natural administration [52]. If ventures enthusiastically participate in green advancement, they can gain cost-cutting and separation-based product benefits, potentially altering competitive principles [53].

3. Hypotheses Development

3.1. Green HRM and Environmental Performance

Green HRM differs from traditional HRM in that standard HRM deals only with efficient management of organizations' internal processes; however, GHRM has the advantage of a beneficial effect on the external stakeholders [54]. In GHRM, while recruiting, potential candidates are only those attracted and selected who are dedicated to environmental issues [55]. Green training includes promoting and creating employee awareness for environmental management and prevention of pollution as much as possible [56]. Thus, we put forward the phenomena of hypothesis.

H_1: GHRM has a significant impact on environmental performance.

3.2. Green Intellectual Capital and Environmental Performance

Past exploration has identified three types of green intellectual capital: green human capital, green relational capital, and green structural capital [16]. As recently expressed and per the overall adaptation of this work, this thought will assume a significant part in underlining the utilization of the two types of green scholarly capital in achieving creative results [57]. Green academic capital is a subcategory of intellectual capital in this review. The suggested green creation relies on the development, transfer, and utilization of a natural assurance system for the executive's information [58].

We propose the hypothesis.

H_2: Green Intellectual Capital is positively related to Environmental Performance.

3.3. Mediating role of Green innovation

Green innovation is a technique for further developing ecological administration execution to meet natural security necessities [59]. Biological contamination like commotion, air, strong waste, and water defilement, add to contamination-

related exercises [60]. Development activities fundamentally influence the climate and have raised a genuine alarm, promoting the government to present various arrangements and guidelines for their control [61, 62].

Green innovation bargains significantly green drives that are part of the expansion and development process [63]. Already in development of the items, the association is working on the plan altogether, new green item production, and send-off so they are set to affect the climate less; rather, the process manages the thoughts of advancement through which change existing activity more excellent climate well disposed [64]. Green innovation is a significant variable for the association to contend in worldwide and homegrown business sectors.

Researchers characterize staff so that they fundamentally affect the association's capacity to improve [64, 65] and describe green development as the "progress of existing items and cycles to make them all the more harmless to the ecosystem." Green development involves the selection of greener, unrefined components, the creation of items per eco plan standards, avoiding squandering, declining water blow, power utilization, fossil fuel byproducts, impression, and other natural substances [66, 67]. Green development lessens genuine impact while accomplishing corporate objectives and profits through ecological advantages [62]. Green development is a part of environmental administration that can straightforwardly address natural difficulties. Green performance is the foremost robust methodology to work on representatives' environmental responsibilities [68] and their inspiration to participate in harmless-to-the-ecosystem development. Associations have the potential to foster a culture of innovation, recognizing and appreciating natural impulses and creative ideas for environmentally friendly products and processes [39]. We contemplated three general extents of GHRM that were given to GI. GHRM rehearses advanced representatives' power, motivation, and possibilities, accordingly developing their new data of technique development. Depending on the communication of green innovation, green intellectual capital could have a positive relationship with environmental performance [69]. Studies have shown that GHRM has a positive connection with environmental performance. While employees may possess environmental awareness, enhancing their skills and knowledge is crucial for driving improvements in products and processes to minimize adverse environmental impacts. As a result, we formulated the following mediation hypothesis.

H_3: Green innovation mediates the relationship between green intellectual capital and environmental performance.

H_4: Green innovation mediates the relationship between GHRM and environmental performance.

3.4. Underpinning Theory

Ability, motivation, and opportunity (AMO) are the foremost concepts to understand the effect of HRM applied to the piece of organization in experimental readings [70]. While this theory plays a crucial role in comprehending the effects of green HRM on the environment, minor adjustments can provide a useful framework for understanding the AMO. This theory details that high-performance work practices (HPWS) are a group of distinctive but interconnected HR applications centered on three main clustered points: ability, enthusiasm, and chance [12]. Capabilities are founded on usual applications, which comprise staffing and selection, teaching, and growth platforms that confirm the abilities and information required for the workforce to act as the main chore. Similarly, performance assessment and both economic and non-economic incentives drive enthusiasm, aiming to motivate personnel to meet performance targets. Lastly, the prospect is a package that applies to participation, information partaking, and sovereignty increase that adoptive worker activities partaking [71]. The research model in the paper is explained in Figure 1.

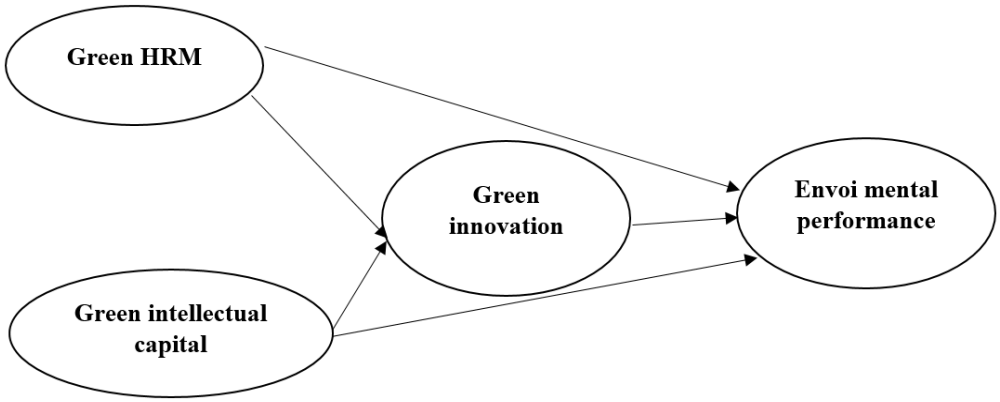

Figure 1.
Research model.

4. Methods

4.1. Data Collection Procedures

The current study has adopted a quantifiable research approach to assess the mechanical relationship between future latent variable. Data will be analyzed using Smart PLS 3.0, with 4 hypotheses based on green activities. This study will adopt a cross-sectional research design, under which the data for the whole study will be collected once.

