Original Research Article

CONFIGURATIONAL INSIGHTS INTO ACHIEVING FUTURE SUSTAINABILITY THROUGH GREEN HUMAN RESOURCE MANAGEMENT PRACTICES

ABSTRACT

This study explores the ways in which green human resource management (GHRM) practices, by encouraging environmentally conscious behavior among staff members, contribute to the attainment of future sustainability in organizations. Engaging employees in green projects and implementing eco-friendly practices have become increasingly important as firms look to gain a competitive edge. The effect of GHRM procedures on workers' opinions of their company's dedication to sustainability and pro-environmental conduct, however, has not received much attention from researchers. In particular, the study focuses at the way three important GHRM elementsgreen recruiting, green training, and green compensationaffect pro-environmental behavior in businesses. Data from 328 employees in the manufacturing and service industries was gathered via online surveys conducted with Google Forms. Sophisticated analytical methods such as fuzzy-set qualitative comparative analysis (fsQCA) and Smart-PLS were employed. The findings emphasize the importance that green hiring, green training, and green pay are to obtaining a competitive edge and attaining sustainability in the future. It has been determined that all three of the GHRM practices are essential to the survival of businesses, especially in light of the growing social and environmental issues. Businesses must incorporate Green HRM (GHRM) principles into their daily operations to create practices and policies that support environmental objectives. Pro-environmental conduct on the part of employees is recognized as a critical means of encouraging staff members to adopt green practices while preserving organizational resources, which in turn makes a substantial contribution to the sustainability of the business. It highlights the value of GHRM as a tool for businesses to advance ecological and societal well-being while accomplishing long-term sustainability objectives.

Key words: Behavior, Configurational, Future Sustainability, Green HRM Practices, Pro-environmental, Sustainability

INTRODUCTION

The need for sustainability will be the primary concern for managers and organizations around the world in the years to come. It is becoming more and more clear that green practiceswhich include recruiting, training and development, and compensationare essential to ensuring the services sector's long-term viability (Ahmad, 2015).The implementation of Green Human Resource Management (HRM) practices is critical in molding the attitudes and behaviors of employees, which in turn shapes the desired environmental performance that is essential for long-term sustainability. Adopting green HRM practices becomes the obvious choice for businesses hoping to secure a sustainable future in the context of intense competition (Luu, 2022). Environmental concerns were traditionally subordinated to economic aims in

organizational hierarchy. But the need for a green environment has become more and more important, particularly in light of the post-industrial revolution and population issues.Adopting green Human Resource Management (HRM) methods emerges as a critical approach for competitive and sustainable business management in both manufacturing and services (He & Zhang 2022). This involves creating a green culture that harmonizes policies, tactics, and employee conduct, so making a substantial contribution to environmental sustainability. Even though research on the relationship between green HRM practices and environmental performance has advanced (Jerónimo et al., 2020), more investigation is still required. It takes careful research to understand the complex relationship that exists between green HRM practices, environmentally conscious behavior, and long-term sustainability. Pro-environmental behavior by employees is essential for reducing adverse effects on the climate and environment, promoting dependability in manufacturing and services for environmental corporate social responsibility (CSR), and guiding businesses toward a sustainable future (Saifulina et al., 2020).

The significant effects that Pro-Environmental Behavior (PEB) among employees has on the environment and organizational sustainability are examined in this study. The body of research on the subject shows that PEB improves an organization's competitiveness, sustainability in the long run, and environmental performance while lowering pollution, energy, and material demands (Piwowar & Kołodziej, 2022). Notably, PEB empowers staff members to promote ecologically conscious practices and promotes a change towards eco-friendly habits. But there is a significant gap in the literature, especially when it comes to the configurational explanation of Green HRM practices and how they contribute to future sustainability through PEB (Saifulina et al., 2023).Prior studies have mostly ignored the manufacturing sector's investigation of green techniques in favor of concentrating on the services sector. The report also emphasizes the importance of sustainabilitywhich is sometimes undervaluedas a competitive advantage for businesses. This research intends to improve business success by illuminating how Green HRM practices encourage people to participate in eco-friendly activities through PEB, highlighting the critical significance of social and environmental elements (Ahmad, 2015). The report provides useful guidance to businesses seeking a competitive edge through socially and ecologically conscious objectives, protecting the environment from deterioration and promoting sustainability in the future.

