

The Impact of Green Human Resource Management on the Resilience of Higher Education Institutions in China

Wei Gan

Universiti Sains Malaysia
Email: ganwei@student.usm.my

Shankar Chelliah*

Universiti Sains Malaysia
*Corresponding Author Email: shankarchelliah1@gmail.com

DOI Link: <http://dx.doi.org/10.6007/IJARBSS/v16-i3/27963>

Published Date: 17 March 2026

Abstract

In recent years, as the pressure on higher education institutions to shoulder the dual carbon goals and the mission of sustainable development has grown increasingly intense, green human resource management (GHRM) came into being and is becoming more and more popular. Meanwhile, resilience denotes the capacity of higher education institutions (HEIs) to absorb shocks, maintain core functions, achieve rapid recovery and facilitate transformation when confronting sudden crises, structural disruptions or prolonged uncertainty. Consequently, exploring the Impact of GHRM on the HEIs resilience holds significant importance for advancing the sustainability of Chinese HEIs. Previous researchers found that pro-environmental behaviour, green human capital performance, green innovation mediated the relationship between GHRM and HEIs resilience both in environmental, organizational and learning dimensions. This study employs the Ability, Motivation, Opportunity (AMO) Theory in constructing its theoretical framework. Statistical analysis is conducted on data from 336 valid survey responses completed by faculty in Chinese HEIs, utilizing the software of SPSS and SmartPLS. Ultimately, it is revealed that GHRM has a positive effect on HEIs resilience, mediated by pro-environmental behaviour, green human capital performance, green innovation. While existing research on the intersection of GHRM and HEIs resilience remains limited, many HEIs are facing issues of insufficient resilience, such as inadequate consensus on sustainable development principles and failure to incorporate green practices into performance assessing metrics. The findings hold implications for the Chinese HEIs in refining GHRM strategies, encouraging faculty to enhance their green behaviour and improve HEIs' environmental, organizational and learning resilience.

Keywords: Green Human Resource Management, Pro-environmental Behaviour, Green Human Capital Performance, Green Innovation, HEIs Resilience

Introduction

Resilience denotes the capacity of higher education institutions (HEIs) to absorb shocks, maintain core functions, achieve rapid recovery and facilitate transformation when confronting sudden crises, structural disruptions or prolonged uncertainty. It encompasses both organizational-level emergency response and recovery mechanisms, alongside adaptive capabilities across multiple dimensions including teaching, research, finance, digitalization and social responsibility (DECART, 2025). Contemporary campuses of HEIs, functioning as “miniature cities” that aggregate diverse functional elements such as industry-academia-research collaboration, interpersonal interaction, knowledge dissemination, and social services, face increasingly complex sustainability challenges amid uncertainties and risks stemming from societal, economic, and environmental factors. Against this backdrop, the development of resilient higher education institutions has emerged as a new research focus within the field of campus management.

Meanwhile, green human resource management (GHRM) came into being and grew increasingly popular. GHRM is a systematic approach that embeds environmental sustainability principles throughout all stages of human resource processes. It aims to guide employees towards adopting green behaviours through HR mechanisms such as recruitment, training, performance management, and incentives, thereby helping organizations achieve environmental, economic, and social triple bottom line benefits (Mudaliar and Agrawal, 2025).

Although existing research on the intersection of GHRM and HEIs resilience remains limited, existing studies have demonstrated that GHRM can influence staff performance and sustainable development within HEIs (Abbas et al., 2022; Alanazi and Yusof, 2025). The increasing global concern for the environment has forced organizations to adopt GHRM practices including HEIs. In HEIs, regarded as knowledge-intensive organizations, GHRM serves not merely as a means to reduce resource consumption, but also as a vital lever for cultivating green values among staff and students, thereby underpinning the long-term sustainability goals (Jumiati and Toaha, 2025).

Currently, many HEIs face issues of insufficient resilience, such as inadequate consensus on sustainable development principles and failure to incorporate green practices into performance assessing metrics (Jumiati and Toaha, 2025); insufficiently systematic green education framework and lacked green concept standards in initial stages of certain projects (Zhang and He, 2023); and weak cross-departmental coordination (Zhang, 2023). These challenges are intrinsically linked to GRHM mechanisms. Obviously, exploring HEIs Resilience among universities will help HEIs to recognize the factors limiting their development, related to sustainability.

This research aims to explore how GHRM influence the HEIs resilience in China. The developed questions were listed as following:

1. Does GHRM have a positive impact on employee PEB, green human capital performance and green innovation in Chinese HEIs?
2. Do employee PEB, green human capital performance and green innovation have positive impacts with HEIs resilience in China?

3. Do employee PEB, green human capital performance and green innovation mediate the relationship between GHRM and HEIs resilience?

This study selects HEIs in Jiangxi Province, China as its research sample for the following reasons. Firstly, Jiangxi Province is representative of the “majority” of China's provinces. Among China's 34 provincial-level administrative regions, the vast majority, like Jiangxi, possess one or two double first-class universities alongside a number of provincial key and ordinary universities. Provinces or municipalities with strong higher education systems, such as Beijing, Shanghai, Jiangsu, and Hubei, constitute a minority. Consequently, studying Jiangxi better reflects the prevailing conditions of higher education in China's mainstream provinces. The second reason is studying Jiangxi enables more effective focus on common issues. Jiangxi is situated in central China and is classified as a ‘developing’ province. The research theme concerns GHRM and HEIs resilience. Such management practices and organizational capabilities may prove more critical and sensitive for relatively resource-constrained ‘developing’ universities (such as those in Jiangxi). In contrast, double first-class universities with abundant resources may exhibit lower sensitivity to resource fluctuations. Consequently, the relational mechanisms identified within the Jiangxi sample may better illuminate the core pathways and key challenges for enhancing resilience under resource constraints across China's broader higher education landscape. This offers stronger practical guidance for the majority of Chinese HEIs.

Literature Review

Green Human Resource Management (GRHM)

When employees perceive the human resource management (HRM) practices implemented by the organization, they consciously align their work attitudes and behaviours with this standard and create a more harmonious employee relations climate, which in turn helps the organization to operate in an environmentally friendly environment and achieve resilience. Combined with green recruitment, green selection, green training, employee green performance assessment, green rewards and green employee relations (Jumiati and Toaha, 2025), GHRM is increasingly being recognized as an important practice for implementing green practices that enhance environmental performance for long-term development (Dragomir, 2020; Ren, Tang, & Jackson, 2018). Thus, it is applied in various researching fields, including sustainable recruitment, environmental training, and performance management that support environmentally friendly practices (Siburian and Sugiarto, 2022).