In addition to the benefits of collecting data from a sizable sample, utilizing surveys offers a practical advantage in terms of time and cost efficiency [72]. Furthermore, the survey method, when employed by the applicant's architecture, guarantees confidentiality while obtaining experimental data. Researchers can use the survey method to collect data, do statistical analysis, and conduct successful reliability and validity testing on the instrument [73]. As a result, the current

study used a quantitative survey method. Because the study's target population was all employees from Pakistan's three-star hotels, they were most suited to explain the organizational phenomena regarding their perceptions of their hotels' culture and performance. Therefore, the current study used the organization as its unit of analysis. The information was gathered from all workers of Pakistan's five significant hotels [74].

4.2. Instruments and Measurements

There needs to be a clear means of creating a flawless data-collecting instrument [75]. Nevertheless, it is imperative that the questionnaire design aligns with the study's objectives to guarantee that the instrument accurately reflects the desired data [75]. Pre-testing serves as a validation step for the questions [76].

The questionnaire contained five sections; section one contained demographic data such as gender, age, education, job title, effort practice, and the number of hotel employees. Section B consisted of six items, all of which were relevant to Green HRM. Section C included four things, all of which were related to Green Human Intellectual Capital. Section D provides four items about Green Innovation. Finally, Section E poses seven questions about environmental performance.

All survey items were answered on a five-point Likert scale. People widely use the Likert scale to assess the relationship between environmental performance and green human resource management, also known as green intellectual capital. In order to accomplish its research goals, the current study used a five-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree," for Green HRM, intellectual capital, innovation, and environmental performance. Second, a five-point Likert scale was selected solely on the basis of prior studies [77]. Adding seven or more points to a scale requires additional consideration, time, and effort, which could lead to confusion among respondents due to the incredibly narrow difference in response levels [78].

4.3. Data Analysis

This study suggests that the Operational Equal Model is particularly valuable for the development and testing of theories. Underlying equivalent displaying, as indicated by the investigations, is especially compelling for the detailing and testing of speculations [79, 80]. When estimating structural equation models, two distinct statistical methods are employed: (1) Covariance-based SEM, also known as CB-SEM [81] and (2) Variance-Based Partial Least Squares path modeling, also referred to as PLS-SEM [81]. PLS-SEM is gaining widespread recognition in academic research and practice [82]. This popularity extends to various fields, including marketing, strategic management, and management information systems [83].

PLS-SEM is considered suitable for research scenarios where:

(a) The theoretical model is novel or not well-established. (b) The model is relatively complex, involving latent variables and structural paths. (c) The goal of the study is to predict relationships.

This study employs the PLS path model for several reasons. Firstly, it allows for the simultaneous estimation of relationships between constructs (structural model) and the relationships between indicators and their corresponding latent constructs (the measurement model) [84]. Secondly, the main aim is to explore how green innovation moderates the association between Green Human Resource Management (Green HRM) and environmental performance, as well as between green intellectual capital and environmental performance [84, 85]. This study delves into the domain that the existing literature hasn’t thoroughly explored.

The study also aims to forecast the potential impact of green innovation might enhance on environmental performance, taking into account its relationship with green human resource management and intellectual capital. The study employs an exploratory methodology by fusing elements of the Contingency Paradigm with the Resource-Based View of the Firm (RBV) theory. Since past scientists have demonstrated that PLS course displaying ought to be preferred over different strategies when the examination is forecast arranged or an augmentation of a current hypothesis, this necessary way showing technique [86]. Researchers choose PLS path modeling due to its suitability for prediction-oriented research and theory expansion. Lastly, Smart PLS software is the preferred choice over other path modeling software like AMOS (Analysis of Moment Structures) due to its user-friendly graphical interface and its capacity to streamline the incorporation of moderating effects in path models, especially when dealing with interaction effects [82].

The study will proceed through several stages of data analysis: 1. Data screening using SPSS to ensure data suitability for PLS analysis. 2. Determination of the measurement model, including assessments of item reliability, internal consistency reliability, convergent validity, and discriminant validity using Smart PLS 3.0.3. Utilization of the standard bootstrapping procedure to evaluate the structural model.

5. Results & Discussion

5.1. Descriptive Analysis

Duarte and Raposo [87] define discriminant strength as the degree to which a specific latent construct differentiates itself from other latent constructs. In this study, we evaluate discriminant validity by employing the Average Variance Extracted (AVE) by the recommended method [88, 89]. Fornell and Larcker [89] introduced the Average Variance Extracted (AVE) square root methodology , which the research used to explore the connections between latent constructs. The criterion employed to evaluate discriminant validity indicates that an AVE value of 0.5 or greater is a widely accepted benchmark [90]. As per their guidelines, they underscored that to confirm discriminant validity, the Average Variance Extracted (AVE) square root must be greater than the correlations between the latent variables in Table 1. To prove that the test is discriminant. All latent constructs showed AVEs higher than the cutoff value of 0.5. Furthermore, Table 1 shows that the average variance's square root was recovered from being bigger than the latent variables' connections. Consequently,

according to the standards established by Fornell and Larcker [89] all the measures employed in this study demonstrated satisfactory discriminant validity [90].

Table 1.
Descriptive statistics (n=215).

Construct	Mean	Std. deviation	Minimum	Maximum
GHRM	2.77	1.08	1.00	5.00
Green intellectual capital	2.72	1.15	1.00	5.00
Green innovation	2.80	1.15	1.00	5.00
Environmental performance	2.73	1.12	1.00	5.00

5.2. Results of PLS-SEM

The present study employs a two-step procedure to report and analyze PLS-SEM results [91]. It's important to highlight that the goodness-of-fit (GoF) index is inappropriate for model validation [92]. This conclusion is based on documented evidence from a simulation study involving PLS path models [93]. The GoF index cannot differentiate between invalid and valid models. This review applied a two-venture method to detail and assess the results of PLS-SEM models. The strategy is separated into two sections: (1) estimation model assessment and (2) primary model assessment [94].

5.3. Valuation of Measurements Prototypical

Researchers must 1) verify singular item consistency; 2) determine non-external constancy, content rationality, convergent rationality, and discriminant rationality [94]. These directions completed each stage, and the specifics are supplied below.

5.4. Singular Items Consistency

The external loadings of every one of the estimations (things) of each build ought to be analyzed for single-thing consistency as per laid-out models [95, 96]. The scientists have also devised a reliable maintenance guideline, recommending that products valued between 0.40 to 0.70 should align with the recommendations of Henseler, et al. [96] and Sharma, et al. [97]. As indicated by the discoveries of the ongoing review's estimating techniques, every 21 things were saved because their loadings went from 0.525 to 0.819. Table 5 displays the item loadings comprehensively.