This study uses a dual-method approach, examining the complex relationship between green HRM practices, pro-environmental behavior, and future sustainability through the use of partial least squares structural equation modeling (PLS-SEM) and fuzzy-set qualitative comparative analysis (fsQCA) (Abbasi et al., 2022). The principal objective is to develop a theoretical framework that investigates the causes of employees' pro-environmental behavior and the way it affects the sustainability of the firm (Ansari. The paper highlights the importance of green HRM practices and explores the theoretical underpinnings, research methods, findings, and implications and limitations before drawing to a close.

The existing research recognizes the importance of pro-environmental behavior (Saifulina, 2020) and green HRM practices (Khurshid, 2016), but it does not fully integrate these variables for a comprehensive understanding. The relationship between implementing green HRM practices and sustainability in the future has been studied (Sohaira Ahmad, 2015), however it has not been thoroughly examined how pro-environmental behavior, sustainability in the future, and green HRM practices interact. By highlighting the necessity of staff participation in

eco-friendly initiatives to ensure long-term sustainability and a competitive advantage, this study fills in these gaps. Future studies should examine different organizational aspects and investigate green HRM practices in industries where they have not yet been implemented. Through the mediating effect of pro-environmental behavior, this study creatively examines the configurational function of green HRM practices in attaining future sustainability and establishing a competitive edge. This study offers a fresh viewpoint by examining the relationship between green HRM practices and pro-environmental behavior and future sustainability. Previous research has recognized the importance of green HRM practices and sustainability justification (Khurshid, 2016). Organizations are concentrating more on greening their operations for sustainability in the current period of rapid development (Aykan, 2017). Businesses are now actively participating in the green movement due to environmental consciousness, highlighting the critical role that HRM plays, particularly when it comes to sustainability and green HRM practices. Pro-environmental behavior has a mediating effect that enhances the impact of green HRM, which serves as a fundamental component of sustainability. Although pro-environmental behavior has been acknowledged as important (Saifulina, 2020), not enough research has been done on how it might help firms become sustainable in the future. The study highlights how pro-environmental behavior, green HRM practices, and staff understanding all work together to sustain sustainability and give businesses a significant competitive advantage, as sustainability becomes an increasingly important concern for businesses (Khurshid, 2016).