According to Jumiati and Toaha (2025), green recruitment encompasses the following: incorporating environmental awareness requirements into job advertisements and role descriptions; prioritizing candidates with green project experience; etc. Green selection refers to assessing candidates' knowledge of sustainability and behavioural tendencies through interviews and evaluations. Green training involves delivering specialized courses on green management, low-carbon technologies, and energy conservation; encouraging staff participation in institutional green initiatives. Moreover, in order to develop an employee green performance assessment system, environmentally conscious actions (such as paper conservation and participation in waste sorting) are incorporated into performance evaluation metrics. Green rewards involve incentivizing eco-friendly conduct through commendations, green incentives, and green innovation funds. Finally, green employee

relations entails establishing green cultural platforms to encourage staff environmental suggestions, alongside organizing volunteer initiatives and workplace greening activities; etc.

Pro-environmental Behaviour (PEB)

Defined as 'any actions that can protect the environment as a whole and/or a specific ecosystem from the destructive effects of human activities' (Ghazali et al., 2019), PEB refers to the green-, sustainable-, or environmentally-friendly (eco-friendly) actions (Krajhanzl, 2010) taken by individuals or groups to reduce negative impacts on the natural environment or even generate positive environmental benefits. This encompasses energy and water conservation, waste sorting and recycling, eco-friendly travel, purchasing environmentally friendly products, and participating in environmental public welfare activities.

Previous researches indicate that PEB is influenced by numerous factors. Ecological value and altruistic value positively promote PEB (Luo and Kim, 2025); cognitive enhancement and emotional motivation serve as prerequisites for behavioural intention (Tusyanah et al., 2024); positive expectations from others and the community significantly enhance behavioural intention (Vinothkumar, 2021); structural factors such as incentive/penalty mechanisms and information feedback provide external support for behaviour (Yang et al., 2024).

Green Human Capital Performance

As a vital internal resource for undertaking green transformation of an organization, green human capital performance refers to the behavioural performance on knowledge, skills, experience, values, and behavioural tendencies that employees possess in relation to environmental sustainability, including individuals' cognitive and practical capabilities regarding ecological conservation and environmental management (Andini and Harsono, 2024).

Its content encompasses two dimensions: knowledge and practice. Within this framework, green knowledge refers to the internal processes of acquisition, sharing, integration, and internalization within an organization, forming the foundation of employees' green competencies (Z. Wang et al., 2023). Meanwhile, green recruitment, training, performance appraisal, and incentive schemes constitute the practical elements. By embedding green values throughout the entire human resources process, these directly influence employees' green behaviours and the organization's environmental performance (Montalvo-Falcón et al., 2023). Multiple empirical studies have demonstrated that green human capital significantly enhances an organization's environmental performance, manifesting in reduced emissions and improved resource efficiency (Andini and Harsono, 2024). Furthermore, it exerts a positive influence on sustainable organizational performance (Nawang Sari et al., 2025). These constitute vital indicators for gauging institutional resilience.

At the HEIs level, green human capital performance is typically reflected in three aspects: (1) green teaching and research outputs (number of green courses, green research projects, green papers/patents); (2) green campus operations (energy conservation, carbon emission reduction, waste recycling rates); (3) green culture and commitment (environmental behaviours among staff and students, engagement in green volunteering).

Green Innovation

Green Innovation refers to the implementation of resource conservation, pollution reduction and value creation through green enhancements in technology, products, processes or management approaches. Employee green innovation encompasses both green creativity—the generation of novel, viable environmental concepts (Lubis et al., 2025), and green innovation behaviour—the specific actions taken by staff towards ecological sustainability objectives when developing, applying or introducing new solutions (Zhu et al., 2022). Serving as a vital internal driver for organizations to achieve sustainable development and enhance environmental performance, green innovation contributes positively to institutional resilience and sustainable development.

HEIs Resilience

The resilience denotes an institution's capacity to rapidly recover, adapt and achieve sustainable development when confronted with sudden crises, policy shifts or resource constraints. It encompasses both institutional resilience and resource flexibility at the organizational level, as well as the psychological and behavioural adaptability of staff and students (Robinson and Pedersen, 2021). Its key dimensions encompass: (1) environmental resilience (the shock resistance of campus facilities, energy systems and waste management); (2) organizational resilience (the flexibility of governance structures, decision-making mechanisms and talent reserves); and (3) learning resilience (the innovative capabilities of staff and students, alongside mechanisms for knowledge sharing and accelerated learning) (Gao et al., 2024).

Ability, Motivation, Opportunity (AMO) Theory

The Ability, Motivation, Opportunity (AMO) Theory is a core model within the fields of human resource management and organizational behaviour, serving to explain and predict employee performance and overall organizational effectiveness. This model was first proposed by Appelbaum et al. (2000) and has since been widely cited and expanded upon.

The AMO Theory offers a framework for comprehending how various HR procedures can affect employee performance, with the formula "Performance = f (Ability × Motivation × Opportunity)": (1) Practices that improve ability: These consist of training and development initiatives as well as selective hiring; (2) Practices that increase motivation include job security, career development opportunities, and performance-based pay; (3) Practices that increase opportunities include information exchange, teamwork, job design, and employee involvement initiatives. Therefore, organizations can create complete HR systems that improve employee performance and contribute to overall organizational success by concentrating on these three areas.

The AMO theory is initially applied to explain how human resource practices enhance employee performance, before being widely adapted to the field of GHRM, where it has become the predominant framework for systematically classifying GHRM practices (Benevene and Buonomo, 2020; Pooja and Bhavani, 2025). In recent years, research has integrated AMO with topics such as supply chain resilience, organisational citizenship behaviour, and environmental cooperation, forming a tripartite research chain encompassing AMO, GHRM, and resilience (Gu et al., 2023; Yu et al., 2020).

Hypothesis Development*Direct Relationships*

Multiple empirical studies have demonstrated a positive correlation between GHRM and PEB. For instance, green recruitment instils environmental motivations within organizations, enhancing employees' identification with green objectives (N. T. Hong et al., 2024); green training bolsters employees' environmental knowledge and green mindfulness, increasing behavioural willingness (Li and Li, 2025); green remuneration/rewards can enhance PEB through extrinsic incentives (Saifulina et al., 2020); green employee engagement strengthens organizational commitment and engagement, further promoting PEB (Prasad et al., 2025). Hence, Hypothesis H1 is formulated.

H1: GHRM has a positive impact on employee PEB.

As is confirmed by many researched, GHRM efficiently affect green human capital performance. Green recruitment and selection within GHRM can rapidly onboard employees possessing green knowledge, elevating the baseline level of an organization's green human capital (Andini and Harsono, 2024). Moreover, green training and development enhance employees' green skills, enabling higher environmental outputs in practical work; green performance management encourages employees to translate green behaviours into quantifiable outcomes, boosting the performance contribution of green human capital; green remuneration and incentives strengthen environmental motivation, increasing both the frequency and quality of employees' voluntary participation in eco-friendly practices (Aggarwal et al., 2023). Finally, green employee engagement fosters a sense of ownership towards environmental stewardship, cultivating an internal green culture that further elevates the overall effectiveness of green human capital (Aggarwal et al., 2023). Hence, Hypothesis H2 is formulated.

H2: GHRM has a positive impact on green human capital performance.