5.5. Non-External Consistency Dependability

Non-external consistency reliability pertains to how well all items within a particular (sub)scale capture the same concept, as described [97]. In organizational research, Cronbach's alpha and composite reliability coefficients are the most commonly employed measures for assessing a scale's non-external consistency reliability. According to the guidelines provided by Sharma, et al. [97] a composite reliability coefficient value of 0.7 or higher is recommended for a specific concept, as Table 2 shows.

Table 2.
Loadings, average variance extracted, and composite consistency.

Latent builds and indicators	Standardize d loading	Average variance extracted (AVE)	Composite consistency (CR)
GHRM			
GHRM1	0.775	0.524	0.779
GHRM2	0.858		
GHRM3	0.815		
GHRM4	0.796		
GHRM5	0.854		
GHRM6	0.789		
Green intellectual capital			
GIC1	0.719	0.542	0.801
GIC2	0.833		
GIC3	0.644		
GIC4	0.525		
Green innovation			
GI1	0.612	0.512	0.761
GI2	0.774		
GI3	0.562		
GI4	0.582		
Environmental performance			
EP1	0.760	0.562	0.898
EP2	0.819		

EP3	0.714		
EP4	0.805		
EP5	0.784		
EP6	0.564		
EP7	0.625		

5.6. Convergent Rationality

As explained by, convergent validity pertains to the extent to which items accurately represent the intended latent variable and demonstrate correlations with other measures of the same latent variable. The evaluation of convergent validity for each latent construct is conducted using the Average Variance Extracted (AVE). AVE should be used to quantify united levelheadedness. When the average recovered fluctuation is at least 50, it demonstrates the focalized legitimacy of an idea [98]. Every one of the developments in this request has been accomplished, at least as per the AVE evaluations in Table 5. Subsequently, at 50 AVE, the review's joined judiciousness is considered adequate.

5.7. Discriminant Rationality

According to Rognes [99] discriminant reasonableness is a term to used to determine how much a single dormant development differs from other idle forms. The square underlying foundations of average change acquired in this technique contrast with the connections between inactive forms [90]. They additionally contended that to decide discriminant soundness, the square base of the AVE ought to be more noteworthy than the associations between the inactive factors. According to Table 3, the AVE for every one of the idle forms is more than the base end of 0.5. Therefore all the actions used in this study demonstrated appropriate discriminant neutrality [89].

Table 3.
Latent variable correlations and square roots of average variance were extracted.

Latent builds	Green innovation	GHRM	Environmental performance	Green intellectual capital
Green innovation	0.733			
GHRM	0.396	0.770		
Environmental performance	0.390	0.228	0.777	
Green intellectual capital	0.520	0.356	0.383	0.709

5.8. Valuation of Importance of the Structural Model

After establishing the measurement model, the current study assessed the structural model to test the hypotheses. To achieve this, a conventional bootstrapping technique is employed, involving the use of 5000 bootstrap samples. This is achieved by complying with the rules given forward by notable specialists in late investigations [100]. Green HRM is associated with better natural execution, as indicated by Hypothesis 1. Table 4 uncovers that green HRM has a positive relationship with natural execution (=0.105, t=2.381, p0.041). The information likewise supports the concentrate's subsequent theory that there is a positive connection between green scholarly capital and natural execution (=0.235, T=3.532, P=0.00).

Table 4.
Structural model valuation (Direct association).

Hypo- thesis	Relationship	Beta	ST. error	T value	P value	Decision
H1	GHRM -> Environmental performance	0.105	0.076	2.381	0.041	Supported
H2	Green Intellectual capital - Environmental performance	0.235	0.066	3.532	0.000	Supported

The results in Table 5 (β=0.080, t=4.113, p<0.018) confirm the third hypothesis of the study, which holds that green innovation mediates the relationship between green HRM and environmental performance. The relationship between green intellectual capital and environmental performance is mediated by green innovation. Table 5 demonstrates the support for hypothesis 4 (β=0.128 t=3.756, p<0.002).

Table 5.
structural model assessment with mediator variable.

Hypo- thesis	Relationship	Beta	ST. error	T value	P value	Decision
H3	Green HRM-> Environmental performance	0.080	0.058	4.113	0.018	Supported
H4	Green intellectual capital -> Environmental performance	0.128	0.079	3.756	0.002	Supported

5.9. Assessment of Variance Explained (R2)

The PLS-SEM primary model assessment reveals another significant basis, the R-squared esteem assessment. The R-square is the coefficient of assurance Sulaiman et al. [101] indicating that the satisfactory measure of value relies upon the conditions in which a review is directed. As per Olaleye et al. [102] a R-z square worth of 0.10 is appropriate. In PLS-SEM, an R-squared worth of 0.60 is respected as huge, 0.33 is moderate, and 0.19 is feeble.

Table 6.
Coefficient of determination values.

Latent variable	Variance explained (R2)
Green innovation	42.1%
Environmental performance	39.8%

5.10. Assessment of Effects Size

Effect size pertains to the proportional impact of a specific exogenous latent variable on endogenous latent variable(s), and this is evaluated by observing shifts in R-squared values. Calculating the effect size involves multiplying the proportion of unexplained variance in the linked latent variable by the rise in the R-squared value of that latent variable [103] as Table 7 demonstrates.

Table 7.
Latent variables influence sizes.

Latent builds	Green innovation	Environmental performance
GHRM	0.075	0.002
Green intellectual capital	0.243	0.049

5.11. Assessment of Predictive Relevance

This review uses a blindfolding strategy and the Stone-Geisser test to determine the predictive viability of the examination model [104]. In fragmentary least squares, the primary calculation displaying the "Stone-Geisser" trial of projected importance is generally utilized as a strengthening metric of the integrity of fit [105]. The creators propose a cross-approved overt repetitiveness metric (Q2) to evaluate the model's prescient significance [105].

Table 8.
Redundancy of cross-validated.