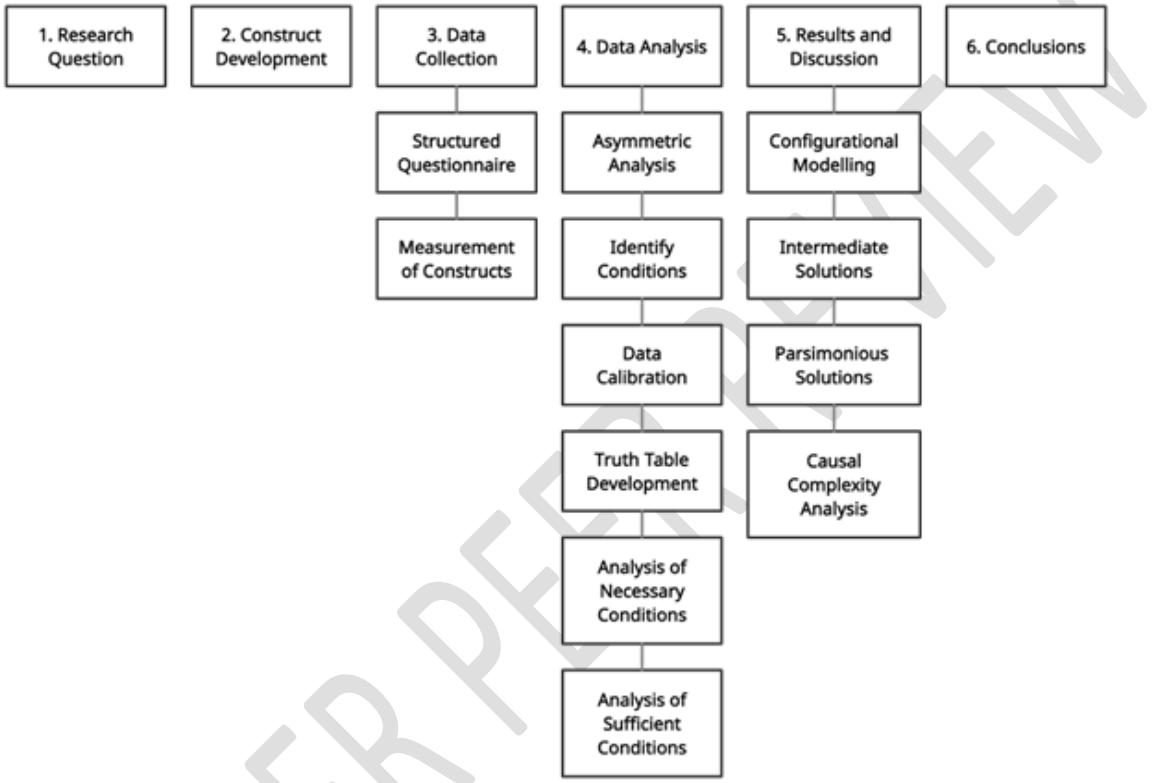
This research covers an empty spot in the literature by investigating how green HRM practices might provide future sustainability with a competitive advantage (Khurshid, 2016). It investigates how these policies affect workers' environmental behavior, with a focus on eco-friendly employment, training, and remuneration. The study emphasizes how important green human resource management is to developing a green workforce and corporate culture. While pro-environmental behavior has been acknowledged as important in previous studies, its mediating function in the relationship between Green HRM practices and future sustainability has not received as much attention. In order to ensure a sustainable future, businesses must comprehend this synergy. This research explores the services industry's targeted investigation of green HRM practices and environmentally conscious behavior. These procedures, which are based on environmentally friendly HR initiatives, increase productivity, decrease expenses, and improve efficiency. Their conclusion gives the organization a competitive edge and guarantees sustainability. These procedures are essential for encouraging environmentally conscious behavior, cutting expenses, and developing a culture of environmental welfare in the services sector. The benefits that follow include waste reduction, brand activism, and the promotion of green products; they also strengthen consumer trust and increase employee involvement (Khurshid, 2016; Saifulina, 2020; Ahmad, 2015; Aykan, 2017).

METHODOLOGY

RESEARCH APPROACH

The intermediary effect of pro-environmental behavior on green HRM practices and future sustainability in the manufacturing and services sectors was examined in a well-researched study. Consequently, we used a quantitative research methodology. The study's data was then subjected to both symmetric (SEM-PLS) and asymmetric (fsQCA) analysis.

Figure 1 depicts the study's order of events.



Unit of Analysis: The part of the paper which describes the characteristics of the study, is the most crucial in any research project. As it differs from person to person, group to group, nation to nation, post to post, organization to organization, and many other factors, the research covers a variety of topics. This study examines how pro-environmental behavior acts as a mediator to promote future sustainability through the design of green recruiting, green training, and green compensation. Data for this study is gathered from workers in Pakistan's manufacturing and service industries, including managers, executives, and other staff members spanning a range of age groups. In order to investigate how GH, GT, and GC affect FS through PEB, we gathered information from each and every employer.