GHRM has had a positive contribution on the green innovation of various organizations (Munawar et al., 2022). By fostering an environmentally conscious culture within organizations, the staff can be encouraged to consciously consider environmental factors in their daily work and innovative ideas among employees can be also stimulated (Jia et al., 2024). GHRM will enhance employees' commitment to green work engagement and fosters creativity, thereby translating into tangible green innovation behaviours (Aboramadan, 2022). Incorporating green principles systematically into human resources processes such as recruitment, training, and performance appraisal can enhance overall innovation capabilities. For instance: green recruitment and training equip staff with environmental knowledge and skills, forming "green intellectual capital" that provides raw material for innovation; rewarding or recognizing employees who propose green initiatives strengthens motivation for innovation and increases the frequency of green ideas generated (Malik et al., 2021). Hence, Hypothesis H3 is formulated.

H3: GHRM has a positive impact on green innovation.

As is indicated by numerous studies, employee PEB is thought to positively impact sustainable resilience, organizational resilience (Robinson and Pedersen, 2021), and psychological resilience (Wang et al., 2025) within HEIs. Pro-environmental behaviour significantly reduces resource wastage and enhances the resilience of campus systems such as student accommodation (Thondhlana and Hlatshwayo, 2018); innovative environmental governance

mechanisms like green procurement and sustainable campus policies facilitate organizational transitions towards greater sustainability and resilience (Robinson and Pedersen, 2021). Employee PEB, including systematic green initiatives (energy management, waste reduction), can bolster HEIs' resilience when facing sudden crises (such as natural disasters, public health incidents, and energy shortages). Hence, Hypothesis H4 is formulated.

H4: Employee PEB has a positive impact on HEIs resilience.

The positive impact of green human capital on organizational performance constitutes a pivotal factor in enhancing organizational sustainability. The performance of human capital simultaneously bolsters an organization's adaptability and resilience (Liu and Zhao, 2023). Green human capital performance in energy conservation, emissions reduction and waste management can lower the probability of sudden environmental incidents on campus, thereby enhancing environmental resilience (Zahrani, 2024). Faculty possessing green skills can conduct green research and foster interdisciplinary collaboration, creating a "dual-engine drive" of technological and managerial innovation, which is also crucial for universities to swiftly adjust their teaching and research directions when facing policy or technological shifts (Syahidun et al., 2024). Institutions demonstrating strong green human capital performance gain greater access to government green funds, corporate partnerships, and public trust. This fosters more robust funding and collaborative networks, enhancing resource mobilization flexibility during crises (Lastanti and Augustine, 2022). Moreover, a "green resilience culture" can be fostered in the permeating procedure of green values in campus culture with green incentives and administrative supports (Zhang, 2023).

Thus, green human capital performance can significantly enhance the resilience of HEIs, enabling them to maintain sustained and stable development when facing external shocks from policy, market, and natural sources. Hence, Hypothesis H5 is formulated.

H5: Green human capital performance has a positive impact on HEIs resilience.

Green technological innovation can effectively mitigate environmental risks in campus operations and enhance resilience (Li et al., 2024). The reserve of green technologies developed through industry-academia-research collaboration strengthens adaptability to policy and market shifts (Wu et al., 2024). Incentives such as green policies and financial rewards significantly boost HEIs' willingness to engage in green innovation, accelerating the transformation of innovations into resilience (Hong, 2024). When green innovation permeates curriculum design, research projects and community services, fostering a "green campus" ethos, it further elevates the institution's overall resilience (Sutawaidjaya et al., 2024). Hence, Hypothesis H6 is formulated.

H6: Green innovation has a positive impact on HEIs resilience.

Mediating Role of Employee PEB, Green Human Capital Performance and Green Innovation

Among three key dimensions (environmental resilience, organizational resilience and learning resilience) of HEIs resilience (Gao et al., 2024), numerous scholars have observed that GHRM indirectly enhances environmental resilience. For instance, green recruitment introduces staff with environmental awareness (Jumiati and Toaha, 2025); green training equips all employees with practical skills in energy conservation and waste sorting (Yaqub et al., 2024); while performance assessments incorporate resource utilization rates as key indicators, driving reductions in campus energy consumption (Jumiati and Toaha, 2025). Moreover,

GHRM can indirectly fortify organizational resilience. For instance, it fosters cross-departmental collaboration (such as joint green policy formulation by logistics, teaching, and research units), establishing a unified sustainable governance framework. Green incentives enhance staff identification with organizational objectives, reducing turnover and maintaining continuity of key personnel (Jumiati and Toaha, 2025). Finally, GHRM indirectly fosters learning resilience. Green training and innovation projects stimulate sustainable research and pedagogical innovation among staff and students; green performance evaluations encourage academics to integrate eco-innovation principles into curriculum design, establishing a chain of “green teaching” (Shokry et al., 2024).

Based on the description above, Hypotheses H7-H9 are formulated as follows:

H7: Employee PEB mediates the relationship between GHRM and HEIs resilience.

H8: Green human capital performance mediates the relationship between GHRM and HEIs resilience.

H9: Green innovation mediates the relationship between GHRM and HEIs resilience.

Methods

Conceptual Framework

Based on the literature review, the conceptual framework of GHRM on HEIs Resilience mediated by PEB, Green Human Capital Performance and Green Innovation is as following. While PEB, green human capital performance and green innovation are mediators, GHRM is the independent variable and HEIs resilience is the dependent variable.

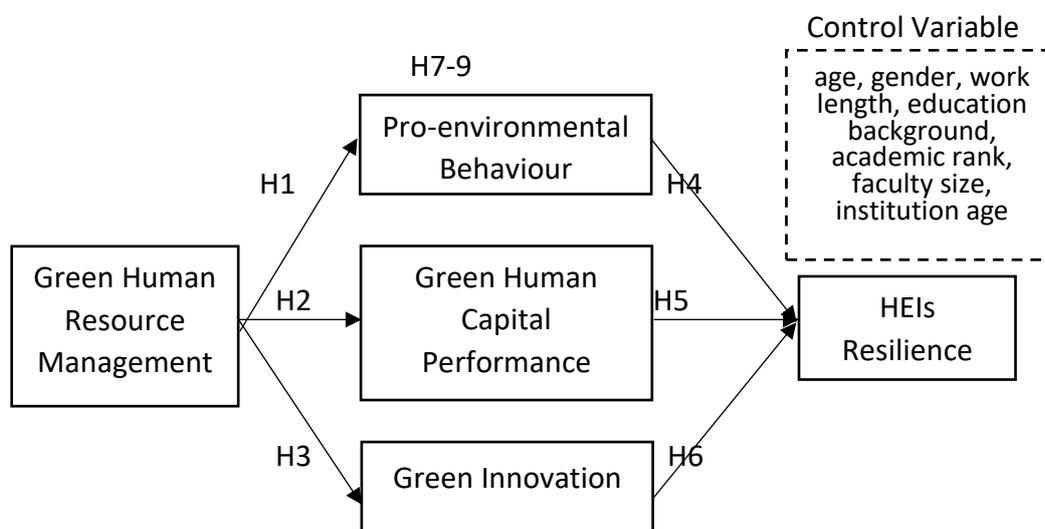


Figure 1. Conceptual Framework

According to AMO Theory, HEIs Resilience is the result of the interaction among three elements — Ability, Motivation and Opportunity. Green training, green recruitment, and green job descriptions can enhance employees' environmental knowledge and technical capabilities, thereby fostering PEB that corresponds to the “Ability”. Green performance assessments, green incentives, and environmental values promotion can strengthen employees' environmental motivation, thereby yielding green human capital performance that corresponds to “Motivation”. Green workflows, channels for environmental project

participation, and resource-sharing platforms provide institutional and resource safeguards for innovation, thereby yielding green innovation that corresponds to “Opportunity”.