Total	SSO	SSE	1-SSE/SSO
Green innovation	1090	914.519	0.161
Environmental performance	1090	967.519	0.112

6. Discussion and Conclusion

6.1. Practical Implications

The research seeks to enhance environmental management and provide green opportunities and innovations by raising awareness of ecological and environmental issues [105]. Additionally, as people's awareness of environmental issues grows, businesses adopt eco-friendly methods. According to these results, firms should spend money on green HR strategies to benefit environmental management and promote the creation of novel, resource-efficient goods [67].

Furthermore, it shows that environmental performance is unrelated to the GIC or GHRM. Given the suggested reevaluation of the connection between GIC and GI, we analyze this discovery. Despite their good intentions, HR staff may lack the necessary expertise to significantly impact the environment. But a company prioritizing Green Innovation is likelier to make a big splash for the planet. Thus, our study shows that Green Innovation may mediate the effect of GIC and GHRM on environmental performance.

7. Limitation and Future Research

This study uses a cross-sectional methodology to collect data at a specific point in time. It's vital to remember that it could take some time for Green HRM (Green Human Resource Management) activities to fully affect the environment. A longitudinal research approach might be used in future studies to monitor changes in employee environmental citizenship behavior and environmental performance over time, providing a more thorough understanding of the outcomes of putting Green HRM policies into reality. Furthermore, this study did not distinguish between exploitative and exploratory Green Innovation (GI). It is conceivable that these two types of GI are associated with environmental performance in distinct ways, and their mediating roles may also differ. Therefore, future research has the potential to provide a more nuanced exploration of various GI categories. Furthermore, it will be imperative to thoroughly evaluate the effectiveness of corporations' environmental strategies.

References

[1] M. Yadav, R. Yadav, and N. S. Vihari, "Green HRM and green innovation in Indian pharmaceutical industry: Mediating role of transformational leader," *Journal of Pharmaceutical Negative Results*, vol. 13, pp. 1059-1065, 2022.

[2] J. Y. Yong, M. Y. Yusliza, T. Ramayah, K. Farooq, and M. I. Tanveer, "Accentuating the interconnection between green intellectual capital, green human resource management and sustainability," *Benchmarking: An International Journal*, 2022. https://doi.org/10.1108/bij-11-2021-0641

[3] N. Wang, G. Tang, B. Jiang, Z. He, and Q. He, "The development of green enterprises: A literature review based on VOSviewer and Pajek," *Australian Journal of Management*, vol. 48, no. 2, pp. 204-234, 2023. https://doi.org/10.1177/03128962211035470

[4] W. Song, H. Yu, and H. Xu, "Effects of green human resource management and managerial environmental concern on green innovation," *European Journal of Innovation Management*, vol. 24, no. 3, pp. 951-967, 2021. https://doi.org/10.1108/ejim-11-2019-0315

[5] C. L. Tan and A. M. Nasurdin, "Human resource management practices and organizational innovation: Assessing the mediating role of knowledge management effectiveness," *Electronic Journal of Knowledge Management*, vol. 9, no. 2, pp. pp155-167-pp155-167, 2011.

[6] A. Rosengren *et al.*, "Socioeconomic status and risk of cardiovascular disease in 20 low-income, middle-income, and high-income countries: The prospective urban rural epidemiologic (PURE) study," *The Lancet Global Health*, vol. 7, no. 6, pp. e748-e760, 2019.

[7] Y. M. Yusoff, M. K. Omar, M. D. K. Zaman, and S. Samad, "Do all elements of green intellectual capital contribute toward business sustainability? Evidence from the Malaysian context using the Partial Least Squares method," *Journal of Cleaner Production*, vol. 234, pp. 626-637, 2019. https://doi.org/10.1016/j.jclepro.2019.06.153

[8] S. U. Rehman, S. Kraus, S. A. Shah, D. Khanin, and R. V. Mahto, "Analyzing the relationship between green innovation and environmental performance in large manufacturing firms," *Technological Forecasting and Social Change*, vol. 163, p. 120481, 2021. https://doi.org/10.1016/j.techfore.2020.120481

[9] M. Y. Yusliza, J. Y. Yong, M. I. Tanveer, T. Ramayah, J. N. Faezah, and Z. Muhammad, "A structural model of the impact of green intellectual capital on sustainable performance," *Journal of Cleaner Production*, vol. 249, p. 119334, 2020. https://doi.org/10.1016/j.jclepro.2019.119334

[10] A. Mansoor, S. Jahan, and M. Riaz, "Does green intellectual capital spur corporate environmental performance through green workforce?," *Journal of Intellectual Capital*, vol. 22, no. 5, pp. 823-839, 2021. https://doi.org/10.1108/jic-06-2020-0181

[11] M. Fayyazi, S. Shahbazmoradi, Z. Afshar, and M. Shahbazmoradi, "Investigating the barriers of the green human resource management implementation in oil industry," *Management Science Letters*, vol. 5, no. 1, pp. 101-108, 2015. https://doi.org/10.5267/j.msl.2014.12.002

[12] A. Labella-Fernández and J. Martínez-del-Río, "Green human resource management. In Responsible Consumption and Production." Cham: Springer International Publishing, 2019, pp. 312-323.

[13] J. Aftab, N. Abid, N. Cucari, and M. Savastano, "Green human resource management and environmental performance: The role of green innovation and environmental strategy in a developing country," *Business Strategy and the Environment*, vol. 32, no. 4, pp. 1782-1798, 2023. https://doi.org/10.1002/bse.3219

[14] N. Nursyabani, Y. Yanti, and A. Rachpriliani, "The Effect of Green Innovation and Sustainability Report on the Financial Performance of MSMEs in Karawang," *International Journal of Social Science and Human Research*, vol. 6, no. 08, pp. 4844-53, 2023. https://doi.org/10.47191/ijsshr/v6-i8-32

[15] E. Kurniawati, "The development of green human resources management in Indonesia," *Jurnal Manajemen dan Kewirausahaan*, vol. 8, no. 2, pp. 146-156, 2023. https://doi.org/10.32503/jmk.v8i2.3754

[16] K. Asiaei, N. G. O'Connor, O. Barani, and M. Joshi, "Green intellectual capital and ambidextrous green innovation: The impact on environmental performance," *Business Strategy and the Environment*, vol. 32, no. 1, pp. 369-386, 2023. https://doi.org/10.1002/bse.3136