Population and Sample size: A convenient and non-probabilistic sampling strategy is used in this investigation. There are 328 replies in the sample size. Data was gathered online from the manufacturing and services sectors using a Google Form. It provided a detailed explanation of

all the conditions and ensured the respondents' total anonymity. To make the questionnaire easy for responders to complete, it was quite straightforward and uncomplicated. Employee responses from a variety of service industries, including restaurants, hospitals, and other manufacturing sectors, are included in this questionnaire. Male respondents had the biggest percentage (65.7%), while female respondents made up 34.3%. The respondents' model age group is 25–34 years old (46.5%). The percentage of respondents who were staff members was greater (45%). The sample was selected in such a manner to give equal representation to each class and group. Unbiased selection of the sample is the pre-requisite to any reliable research; therefore, it was maintained genuinely. The remaining information is represented in Table 1

Table 1: Profile of respondents and summary statistics

Factors	**Scaling**	**Frequency**	**Percentage**
N		328	100 %
Age	18-24	36	11 %
	25-34	152	46.5 %
	35-44	59	18 %
	45-54	54	16.5 %
	55-64	59	8 %
Gender	Male	215	65.7 %
	Female	112	34.3 %
Position	Executive	60	18.5 %
	Director	39	12 %
	Manager	80	24.5 %
	Staff	147	45 %
Work experience	< 1 year	45	14 %
	1-3 Years	72	22 %
	4-6 Years	45	13.8 %
	7-10 Years	73	22.4 %
	> 10 years	58	17.8 %

Sampling Technique: We used Google Forms to gather data online. Sampling's primary goal is to gather information from the broader public so that their responses can be examined. Online data collection has the advantages of being paperless, time- and money-efficient, and environmentally benign. The method is a practical sampling methodology. This study employed this method to make it simple for me to get data from the industrial and services industries. Since it saves money and time, this method is mostly employed in research. This study aims to demonstrate how pro-environmental behavior (PEB) acts as a mediating factor in the future sustainability of GH, GT, and GC, based on data obtained from a sample community.

Measurements of Items: This study used a modified version of Jennifer Tosti-Kharas's (2016) methodology to evaluate the sustainability of organizations in the future. It featured inquiries such as, "My company believes that good environmental practices will contribute to its long-

term success" as well as "A good reputation for environmental responsibility helps attract and retain quality employees." A 5-point Likert scale was used to score the responses (1 being strongly disagreed and 5 being strongly agreed). To assess green hiring, green training, and green compensation, the study also included the methodologies of H.A. Masri (2017) and Jabbour (2011). On a 5-point Likert scale, workers assessed the following statements about green human resource management practices: "The organization clarifies green HRM practices and values," "Offers rewards for environmental achievements (e.g., sabbatical leave, gifts, bonuses, cash, premiums, promotion)." Finally, to investigate the mediating role of pro-environmental behavior, the study employed Pascal Paille's (2013) technique. The 5-point Likert scale was used to score the following questions: "I voluntarily carry out environmental actions at work" and "I undertake environmental actions that positively contribute to my organization's image." This all-encompassing method offered insights into how to incorporate sustainable practices into organizational plans.

Table 2: Measurement Items of Constructs

Item	Code	Description	References
Green Hiring	GH1	Organization actively support Green HRM practices	((H.A. Masri), 2017), (Jabbour, 2011)
	GH2	Organization clarifies information and values of Green HRM practices	
	GH3	Jobs positions designed to focus exclusively on Green HRM practices of the organizations	
	GH4	Selecting applicants who are sufficiently aware of greening to fill job vacancies	
Green Training	GT 1	Provide training on Green HRM practices to the organizational members to increase environmental awareness	((H.A. Masri), 2017), (Jabbour, 2011)
	GT2	Employees know their specific green targets, goals, and responsibilities	
	GT3	Following Induction programs that emphasize environmental issues concerns and Green HRM practices	
	GT4	Environmental and Green HRM training is continuous	
Green Compensation	GC1	The company offers a non-monetary and monetary rewards based on the environmental and Green HRM practices achievements (sabbatical, leave, gifts bonuses, cash, premiums, promotion)	((H.A. Masri), 2017), (Jabbour, 2011)
	GC2	Environmental performance and Green HRM practices are recognized publicly (awards, dinner, and publicity)	
	GC3	Individual incentives or reward programs that encourage environmental behavior.	
	GC4	Team incentives or reward programs that encourage environmental behavior.	
Future	FS1	My company believes that good environmental	(Jennifer