Research Design and Scales

In this study, quantitative research method is used through questionnaires for collecting the primary data among faculty in the universities in Jiangxi Province. The reason of choosing Jiangxi among all 34 provincial-level administrative regions. As is designated as a national pilot zone for ecological civilization and a pioneer region for green development, Jiangxi had carried out numerous policies on green finance, green industries, and ecological conservation, providing robust institutional safeguards for HEIs to implement green human resource management. Located in central China, Jiangxi combines industrial and agricultural strengths with abundant natural ecological resources. This enables the study to highlight both the differences and commonalities among various types of HEIs during their green transitions, ensuring the research findings possess strong applicability for broader implementation.

Firstly, a self-designed questionnaire with 7 items on personal information was offered to analyse the demographic profile of respondents. The GHRM was measured by a 6-item scale, adapted from Dumont et al. (2017), with the subject of ‘my company’ changing to ‘my university’. For example, ‘my *company (university)* has set green goals for our employees’, making it more suitable for the distribution environment in HEIs. The PEB was measured by a 7-item scale adopted from Robertson and Baling (2013), which was used to measure employees’ green behaviour in the workplace. Green human capital performance was measured by 5 items adapted from a scale developed by Chen (2008) and revised by Chen and Chang (2012), with the location where the situation described in the question occurs changing from ‘company’ to ‘university’. For example, ‘the productivity and contribution of employees concerning environmental protection in the *company (university)* is better than those of its major competitors’. Green innovation was measured with a 4-items scale adapted from Mankgele (2023). To better align the question descriptions with the HEIs context, the following modifications had been made to the items, with annotations provided in brackets: ‘our *organization (university)* uses less or non-polluting/toxic materials’, ‘our *organization (university)* improves environmentally friendly packaging for existing and new products’, ‘our *organization (university)* recovers end-of-life products and recycling’ and ‘our *organization (university)* uses eco-labelling’. Finally, HEIs resilience was measured with a 5-items scale adopted from Parker and Ameen (2018). All the scales are 5-point Likert scales, in which employees choose the degree of green human resource management they perceive and the values from 1 to 5 represent, in sequence: “Never/Strongly disagree”, “Rarely/Somewhat disagree”, “Sometimes/Neutral”, “Often/Somewhat agree” and “Very frequently/Strongly agree”.

A pre-test on the overall construction was also conducted for testing and revise the questionnaire by sending to experts from two aspects: academicians specialising in human resource management and staff with extensive experience in human resource work within HEIs. In this stage, the overall number of items is quite appropriate, though online questionnaire completion may be rather haphazard, with respondents potentially not taking it seriously. To address this issue and enhance respondents’ engagement and diligence, the homepage features a questionnaire briefing explicitly informing participants that completing

the survey will get a monetary reward. Additionally, a minimum time limit has been imposed on the answering process to prevent respondents from selecting answers without reading.

Research Data

According to Hair Jr et al. (2019), five times the total number of observed variables is the anticipated minimum sample size. As there are 27 observed items in this study, a minimum number of 135 respondents was required. Moreover, based on the calculating result of G*Power 3.1.9.7 software, the total sample size should be 98. Finally, this study selected 135 employees in HEIs in Jiangxi, China as the minimum sample size. To facilitate the distribution, completion and collection of questionnaires, this study employed the on-line platform of WENJUANXING for the survey. Furthermore, to ensure the validity of responses, an invitation to complete the questionnaire and short instructions were included on the questionnaire's opening page. Among 349 collected answers, the number of not completed is 5 and identical answers 8, which were screened out. Thus, 336 surveys were deemed valid and used with the response rate reaching 96.2%).

Table 1

Demographic Profile of Respondents

Characteristics	Category	Frequency	Percent (%)
Gender	male	186	55.357
	female	150	44.643
Age	under 30	45	13.393
	31-35	64	19.048
	36-45	87	25.893
	46-55	88	26.190
	Over 56	52	15.476
	Below 3	37	11.012
Work Length	4-10	74	22.024
	11-20	112	33.333
	21-30	65	19.345
Education Background	Over 31	48	14.286
	undergraduate or below	2	0.595
	master's	32	9.524
	PhD. or postdoctoral researcher	302	89.881
Academic Rank	Assistant	11	3.274
	Lecturer	105	31.250
	Associate professor	111	33.036
	professor	109	32.440
Faculty Size	Less than 500	35	10.417
	500-1500	89	26.488
	More than 1500	212	63.095
University Age	Less than 20 years	59	17.560
	20-50 years	92	27.381
	More than 50 years	185	55.060

SPSS 27 and SmartPLS 4.0 are utilized to analyse the collecting data in this study. The used research techniques include: (1) examining common method variance (CMV) of data by Harman single-factor test; (2) examining indicator loadings and Cronbach's alpha of constructs to assess reliability; (3) examining average variance extracted (AVE) and heterotrait–monotrait ratio (HTMT) value of correlations to assess validity; (4) examining

variance inflation factor (VIF), coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2) to assess collinearity and the model's explanatory and predictive power; (5) using bootstrapping to test the path coefficients of hypotheses in partial least squares structural equation modelling (PLS-SEM).

Findings

Results of CMV

In order to mitigate the potential impact of CMV on the accuracy of research findings, this study implemented procedural controls during questionnaire distribution by emphasizing principles such as anonymity and confidentiality. Besides, the first factor extracted variance, calculated by SPSS, is only 39.851%, meeting the criterion of less than 50% (Podsakoff, 2003). This result suggests that no significant CMV exists in this study, and the data analysis findings are not markedly affected by such variances.

Results of Reliability and Validity Assessment

This study employed SmartPLS 4.0 to analyse the data, examining the reliability and validity of the model to assess whether the questionnaire survey demonstrated consistency and dependability.

According to the results reflected in Table 2, all indicator loadings range from 0.758 to 0.880, meeting the criterion of more than 0.708 (J. F. J. Hair et al., 2021). Moreover, Cronbach's α for each latent variable ranged from 0.861 to 0.907, all exceeding the threshold value of 0.70 (Taber, 2018). These findings indicate that the model employed in this study possesses good reliability.

Meanwhile, as can be seen in Table 3 and Table 4, AVE values ranged from 0.615 to 0.706, all exceeding the threshold value of 0.5 (Hair et al., 2022); the HTMT values for each latent variable were below 0.9 suggested by Henseler et al. (2015). These findings indicate that the model employed in this study possesses satisfactory validity.