[17] K. Haldorai, W. G. Kim, and R. F. Garcia, "Top management green commitment and green intellectual capital as enablers of hotel environmental performance: The mediating role of green human resource management," *Tourism Management*, vol. 88, p. 104431, 2022. https://doi.org/10.1016/j.tourman.2021.104431

[18] J. Jirakraisiri, Y. F. Badir, and B. Frank, "Translating green strategic intent into green process innovation performance: The role of green intellectual capital," *Journal of Intellectual Capital*, vol. 22, no. 7, pp. 43-67, 2021. https://doi.org/10.1108/jic-08-2020-0277

[19] S. Y. Malik, Y. Cao, Y. H. Mughal, G. M. Kundi, M. H. Mughal, and T. Ramayah, "Pathways towards sustainability in organizations: Empirical evidence on the role of green human resource management practices and green intellectual capital," *Sustainability*, vol. 12, no. 8, p. 3228, 2020. https://doi.org/10.3390/su12083228

[20] N. M. Suki, N. M. Suki, A. Sharif, S. Afshan, and G. Rexhepi, "Importance of green innovation for business sustainability: Identifying the key role of green intellectual capital and green SCM," *Business Strategy and the Environment*, vol. 32, no. 4, pp. 1542-1558, 2023. https://doi.org/10.1002/bse.3204

[21] J. Abbas and S. M. Khan, "Green knowledge management and organizational green culture: An interaction for organizational green innovation and green performance," *Journal of Knowledge Management*, vol. 27, no. 7, pp. 1852-1870, 2023. https://doi.org/10.1108/jkm-03-2022-0156

[22] X. Hao and W. Fu, "Innovation with ecological sustainability: Does corporate environmental responsibility matter in green innovation?," *Journal of Economic Analysis*, vol. 2, no. 3, pp. 21-42, 2023. https://doi.org/10.58567/jea02030002

[23] E. Akdeniz, "Toward a sustainable human resources management: Linking green human resources management activities with ISO standards," *Sage Open*, vol. 13, no. 3, p. 21582440231192907, 2023. https://doi.org/10.1177/21582440231192907

[24] G. Rana and V. Arya, "Green human resource management and environmental performance: mediating role of green innovation–a study from an emerging country," *Foresight*, vol. 26, no. 1, pp. 35-58, 2024. https://doi.org/10.1108/fs-04-2021-0094

[25] M. A. Islam, J. Mendy, A. A. Haque, and M. Rahman, "Green human resource management practices and millennial employees' retention in small and medium enterprises: The moderating impact of creativity climate from a developing country perspective," *Business Strategy & Development*, vol. 5, no. 4, pp. 335-349, 2022. https://doi.org/10.1002/bsd2.202

[26] M. U. Shahzad, "Green human resource management: Past, present and future research agenda," *Sukkur IBA Journal of Management and Business*, vol. 10, no. 1, pp. 79-120, 2023. https://doi.org/10.30537/sijmb.v10i1.1244

[27] M. Usman, Y. Rofcanin, M. Ali, C. Ogbonnaya, and M. T. Babalola, "Toward a more sustainable environment: Understanding why and when green training promotes employees' eco-friendly behaviors outside of work," *Human Resource Management*, vol. 62, no. 3, pp. 355-371, 2023. https://doi.org/10.1002/hrm.22148

[28] R. K. Boso, E. Adusei, and E. Demah, "How does green intellectual capital affect environmental performance? Evidence from manufacturing firms in Ghana," *Social Responsibility Journal*, vol. 19, no. 7, pp. 1178-1195, 2022. https://doi.org/10.1108/srj-12-2021-0503

[29] S. Solihin, H. Harnovinsah, T. Tugiantoro, and K. Karsam, "Green intellectual capital and sustained competitive advantages in the industrial sector of Indonesia," *Jurnal Reviu Akuntansi dan Keuangan*, vol. 13, no. 1, pp. 134-156, 2023.

[30] H. E. Arici and M. Uysal, "Leadership, green innovation, and green creativity: A systematic review," *The Service Industries Journal*, vol. 42, no. 5-6, pp. 280-320, 2022. https://doi.org/10.1080/02642069.2021.1964482

[31] S. Yin and Y. Yu, "An adoption-implementation framework of digital green knowledge to improve the performance of digital green innovation practices for industry 5.0," *Journal of Cleaner Production*, vol. 363, p. 132608, 2022. https://doi.org/10.1016/j.jclepro.2022.132608

[32] Q.-J. Wang, H.-J. Wang, and C.-P. Chang, "Environmental performance, green finance and green innovation: What's the long-run relationships among variables?," *Energy Economics*, vol. 110, p. 106004, 2022. https://doi.org/10.1016/j.eneco.2022.106004

[33] J. Aftab, N. Abid, H. Sarwar, and M. Veneziani, "Environmental ethics, green innovation, and sustainable performance: Exploring the role of environmental leadership and environmental strategy," *Journal of Cleaner Production*, vol. 378, p. 134639, 2022. https://doi.org/10.1016/j.jclepro.2022.134639

[34] I. Hidayat, T. Ismail, M. Taqi, and A. S. Yulianto, "The effects of environmental cost, environmental disclosure and environmental performance on company value with an independent board of commissioners as moderation," *International Journal of Energy Economics and Policy*, vol. 13, no. 3, pp. 367-373, 2023. https://doi.org/10.32479/ijeep.14159

[35] P. K. Purnomo and L. P. Widianingsih, "The influence of environmental performance on financial performance with corporate social responsibility (CSR) disclosure as a moderating variable: Evidence from listed companies in Indonesia," *Review of Integrative Business and Economics Research*, vol. 1, no. 1, pp. 1-13, 2012.