Sustainability of Organization		practices can save it money.	Tosti-Kharas, 2016)
	FS2	My company believes that good environmental practices will contribute to its success in the long run.	
	FS3	My company believes that a good reputation responsible for environmental practices helps attract and retain good employees.	
	FS4	It is very important for businesses to learn how to make products or provide services in ways that do not harm the environment.	
Pro-environmental behavior	PEB1	In my work, I weigh my actions before doing something that could affect the environment.	(Pascal.Paille, 2013)
	PEB2	I voluntarily carry out environmental actions and initiatives in my daily activities at work.	
	PEB3	I undertake environmental actions that contribute positively to my organization's image.	

Research Procedure: The employees in both the service and manufacturing industries are the subjects of a convenience sampling technique. In order to protect and respect the privacy of the sample population that we specified on the Google Forms, we took care to obtain their personal consent before collecting any data. Following that, we filled out the paperwork with the participants and gave them the research rules and purpose. The survey form asked questions on the participants' name, gender, age, position, and job experience, among other things. About 30 to 40 days were needed to gather the data. The approach, design, analytic unit, time frame, population, sample size, demographics, sampling technique, questionnaire formulation, and measurement scales for variables are all included in the methodology chapter of a research study. Research questions and proposed relationships between variables are also included.

RESULTS

In this study, two methodologies were employed to analyze data and validate the hypothesis: fuzzy-set Qualitative Comparative Analysis (fsQCA) and Partial Least Squares Structural Equation Modeling (PLS-SEM). The fsQCA method was selected for its ability to represent variables on a continuous spectrum, providing a more nuanced analysis compared to traditional binary measures (Kraus, 2018). PLS-SEM was utilized for its sophisticated analysis capabilities, particularly in assessing latent constructs within route models (Wong, 2013).

Asymmetric Analysis

PLS-SEM facilitated the symmetric modeling of the study. This approach was pivotal in measuring latent variables to address research questions. Smart PLS 3.0 software enabled the assessment of symmetrical outcomes. Statistical significance of loadings and path coefficients was determined using a bootstrap method, a non-parametric resampling technique to estimate PLS model parameters (Wong, 2013). Hypotheses received support if the measurement model

demonstrated adequate reliability, convergent and discriminant validity, and statistically significant values for structural routes.

Measurement Model

PLS-SEM's two-step modeling approach was employed for evaluating measurement and structural models (Wong, 2013). Confirmatory Factor Analysis (CFA) examined the measurement model's convergent validity, internal consistency reliability, and discriminant validity (Joe F. Hair, 2012).

Reliability and Validity Constructs

The study ensured validity by assessing the dependability of indicators. Values for individual indicator dependability exceeded the acceptable threshold of 0.4 or approximated 0.7 (Wong, 2013). Internal consistent dependability was estimated using Cronbach's alpha, with threshold values of 0.7 and above. Additionally, composite reliability (thresholds value 0.5 and above) and Average Variance Extracted (AVE) (thresholds value 0.5 and above) statistics for each construct were evaluated for convergent validity (Joe F. Hair, 2012). Table 3 demonstrates that CV is enough since the AVE values are more than 0.5 (Joe F. Hair, 2012). A correlation exists between two variables when the value of one exceeds 0.5.