Table 2

Reliability and Validity Assessment

Variables	Items	Loading	Cronbach's Alpha (α)	AVE
GHRM	GHRM1	0.817	0.907	0.682
	GHRM2	0.814		
	GHRM3	0.844		
	GHRM4	0.833		
	GHRM5	0.790		
	GHRM6	0.856		
PEB	PEB1	0.834	0.896	0.615
	PEB2	0.792		
	PEB3	0.765		
	PEB4	0.784		
	PEB5	0.776		
	PEB6	0.779		
	PEB7	0.758		
GHC	GHC1	0.790	0.878	0.673
	GHC2	0.826		

	GHC3	0.809		
	GHC4	0.845		
	GHC5	0.831		
	GI1	0.840		
GI	GI2	0.856	0.861	0.706
	GI3	0.782		
	GI4	0.880		
	RS1	0.839		
	RS2	0.774		
RS	RS3	0.834	0.876	0.669
	RS4	0.831		
	RS5	0.811		

Note: GHRM= Green Human Resource Management, PEB = Pro-environmental Behaviour, GHC = Green Human Capital Performance, GI = Green Innovation, RS = HEIs Resilience

Table 3
Heterotrait-Monotrait Ratio (HTMT) (N=336)

	GHC	GHRM	GI	PEB	RS
GHC					
GHRM	0.653				
GI	0.476	0.671			
PEB	0.488	0.646	0.512		
RS	0.564	0.514	0.518	0.484	

Results of Structural Model Assessment

The following results are obtained using SmartPLS 4.0 software. The VIF values of the latent variables range from 1.000 to 1.383, meeting the ideal criterion of ≤ 3 proposed by Hair et al. (2019), that indicates no multicollinearity issues exist among the latent variables in this research model. Meanwhile, the VIF values of all observed variables range from 1.667 to 2.612, which are below 3 as well, indicating no collinearity problem will exist among observed variables in this model.

Besides, among all the endogenous variables, the R^2 for GHC is 0.342, GI 0.353, PEB 0.341, and RS 0.343. All these results exceed 0.33 but below 0.67. According to Chin (1998)'s proposed standard—"0.67 is considered substantial, 0.33 moderate, and 0.19 weak", all variables possess moderate explanatory power. In summary, it can be concluded that the research model presented demonstrates effective explanatory capability.

Additionally, the value of f^2 in this model, displayed in Table 4, consistently exceeds 0.02. According to Cohen (1988), this result indicates that independent variables demonstrate a high degree of explanatory power for dependent variable.

Table 4
The Value of Effect Size (f^2)

	GHC	GI	PEB	RS
GHC				0.117
GHRM	0.519	0.546	0.517	
GI				0.061
PEB				0.038

Furthermore, the Q^2 values of PEB, GHC, GI and RS are 0.330, 0.332, 0.344 and 0.205 respectively. Based on the criteria of “greater than 0” proposed by (Hair et al., 2011), all the exogenous variables had some predictive power for the endogenous variables.

Table 5
The Value of Model Fit

	Saturated model	Estimated model
SRMR	0.044	0.053
d_ULS	0.723	1.058
d_G	0.291	0.294
Chi-square	575.048	570.538
NFI	0.895	0.895

Lastly, the model fit indices are as follows: SRMR (Saturated model) = 0.044, NFI = 0.895 (Saturated model), both of which belong to the acceptable range.

Results of Hypotheses Testing

Bootstrapping method is used to test the path coefficients of hypotheses, with the partial least squares structural equation model displayed in Figure 2. The hypotheses testing results of the model are presented in Table 5.

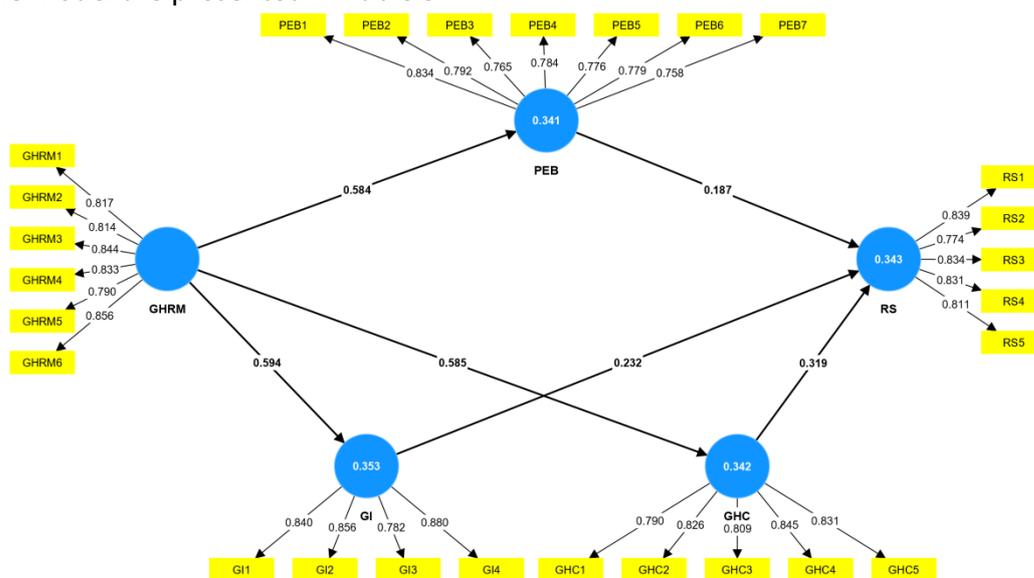


Figure 2. Structural Model

Regarding the path coefficients of direct relations:

H1: The path coefficient from GHRM to PEB is 0.584 ($t=11.794$, $p=0.0$, with a confidence interval (CI) [0.483, 0.677] not containing 0), indicating that GHRM has a significant positive influence on PEB.

H2: The path coefficient from GHRM to GHC is 0.585 ($t=9.716$, $p=0.0$, with a CI [0.465, 0.7] not containing 0), indicating that GHRM has a significant positive influence on GHC.

H3: The path coefficient from GHRM to GI is 0.594 ($t=11.871$, $p=0.0$, with a CI [0.493, 0.69] not containing 0), indicating that GHRM has a significant positive influence on GI.

H4: The path coefficient from PEB to RS was 0.187 ($t=2.536$, $p=0.011$, with a CI [0.047, 0.334] not containing 0), indicating that PEB has a significant positive influence on RS.

H5: The path coefficient from GHC to RS is 0.319 ($t=3.859$, $p=0.0$, with a CI [0.156, 0.483] not containing 0), indicating that GHC has a significant positive influence on RS.

H6: The path coefficient from GI to RS was 0.232 ($t=2.909$, $p=0.004$, with a CI [0.079, 0.393] not containing 0), indicating that GI has a significant positive influence on RS.