[36] X. Huang, W. Liu, Z. Zhang, X. Zou, and P. Li, "Quantity or quality: Environmental legislation and corporate green innovations," *Ecological Economics*, vol. 204, p. 107684, 2023. https://doi.org/10.1016/j.ecolecon.2022.107684

[37] Q. A. Nisar, S. Haider, F. Ali, S. Jamshed, K. Ryu, and S. S. Gill, "Green human resource management practices and environmental performance in Malaysian green hotels: The role of green intellectual capital and pro-environmental behavior," *Journal of Cleaner Production*, vol. 311, p. 127504, 2021. https://doi.org/10.1016/j.jclepro.2021.127504

[38] A. Sarwar and A. Mustafa, "Analysing the impact of green intellectual capital on environmental performance: The mediating role of green training and development," *Technology Analysis & Strategic Management*, pp. 1-14, 2023. https://doi.org/10.1080/09537325.2023.2209205

[39] O. Ogiemwonyi, M. N. Alam, and H. S. Alotaibi, "Connecting green HRM practices to pro-environmental behavior through green human capital in the hospitality sector," *Business Strategy & Development*, vol. 6, no. 4, pp. 1053-1071, 2023. https://doi.org/10.1002/bsd2.297

[40] T. Roh, J. Noh, Y. Oh, and K.-S. Park, "Structural relationships of a firm's green strategies for environmental performance: The roles of green supply chain management and green marketing innovation," *Journal of Cleaner Production*, vol. 356, p. 131877, 2022. https://doi.org/10.1016/j.jclepro.2022.131877

[41] H. Teixeira, M. G. Gomes, A. M. Rodrigues, and J. Pereira, "Thermal and visual comfort, energy use and environmental performance of glazing systems with solar control films," *Building and Environment*, vol. 168, p. 106474, 2020. https://doi.org/10.1016/j.buildenv.2019.106474

[42] S. Ren, G. Tang, and S. E. Jackson, "Effects of Green HRM and CEO ethical leadership on organizations' environmental performance," *International Journal of Manpower*, vol. 42, no. 6, pp. 961-983, 2021. https://doi.org/10.1108/ijm-09-2019-0414

[43] S. Ren, D. Fan, and G. Tang, "Organizations' management configurations towards environment and market performances," *Journal of Business Ethics*, vol. 188, no. 2, pp. 239-257, 2023. https://doi.org/10.1007/s10551-022-05299-4

[44] T. Garavan *et al.*, "Putting the individual and context back into national human resource development research: A systematic review and research agenda," *International Journal of Management Reviews*, vol. 25, no. 1, pp. 152-175, 2023. https://doi.org/10.1111/ijmr.12308

[45] L. Obereder, M. Müller-Camen, and D. W. Renwick, *GHRM in sustainability reporting: An exploratory analysis across six countries using the AMO framework. In Green human resource management research: Issues, trends, and challenges.* Cham: Springer International Publishing, 2022.

[46] N. T. Pham, H. T. Hoang, and Q. P. T. Phan, "Green human resource management: A comprehensive review and future research agenda," *International Journal of Manpower*, vol. 41, no. 7, pp. 845-878, 2020. https://doi.org/10.1108/ijm-07-2019-0350

[47] C. H. Chang and Y. S. Chen, "The determinants of green intellectual capital," *Management Decision*, vol. 50, no. 1, pp. 74-94, 2012. https://doi.org/10.1108/00251741211194886

[48] B. Marco-Lajara, P. C. Zaragoza-Sáez, J. Martínez-Falcó, and E. Sánchez-García, "Does green intellectual capital affect green innovation performance? Evidence from the Spanish wine industry," *British Food Journal*, vol. 125, no. 4, pp. 1469-1487, 2023. https://doi.org/10.1108/bfj-03-2022-0298

[49] S. Parida, C. Chan, S. Ananthram, and K. Brown, "In the search for greener buildings: The role of green human resource management," *Business Strategy and the Environment*, vol. 32, no. 8, pp. 5952-5968, 2023. https://doi.org/10.1002/bse.3467

[50] E. Vasileiou, N. Georgantzis, G. Attanasi, and P. Llerena, "Green innovation and financial performance: A study on Italian firms," *Research Policy*, vol. 51, no. 6, p. 104530, 2022. https://doi.org/10.1016/j.respol.2022.104530

[51] F. Mustafa, S. Arshad, A. Iqbal, and S. N. Khan, "The influence of green HRM on environmental performance: The mediating effect of green innovation and moderating effect of environmental strategy," *International Journal of Business and Economic Affairs*, vol. 7, no. 4, pp. 34-44, 2022. https://doi.org/10.24088/ijbea-2022-74003

[52] T. T. Le, P. Q. Tran, N. P. Lam, M. N. L. Tra, and P. H. P. Uyen, "Corporate social responsibility, green innovation, environment strategy and corporate sustainable development," *Operations Management Research*, vol. 17, no. 1, pp. 114-134, 2024. https://doi.org/10.1007/s12063-023-00411-x

[53] S. Ullah, T. Mehmood, and T. Ahmad, "Green intellectual capital and green HRM enabling organizations go green: Mediating role of green innovation," *International Journal of Innovation Science*, vol. 15, no. 2, pp. 245-259, 2023. https://doi.org/10.1108/ijis-12-2021-0222

[54] Y. Yuan, S. Ren, G. Tang, H. Ji, F. L. Cooke, and Z. Wang, "How green human resource management affects employee voluntary workplace green behaviour: An integrated model," *Human Resource Management Journal*, vol. 34, no. 1, pp. 91-121, 2024. https://doi.org/10.1111/1748-8583.12510

[55] P. Choudhary and A. Datta, "The significance of GHRM in fostering hospitality employees' green creativity: A systematic literature review with bibliometric analysis," *Journal of Information and Optimization Sciences*, vol. 43, no. 7, pp. 1709-1720, 2022. https://doi.org/10.1080/02522667.2022.2128527

[56] S. R. Chowdhury, J. Mendy, and M. Rahman, "A systematic literature review of GHRM: organizational sustainable performance reimagined using a new holistic framework," *Sustainability*, vol. 15, no. 9, p. 7513, 2023. https://doi.org/10.3390/su15097513

[57] M. Xi, W. Fang, and T. Feng, "Green intellectual capital and green supply chain integration: The mediating role of supply chain transformational leadership," *Journal of Intellectual Capital*, vol. 24, no. 4, pp. 877-899, 2023. https://doi.org/10.1108/jic-12-2021-0333

[58] M. Gharib *et al.*, "Roles of green intellectual capital facets on environmental sustainability in Oman," *Economic Research-Ekonomska Istraživanja*, vol. 36, no. 3, p. 2149591, 2023. https://doi.org/10.1080/1331677x.2022.2149591

[59] D. Renwick, T. Redman, and S. Maguire, "Green HRM: A review, process model, and research agenda," *University of Sheffield Management School Discussion Paper*, vol. 1, no. 1, pp. 1-46, 2008.