Table 3: Assessment of Construct Reliability and Validity for Latent Constructs Related to Sustainability and Environmental Behavior

Latent constructs	**Items**	**Factor Loadings**	**α**	**rho_A**	**CR**	**AVE**	**VIF**
Future Sustainability (FS)	FS1 FS2 FS3 FS4	0.895 0.923 0.895 0.882	0.921	0.922	0.944	0.808	1.157 1.884 2.858 2.815
Green Hiring (GH)	GH1 GH2 GH3 GH4	0.822 0.880 0.876 0.825	0.873	0.877	0.913	0.724	2.233 1.688 1.608 2.199
Green Compensation (GC)	GC1 GC2 GC3 GC4	0.850 0.925 0.932 0.931	0.930	0.931	0.951	0.828	2.253 1.980 1.708 1.857
Green Training (GT)	GT1 GT2 GT3 GT4	0.865 0.907 0.866 0.926	0.913	0.915	0.939	0.794	2.545 2.466 2.704 2.879
Pro-environmental Behavior (PEB)	PEB1 PEB2	0.887 0.948	0.874	0.921	0.915	0.733	1.051 1.706

	PEB3	0.906					1.087
	PEB4	0.650					1.459

Note: alpha, CR, AVE, VIF stands for Cronbach's Alpha, composite reliability, average variance, and variance inflation factors respectively.

Discriminant Validity

To evaluate discriminant validity, we look at the square root of the Average Variance Extracted (AVE) for each latent variable in Table 3. For validation, AVE values need to be higher than 0.7. The square root of AVE in Table 4 is more than 0.7, indicating discriminant validity (Bookstein, Nov. 1982). According to Wong (2013), multicollinearity arises when there are significant and associated interactions between variables. To evaluate it, Variance Inflation Factors (VIF) are employed. Higher VIF values imply stronger correlations, therefore if the VIF is greater than 5, it suggests an issue (Wong, 2013).

Table 4: Discriminant Validity Among Future Sustainability and Green HRM Variables

Variables	**FS**	**GH**	**GC**	**GT**	**PEB**
FS	**0.899**				
GH	0.636	**0.851**			
GC	0.637	0.836	**0.910**		
GT	0.643	0.823	0.855	**0.891**	
PEB	0.766	0.654	0.702	0.686	**0.856**

Note: FS, GH, GC, GT & PEB stands for Future sustainability, Green Hiring, Green Compensation, Green Training and Pro-Environmental Behavior

Table 5: Collinearity Assessment of Latent Constructs (VIF)

Latent Constructs	**Items**	**VIF**
Future Sustainability (FS)	FS1	1.157
	FS2	1.884
	FS3	2.858
	FS4	2.815
Green Hiring (GH)	GH1	2.233
	GH2	1.688
	GH3	1.608
	GH4	2.199
Green Compensation (GC)	GC1	2.253
	GC2	1.980
	GC3	1.708
	GC4	1.857
Green Training (GT)	GT1	2.545
	GT2	2.466
	GT3	2.704

	GT4	2.879
Pro-environmental Behavior (PEB)	PEB1 PEB2 PEB3 PEB4	1.051 1.706 1.087 1.459

STRUCTURE MODEL

To test for significance, we employ bootstrapping with 5,000 samples, yielding beta and t-values. With a range of 0 to 1, R-squared indicates how effectively a variable predicts an outcome (0.75 being strong, 0.50 being moderate, and 0.25 being weak Bookstein, Nov. 1982). Pro-environmental conduct has an R-squared of 0.525 and future sustainability of 0.622, showing moderate predictive strength. R-squared values above 0 are shown in Table 6 and Figure 2, indicating strong model support.