Table 6

Path Coefficients

Hypothesis	Path	Path Coefficient (β)	t-value	p-value	95% CI	
H1	GHRM→PEB	0.584	11.794	0.000	0.483	0.677
H2	GHRM→GHC	0.585	9.716	0.000	0.465	0.700
H3	GHRM→GI	0.594	11.871	0.000	0.493	0.690
H4	PEB→RS	0.187	2.536	0.011	0.047	0.334
H5	GHC→RS	0.319	3.859	0.000	0.156	0.483
H6	GI→RS	0.232	2.909	0.004	0.079	0.393
H7	GHRM→PEB→RS	0.109	2.514	0.012	0.027	0.195
H8	GHRM→GHC→RS	0.187	3.522	0.000	0.090	0.297
H9	GHRM→GI→RS	0.138	2.886	0.004	0.045	0.235

Regarding the path coefficients of mediating relations:

For the path 'GHRM→PEB→RS', the mediation effect value was 0.109 ($t=2.514$, $p=0.012$, with a confidence interval [0.027,0.195] not containing zero). For the path 'GHRM→GHC→RS', the mediation effect value is 0.187 ($t=3.522$, $p=0.0$, and the confidence interval [0.09, 0.297] does not contain zero). For the path 'GHRM→GI→RS', the mediation effect value was 0.138 ($t=2.886$, $p=0.004$, with a confidence interval [0.045, 0.235] not containing zero). All these results indicate that PEB, GHC and GI significantly mediates the effect of GHRM on RS.

Discussion and Conclusion

This study explores the influence of GHRM on HEIs resilience with mediators of pro-environmental behaviour, green human capital performance and green innovation. Based on the results calculated, GHRM has a positive effect on HEIs resilience, mediated by pro-environmental behaviour, green human capital performance and green innovation. This finding is consistent with existing researches. For example, PEB is influenced by external factors such as campus facilities and policies, and exerts a positive effect on organizational sustainability (Thondhlana and Hlatshwayo, 2018); GHRM practices such as green training, green recruitment and green incentives significantly can improve green human capital performance by enhancing energy efficiency and waste recovery rates, thereby strengthening the environmental resilience of HEIs (Zahrani, 2024); GHRM influences product and process innovation, thereby indirectly enhancing environmental performance within organizational resilience (Qiu et al., 2025). Through the empirical application of AMO theory, a comprehensive new perspective for promoting the resilience for seeking for sustainable development in HEIs is offered in this study.

In order to improve GHRM in HEIs, an integrated six-module closed-loop system of "Human Resources — Process Management — Education — Rewards — Cross-departmental Collaboration — Faculty Engagement" should be formed, with GHRM occupying the central position:

1. Optimizing GHRM at the institutional level: Incorporate dedicated contents or requirements on GHRM within the regulations or policies on personnel management in HEIs,

specifying operational guidelines for green recruitment, green selection, green training, green performance management, green incentives, etc.; include GHRM objectives in the annual priorities of HEIs leadership to ensure adequate budget and resource allocation; establish a “Green Post” designation and implement a digital paperless application system.

2. Fostering green consensus by strengthen education and training: Launch an online “Green Campus Management” course, inviting environmental experts and corporate GHRM practitioners to deliver case studies, establishing a regular learning platform.

3. Refining incentive mechanisms: Establish certain green innovation fund to provide financial support for staff proposing viable environmental projects; implement a “Green Star” recognition scheme to foster a sense of honour.

4. Fostering cross-departmental collaboration: Establish a green campus management platform in partnership with logistics, infrastructure and research departments to achieve resource sharing, information exchange, and create a unified campus-wide green action network.

5. Establishing a green metrics framework: Embed green checkpoints within recruitment, training, and performance management processes; adopt the AMO framework to translate green competencies, motivation, and opportunities into quantifiable indicators, integrating these into annual performance appraisals.

In conclusion, as a pivotal lever for achieving sustainable development, GHRM do help in improving HEIs resilience when facing risk issues through pro-environmental behaviour, green human capital performance and green innovation. Although bottlenecks such as green recruitment, management support, and performance evaluation still persist, HEIs should advance simultaneously across multiple dimensions of institutional frameworks, performance metrics, training program, incentive structures, and governance mechanisms to establish a GHRM ecosystem, which is institutionalized, routine-based, and involves all members of the organization.

Theoretical Implications

This study enriches the research content of GHRM. As an emerging management concept, the related research of GHRM in China is still in the initial stage compared with that of foreign countries. This study further enriches the research content by combing the relevant literature, selecting faculty members at different levels as the survey object, and exploring the mechanism of the impact of GHRM on HEIs resilience in the context of China.

Meanwhile, this study further explains the factors that will have an impact on HEIs resilience. The implementation of any policy or practice in an organization cannot be separated from the faculty members, whose green behaviours play an important role in promoting the successful implementation of GHRM practices. Using resilience as an outcome variable and introducing relational psychological contract and environmental knowledge as mediating variables, this study explores the role of good relationship between faculty and organization in this process and enriches the research framework of resilience.

Moreover, this study enriches the research framework of AMO theory. The findings reveal that the AMO model has good explanatory power in analysing the factors influencing HEIs resilience as well.

Practical and Social Implications

Firstly, as previous studies on HEIs resilience focus more on campus design, environmental behaviour, this study explores the mechanism of GHRM's influence on HEIs resilience. It is thought to make a contribute on enhancing environmental performance and operational efficiency on campus, and strengthening HEIs' adaptability and resilience within complex and dynamic environments.

Besides, through the research on the mediating role of pro-environmental behaviour, green human capital performance and green innovation, data support and case studies for university management to formulate specific green staffing policies can be provided, thereby avoiding the waste of resources or implementation resistance that may result from ill-considered rollouts.

Furthermore, as cross-disciplinary research on the interplay between GHRM and HEIs resilience remains scarce, particularly lack of empirical evidence demonstrating how green culture enhances HEIs' crisis adaptability. This study fills a gap in the field.

Limitations and Suggestions for Future Research

This study has certain limitations. To be specific, firstly, random sampling may result in findings lacking generalizability; secondly, as the questionnaire was collected online, respondents' answers may not be entirely accurate; thirdly, the dimensions of GHRM were not sufficiently refined, rendering the scope of the research insufficiently targeted.

In the future, researches can be made from following aspects: (1) cross-national comparative study: examine variations in the impact of GHRM on HEI resilience across different institutional environments (e.g., EU, Asia, Latin America), testing the moderating effects of institutional frameworks and regulatory pressures; (2) integration of digital and green HR: explore the application of AI HR and green performance analytics platforms in university crisis management, evaluating their contribution to recovery velocity and resource conservation; (3) longitudinal case tracking: select HEIs during emergencies such as pandemics or natural disasters to track the implementation process and resilience performance of GHRM-related policies, providing empirical evidence of causal chains.