[60] R. Paulet, P. Holland, and D. Morgan, "A meta-review of 10 years of green human resource management: Is Green HRM headed towards a roadblock or a revitalisation?," *Asia Pacific Journal of Human Resources*, vol. 59, no. 2, pp. 159-183, 2021. https://doi.org/10.1111/1744-7941.12285

[61] M. Darvishmotevali and L. Altinay, "Green HRM, environmental awareness and green behaviors: The moderating role of servant leadership," *Tourism Management*, vol. 88, p. 104401, 2022. https://doi.org/10.1016/j.tourman.2021.104401

[62] C. Tanova and S. W. Bayighomog, "Green human resource management in service industries: tthe construct, antecedents, consequences, and outlook," *The Service Industries Journal*, vol. 42, no. 5-6, pp. 412-452, 2022. https://doi.org/10.1080/02642069.2022.2045279

[63] J. Y. Yong, M.-Y. Yusliza, and O. O. Fawehinmi, "Green human resource management: A systematic literature review from 2007 to 2019," *Benchmarking: An International Journal*, vol. 27, no. 7, pp. 2005-2027, 2020. https://doi.org/10.1108/bij-12-2018-0438

[64] P. K. Muisyo, Q. Su, H. B. A. Hashmi, T. H. Ho, and M. M. Julius, "The role of green HRM in driving hotels' green creativity," *International Journal of Contemporary Hospitality Management*, vol. 34, no. 4, pp. 1331-1352, 2022. https://doi.org/10.1108/ijchm-07-2021-0833

[65] O. M. A. Ababneh, "How do green HRM practices affect employees' green behaviors? The role of employee engagement and personality attributes," *Journal of Environmental Planning and Management*, vol. 64, no. 7, pp. 1204-1226, 2021. https://doi.org/10.1080/09640568.2020.1814708

[66] M. Aboramadan, "The effect of green HRM on employee green behaviors in higher education: The mediating mechanism of green work engagement," *International Journal of Organizational Analysis*, vol. 30, no. 1, pp. 7-23, 2022. https://doi.org/10.1108/ijoa-05-2020-2190

[67] S. K. Singh, M. Del Giudice, R. Chierici, and D. Graziano, "Green innovation and environmental performance: The role of green transformational leadership and green human resource management," *Technological Forecasting and Social Change*, vol. 150, p. 119762, 2020. https://doi.org/10.1016/j.techfore.2019.119762

[68] M. Alreahi *et al.*, "Green human resources management in the hotel industry: A systematic review," *Sustainability*, vol. 15, no. 1, p. 99, 2022. https://doi.org/10.3390/su15010099

[69] M. A. Shahzad, D. Jianguo, and M. Junaid, "Impact of green HRM practices on sustainable performance: mediating role of green innovation, green culture, and green employees' behavior," *Environmental Science and Pollution Research*, vol. 30, no. 38, pp. 88524-88547, 2023. https://doi.org/10.1007/s11356-023-28498-6

[70] A. Bos-Nehles, K. Townsend, K. Cafferkey, and J. Trullen, "Examining the Ability, Motivation and Opportunity (AMO) framework in HRM research: Conceptualization, measurement and interactions," *International Journal of Management Reviews*, vol. 25, no. 4, pp. 725-739, 2023. https://doi.org/10.1111/ijmr.12332

[71] Z. Abbas, A. G. Khan, R. Smaliukienė, R. Zámečník, K. Hussain, and S. Mubarik, "Green HRM pursuit of social sustainability in the hotels: AMO theoretical perspective," *Calitatea*, vol. 23, no. 190, pp. 41-50, 2022.

[72] M. Davis, "Flexibility of government employees in a hybrid workplace," Doctoral Dissertation, Northcentral University, 2023.

[73] D. Dillman, "Conducting survey research," *Survey Research in Corporate Finance: Bridging the gap between Theory and Practice*, p. 25, 2011.

[74] H. K. Mohajan, "Quantitative research: A successful investigation in natural and social sciences," *Journal of Economic Development, Environment and People*, vol. 9, no. 4, pp. 50-79, 2020. https://doi.org/10.26458/jedep.v9i4.679

[75] V. Venkatesh and F. D. Davis, "A model of the antecedents of perceived ease of use: Development and test," *Decision Sciences*, vol. 27, no. 3, pp. 451-481, 1996. https://doi.org/10.1111/j.1540-5915.1996.tb00860.x

[76] G. B. Magova and S. S. Kessy, "Effects of human resources management practices on supply chain flexibility: Evidence from tourist hotels in Tanzania," *Business Management Review*, vol. 23, no. 1, pp. 31-53, 2020.

[77] K. Al-Marri, A. M. M. B. Ahmed, and M. Zairi, "Excellence in service: An empirical study of the UAE banking sector," *International Journal of Quality & Reliability Management*, vol. 24, no. 2, pp. 164-176, 2007. https://doi.org/10.1108/02656710710722275

[78] R. B. Frary, "Hints for designing effective questionnaires," *Practical Assessment, Research, and Evaluation*, vol. 5, no. 1, p. 3, 1996.

[79] J.-M. Becker, J.-H. Cheah, R. Gholamzade, C. M. Ringle, and M. Sarstedt, "PLS-SEM's most wanted guidance," *International Journal of Contemporary Hospitality Management*, vol. 35, no. 1, pp. 321-346, 2023. https://doi.org/10.1108/ijchm-04-2022-0474

[80] J. F. Hair, C. M. Ringle, and M. Sarstedt, "Partial least squares: The better approach to structural equation modeling?," *Long Range Planning*, vol. 45, no. 5-6, pp. 312-319, 2012. https://doi.org/10.1016/j.lrp.2012.09.011

[81] W. Afthanorhan, "Hierarchical component using reflective-formative measurement model in partial least square structural equation modeling (Pls-Sem)," *International Journal of Mathematics*, vol. 2, no. 2, pp. 33-49, 2014.