Acknowledgement

My sincere gratitude extends to my supervisor, my families, and all friends who have supported this research. I am profoundly indebted to my supervisor, Professor Shankar Chelliah, for his meticulous guidance. His rigorous scholarly approach and insightful perspectives have been immensely valuable. I am equally grateful to my families for their selfless support; your understanding and encouragement have been the driving force behind my progress. I am grateful to my dear friends for their companionship and inspiration, particularly Cui Wanting for her invaluable assistance with this research. The intellectual exchanges with you all have been immensely enriching. This work is dedicated to all those who have illuminated my academic path.

References

- Abbas, Z., Sarwar, S., Rehman, M. A., Zámečník, R., & Shoaib, M. (2022). Green HRM promotes higher education sustainability: a mediated- moderated analysis. *International Journal of Manpower*, 43(3), 827–843.
- Aboramadan, M. (2022). The effect of green HRM on employee green behaviors in higher education: the mediating mechanism of green work engagement. *International Journal of Organizational Analysis*, 30(1), 7–23.
- Aggarwal, M., Dutta, M., Madaan, V., Pham, L. T., & Lourens, M. (2023). Impact of Green Human Resource Management on Sustainable Performance. *E3S Web of Conferences*, 399, 07005.
- Alanazi, Y. Q., & Yusof, R. B. (2025). Nexus between GHRM Practices and Job Performance through Organizational Culture in Saudi Higher Education Institutions: A Conceptual Paper. *International Journal of Academic Research in Business and Social Sciences*, 15(5), 933–953.
- Andini, S. P., & Harsono, M. (2024). The Effect of Green Intellectual Capital on Environmental Performance with Green Human Resource Management as a Mediating Variable. *International Journal of Economics, Business and Management Research*, 8(11), 277–290.
- Appelbaum, E., Bailey, T., Berg, P., & Kalleberg, A. L. (2000). *Manufacturing advantage: Why high-performance work systems pay off*. Cornell University Press.
- Benevene, P., & Buonomo, I. (2020). Green Human Resource Management: An Evidence-Based Systematic Literature Review. *Sustainability*, 12, 5974.
- Chen, Y. S. (2008). The positive effect of green intellectual capital on competitive advantages of firms. *Journal of Business Ethics*, 77(3), 271–286.
- Chen, Y. S., & Chang, C. H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision*, 50(3), 502–520.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research/Lawrence Erlbaum Associates*, 295(2), 295–336.
- Cohen, J. (1988). *The analysis of variance: Statistical power analysis for the behavioral sciences (2nd ed.)*. Lawrence Erlbaum Associates. <https://doi.org/https://doi.org/10.4324/9780203771587>
- DECART. (2025). *DECART: Designing Higher Education Curricula for Agility, Resilience & Transformation*.
- Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human Resource Management*, 56(4), 613–627.
- Gao, H., Feng, G., Zhang, J., & Zhang, X. (2024). Resilient University Campus : Concept, Framework and Planning Strategies. *Journal of Catastrophology*, 39(3), 117–125.
- Ghazali, E. M., Nguyen, B., Mutum, D. S., & Yap, S. F. (2019). Pro-Environmental Behaviours and Value- Belief-Norm Theory: Assessing Unobserved Heterogeneity of Two Ethnic Groups. *Sustainability*, 11, 1–28.
- Gu, M., Zhang, Y., Li, D., & Huo, B. (2023). The effect of high-involvement human resource management practices on supply chain resilience and operational performance. *Journal of Management Science and Engineering*, 8, 176–190.
- Hair, J. F., Hult, T., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.)* (3rd ed.). Sage.

- Hair, J. F. J., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*. Springer Nature.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–151.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24.
- Hair Jr, J. F., Black William C., Babin Barry J., & Anderson Rolph E. (2019). *Multivariate Data Analysis* (Eighth Edition). Cengage Learning EMEA.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
- Hong, F. (2024). Three-Party Evolutionary Game Analysis of Green Technological Innovation Development under Smart Manufacturing. *Economic Management Journal*, 13(4), 216–224.
- Hong, N. T., Hieu, L. T., Huong, D. T., & Phuong, T. T. M. (2024). Impact of green human resource management on employees' green behavior in hotels. *Heritage and Sustainable Development*, 6(2), 639–656.
- Jia, C., Chen, Q., Huang, J., & Rong, Y. (2024). The Impact of Green Human Resource Management on Green Service Innovation in Hotels —A Moderated Chain Mediation Model. *Journal of Hubei University of Economics*, 22(3), 52–64.
- Jumiati, S., & Toaha, M. (2025). Exploring Green Human Resources Management Implementation in Higher Education Employees: Case Study at Hasanuddin University. In A. Appolloni, F. Caracciolo, Z. Ding, P. Gogas, G. Huang, G. Nartea, T. Ngo, W. Strielkowski, & S. Joshi (Eds.), *Proceedings of the 9th International Conference on Accounting, Management, and Economics 2024 (ICAME 2024), Advances in Economics, Business and Management Research* (pp. 2739–2755). https://doi.org/10.2991/978-94-6463-758-8_222
- Krajhanzl, J. (2010). Environmental and Proenvironmental Behavior. *Sch. Heal. Heal. Educ. Int. Exp.*, 21, 251–274.
- Lastanti, H. S., & Augustine, Y. (2022). The Strength of Good Corporate Governance in Moderating the Effects of Green Intellectual Capital on Green Competitive Advantage and Firm Performance. *Jurnal Akuntansi Trisakti*, 9(1), 85–98.
- Li, C., Zhang, S., & Yang, B. (2024). The impact of ecological civilization construction on the resilience of green technology innovation: evidence based on double dual machine learning. *Frontiers in Environmental Science*, 12.
- Li, Y., & Li, Y. (2025). Enhancing Pro-Environmental Behavior Through Green HRM: Mediating Roles of Green Mindfulness and Knowledge Sharing for Sustainable Outcomes. *Sustainability*, 17(6), 2411.
- Liu, B., & Zhao, F. (2023). Empirical Study of Human Resources Promotion Impact on Corporate Green Development — Based on the Chinese College Enrollment Expansion in 1999. *Journal of Hubei University (Philosophy and Social Society)*, 50(1), 152–162.
- Lubis, Y., Suryani, W., Hernosa, S. P., Lubis, F. R. A., & Nasib, N. (2025). Exploring the Influence of Employee Green Creativity on Green Performance Through Voluntary Green Behavior. *Society*, 13(1), 728–746. <https://doi.org/10.33019/society.v13i1.771>

- Luo, L., & Kim, W. (2025). Decoding Pro-Environmental Behaviors in China through Values and the Theory of Planned Behavior. *Asian Journal for Public Opinion Research*, 13(1), 82–99.
- Malik, M. S., Ali, K., Kausar, N., & Chaudhry, M. A. (2021). Enhancing environmental performance through green HRM and green innovation: Examining the mediating role of green creativity and moderating role of green shared vision. *Pakistan Journal of Commerce and Social Sciences*, 15(2), 265–285.
- Mankgele, K. P. (2023). Green Entrepreneurial Self-efficacy and Environmental Performance of SMEs: Mediating and Moderating Role of Green Innovation and Green Purchase Behaviour. *Global Business and Finance Review*, 28(6), 48–58.
- Montalvo-Falcón, J. V., Sánchez-García, E., Marco-Lajara, B., & Martínez-Falcó, J. (2023). Green human resource management and economic, social and environmental performance: Evidence from the Spanish wine industry. *Heliyon*, 9(10), e20826.
- Mudaliar, D., & Agrawal, A. (2025). Green Human Resource Management: Policies and Practices. *International Journal of Research Publication and Reviews*, 6(4), 16–24.
- Munawar, S., Yousaf, H. Q., Ahmed, M., & Rehman, S. (2022). Effects of green human resource management on green innovation through green human capital, environmental knowledge, and managerial environmental concern. *Journal of Hospitality and Tourism Management*, 52, 141–150.
- Nawangari, L. C., Siswanti, I., Arijant, A., & Wahyu, M. (2025). From Knowledge to Action: Exploring Green Intellectual Capital's Role in Sustainable Organizational Performance for Millennials. *International Review of Management and Marketing*, 15(1), 82–90.
- Parker, H., & Ameen, K. (2018). The role of resilience capabilities in shaping how firms respond to disruptions. *Journal of Business Research*, 88, 535–541.
- Podsakoff, P. M. M. S. B. (2003). Common method biases in behavioral research : a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Pooja, S., & Bhavani, J. (2025). Bibliometric analysis of research trends in Green Human Resource Management and sustainable development. *International Journal of Human Capital in Urban Management*, 10(1), 179–198.
- Prasad, K. D. V., Singh, S., Srinivas, V., Kothari, H., & Shrimali, D. (2025). The Impact of Green Human Resource Management on IT Employees' Environmentally Eco-friendly Performance and Behavior: The Mediating Role of Organizational Commitment. *Qubahan Academic Journal*, 5(1), 229–248. <https://doi.org/10.48161/qaj.v5n1a1069>
- Qiu, X., Bashir, T., Gul, R. F., Sadiq, B., & Naseem, A. (2025). Collaborative Green Initiatives: Integrating Human Resources, Intellectual Capital, and Innovation for Environmental Performance. *Sustainability*, 17, 224.
- Robertson, J. L., & Baling, J. (2013). Greening Organizations through Leaders' Influence on Employees' Pro-Environmental Behaviors. *Journal of Organizational Behavior*, 34, 176–194.
- Robinson, Z. P., & Pedersen, R. L. (2021). How to Repurpose the University: A Resilience Lens on Sustainability Governance. *Frontiers in Sustainability*, 2, 674210.
- Saifulina, N., Carballo-Penela, A., & Ruzo-Sanmartín, E. (2020). Sustainable HRM and Green HRM: The Role of Green HRM in Influencing Employee Pro-environmental Behavior at Work. *Journal of Sustainability Research*, 2(3), e200026.

- Shokry, W. M., Darwish, S. S., & Elshall, S. E. (2024). Human Capital Sustainability Leadership Educational Interventions: A Key for Promoting Nursing Managers' Green management practices and Resilience. *Egyptian Journal of Health Care*, 15(3), 589–604.
- Siburian, N. A., & Sugiarto, A. (2022). Implementasi praktik green human resources management: (Studi Kasus pada Perusahaan Pertambangan). *JURISMA : Jurnal Riset Bisnis & Manajemen*, 12(2), 336–360.
- Sutawaidjaya, A. H., Yusuf, M., & Hamdi, E. (2024). Building Sustainability in Higher Education through Green Management and Innovation: A Case Study of Private Universities in Jakarta. *Journal of Ecohumanism*, 3(6), 1034–1047.
- Syahidun, Zainal, V. R., Siswanti, I., & Nawangsari, L. C. (2024). The Implementation of Green Human Resource Management: A Survey on the Manufacturing Industry in Indonesia. *Journal of Management and Economic Studies*, 6(1), 38–51.
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Thondhlana, G., & Hlatshwayo, T. N. (2018). Pro-Environmental Behaviour in Student Residences at Rhodes University, South Africa. *Sustainability*, 10(8), 2746.
- Tusyanah, T., Pujiati, A., Sakitri, W., Wibowo, S. B., & Ismiyati, I. (2024). Exploring the Role of Personal Norms and Environmental Concerns in Pro-Environmental Behavior: A Value-Belief-Norm Theory Perspective. In K. B. Abiprayu & A. B. Setiawan (Eds.), *Proceedings of the International conference of Economics Business and Economics Education Science (ICE-BEES-24)* (pp. 709–724).
- Vinothkumar, M. (2021). Determinants of Pro-Environmental Behavior by Using the Theory of Planned Behavior in Indian Context. *The International Journal of Indian Psychology*, 9(3), 1000–1016.
- Wang, F., Huang, P., Xi, Y., & King, R. B. (2025). Fostering resilience among university students: the role of teaching and learning environments. *Higher Education*.
- Wang, Z., Cai, S. A., Ren, S., & Singh, S. K. (2023). Green operational performance in a high-tech industry: Role of green HRM and green knowledge. *Journal of Business Research*, 160, 113761.
- Wu, Y., Zeng, S., Shen, M., & Hu, Z. (2024). How Does the Impact of Corporate Emission Reduction Demand Induce Green Innovation at Universities? — From the Perspective of Industry-University Integration. *Journal of Zhejiang University (Humanities and Social Sciences)*, 54(2), 41–59.
- Yang, Z., He, L., & Huang, T. (2024). Powering Pro-Environment Behavior: The Impact of Unlocking Reward Strategy on Pro-Environmental Behavior. *Sustainability*, 16(21), 9561.
- Yaqub, R. M. S., Rehman, H. M. Z. U., Manzoor, S. F., & Daud, M. (2024). FOSTERING SUSTAINABILITY IN VOCATIONAL TRAINING INSTITUTES: THE INTERSECTION OF GREEN HUMAN RESOURCE MANAGEMENT (GHRM) AND GREEN TECHNICAL VOCATIONAL EDUCATION AND TRAINING (GTVET) SKILLS Author). *CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW*, 2(4).
- Yu, W., Chavez, R., Feng, M., Wong, C. Y., & Fynes, B. (2020). Green human resource management and environmental cooperation: An ability-motivation-opportunity and contingency perspective. *International Journal of Production Economics*, 219, 224–235.
- Zahrani, A. A. (2024). The influence of green human resource management on university sustainability in higher education: the role of mediating environmental performance and green commitment. *Peer J*.

- Zhang, Y. (2023). Research on the Construction of “Resilient Campus” in Colleges and Universities —Taking C University as an Example. *Advances in Social Sciences*, 12(6), 3076–3082.
- Zhang, Z., & He, S. (2023). The Practice Path of Green Campus Construction in Colleges and Universities. *Journal of Fujian University of Technology*, 21(2), 186–191.
- Zhu, J., Tang, W., Zhang, B., & Wang, H. (2022). Influence of Environmentally Specific Transformational Leadership on Employees’ Green Innovation Behavior—A Moderated Mediation Model. *Sustainability*, 14, 1828.