[82] J. Evermann and M. Rönkkö, "Recent Developments in PLS," *Communications of the Association for Information Systems*, vol. 52, no. 1, pp. 663-667, 2023. https://doi.org/10.17705/1cais.05229
[83] C.-C. Liang, A. P.-I. Yu, and T. H. Le, "Customers focus and impulse buying at night markets," *Journal of Retailing and Consumer Services*, vol. 60, p. 102434, 2021. https://doi.org/10.1016/j.jretconser.2020.102434
[84] A. Y. C. May, G. S. Hao, and S. Carter, "Intertwining corporate social responsibility, employee green behavior, and environmental sustainability: The mediation effect of organizational trust and organizational identity," *Economics, Management and Financial Markets*, vol. 16, no. 2, pp. 32-61, 2021. https://doi.org/10.22381/emfm16220212
[85] P. Arunprasad, C. Dey, N. Santhanam, and K. Z. B. Ahmad, "Strategic HRM practices, learning orientation and learning competence: Study from retail industry," *The Learning Organization*, vol. 30, no. 4, pp. 406-425, 2023. https://doi.org/10.1108/tlo-05-2022-0066
[86] A. Purwanto, "Partial least squares structural equation modeling (PLS-SEM) analysis for social and management research: A literature review," *Journal of Industrial Engineering & Management Research*, 2021.
[87] P. A. O. Duarte and M. L. B. Raposo, "A PLS model to study brand preference: An application to the mobile phone market," *Handbook of Partial Least Squares: Concepts, Methods and Applications*, pp. 449-485, 2010. https://doi.org/10.1007/978-3-540-32827-8_21
[88] A. Afthanorhan, P. L. Ghazali, and N. Rashid, "Discriminant validity: A comparison of CBSEM and consistent PLS using Fornell & Larcker and HTMT approaches," presented at the Journal of Physics: Conference Series, 2021.
[89] C. Fornell and D. F. Larcker, *Structural equation models with unobservable variables and measurement error: Algebra and statistics.* Los Angeles, CA: Sage Publications Sage, 1981.
[90] S. M. Rasoolimanesh, "Discriminant validity assessment in PLS-SEM: A comprehensive composite-based approach," *Data Analysis Perspectives Journal*, vol. 3, no. 2, pp. 1-8, 2022.
[91] M. Sahoo, *Structural equation modeling: Threshold criteria for assessing model fit methodological issues in management research: Advances, challenges, and the way ahead* (Leeds). Emerald Publishing Limited. https://doi.org/10.1108/978-1-78973-973-220191016, 2019.
[92] N. Kock, "Using causality assessment indices in PLS-SEM," *Data Analysis Perspectives Journal*, vol. 3, no. 5, pp. 1-6, 2022.
[93] M. Sarstedt, J. F. Hair, M. Pick, B. D. Liengaard, L. Radomir, and C. M. Ringle, "Progress in partial least squares structural equation modeling use in marketing research in the last decade," *Psychology & Marketing*, vol. 39, no. 5, pp. 1035-1064, 2022. https://doi.org/10.1002/mar.21640
[94] J. Henseler and F. Schuberth, "Partial least squares as a tool for scientific inquiry: Comments on Cadogan and Lee," *European Journal of Marketing*, vol. 57, no. 6, pp. 1737-1757, 2023. https://doi.org/10.1108/ejm-06-2021-0416
[95] J. F. Hair, C. M. Ringle, and M. Sarstedt, "Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance," *Long Range Planning*, vol. 46, no. 1-2, pp. 1-12, 2013. https://doi.org/10.1016/j.lrp.2013.01.001
[96] J. Henseler *et al.*, "Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013)," *Organizational Research Methods*, vol. 17, no. 2, pp. 182-209, 2014. https://doi.org/10.1177/1094428114526928
[97] P. N. Sharma, B. D. Liengaard, J. F. Hair, M. Sarstedt, and C. M. Ringle, "Predictive model assessment and selection in composite-based modeling using PLS-SEM: Extensions and guidelines for using CVPAT," *European Journal of Marketing*, vol. 57, no. 6, pp. 1662-1677, 2022. https://doi.org/10.1108/ejm-08-2020-0636
[98] D. M. Houghton, E. L. Nowlin, D. Walker, and B. T. McLeod, "Which fantasy sports players will bet on sports? A trait-based predictive model of fantasy sport players engaging in sports betting," *Sport Marketing Quarterly*, vol. 32, no. 2, pp. 105-123, 2023. https://doi.org/10.32731/smq.322.062023.02
[99] I. N. Rognes, "Inflammation and coagulation in human trauma: A prospective observational study with repeated measures design," 2022.
[100] M. R. Ab Hamid, W. Sami, and M. M. Sidek, "Discriminant validity assessment: Use of Fornell & Larcker criterion versus HTMT criterion," presented at the Journal of Physics: Conference Series, 2017.
[101] S. M. Sulaiman, M. A. Muhammad, A. D. Muhammad, and T. T. Sabiu, "Mediating role of customer satisfaction between service quality and customer loyalty with non-interest bank in Nigeria," *International Journal of Islamic Economics and Finance*, vol. 4, no. 1, pp. 1-30, 2021. https://doi.org/10.18196/ijief.v4i1.10424
[102] B. R. Olaleye, I. Abdurrashid, and B. Mustapha, "Organizational sustainability and TQM practices in hospitality industry: Employee-employer perception," *The TQM Journal*, 2023. https://doi.org/10.1108/tqm-10-2022-0306
[103] J. Henseler and W. W. Chin, "A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modeling," *Structural Equation Modeling: A Multidisciplinary Journal*, vol. 17, no. 1, pp. 82-109, 2010. https://doi.org/10.1080/10705510903439003
[104] M. W. Browne and R. Cudeck, "Single sample cross-validation indices for covariance structures," *Multivariate Behavioral Research*, vol. 24, no. 4, pp. 445-455, 1989. https://doi.org/10.1207/s15327906mbr2404_4
[105] W. Chin, J.-H. Cheah, Y. Liu, H. Ting, X.-J. Lim, and T. H. Cham, "Demystifying the role of causal-predictive modeling using partial least squares structural equation modeling in information systems research," *Industrial Management & Data Systems*, vol. 120, no. 12, pp. 2161-2209, 2020. https://doi.org/10.1108/imds-10-2019-0529