Table 6. Predictive power of constructs on future sustainability and pro-environmental behavior

Constructs	R square	R square adjusted
Future Sustainability	0.622	0.617
Pro-environmental Behavior	0.525	0.520

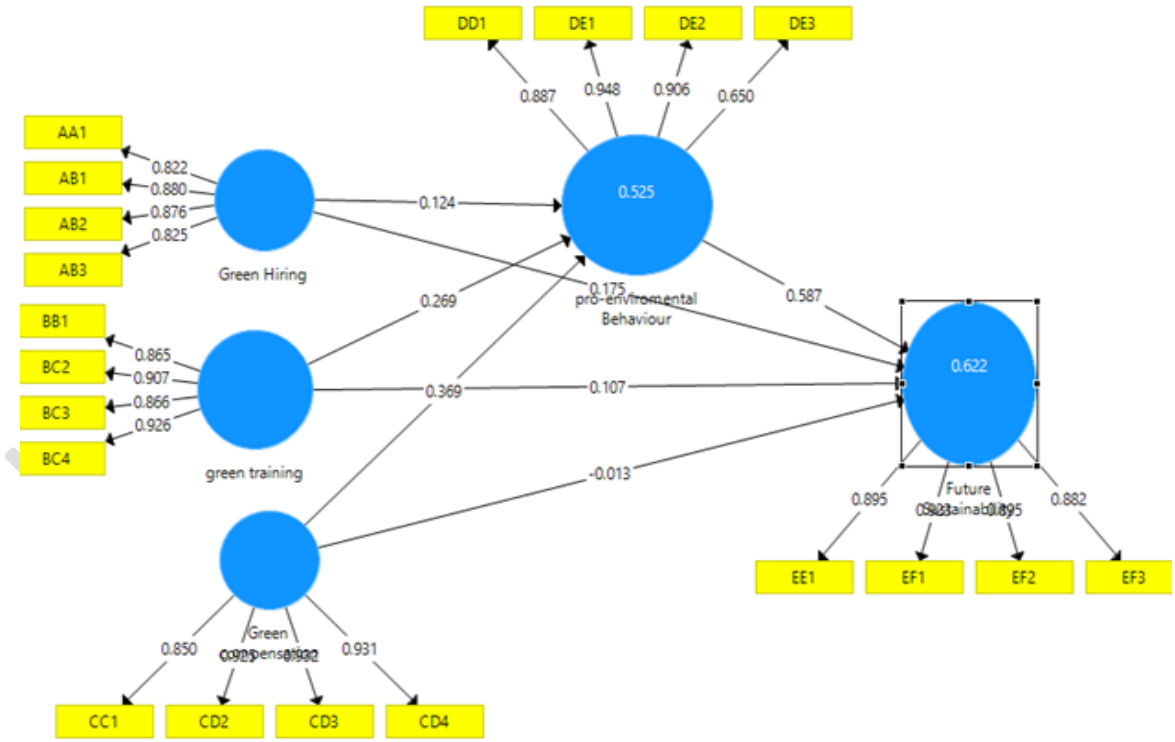


Figure 2: Structural PLS model

Hypothesis Testing:

The findings ensure hypothesis H1a, showing that Green Hiring (GH) has a positive impact on Future Sustainability with a beta coefficient (β) of 0.175, a t-value of 2.571, and a p-value of 0.010. Green Hiring can have a direct impact on FS without Pro-Environmental Behavior (PEB), but Green Compensation and Green Training cannot. Green Compensation (GC) has a β of -0.013, a t-value of 0.154, and a p-value of 0.878, while Green Training (GT) has a β of 0.107, a t-value of 1.208, and a p-value of 0.228. These results do not support the H1c and H1b hypotheses. Furthermore, PEB mediates the association between Green Hiring, Green Training, Green Compensation, and FS, as demonstrated by hypotheses H2a, H2b, and H2c. This suggests that Pro-Environmental Behavior has a mediating role in the impact of Green HRM practices on Future Sustainability.

Table 7 Summary of Hypothesis Testing Results for Relationship Effects:

Hypothesis	**Relationship**	**Beta ()**	**Mean**	**SD**	**T-values**	**P-values**	**Results**
Total Effects							
H1 a	GH→FS	0.175	0.177	0.068	2.571	0.010	Supported
	GH →PEB	0.124	0.298	0.076	3.894	0.020	Supported
H1 c	GC → FS	-0.013	-0.016	0.087	0.154	0.878	Rejected
	GC → PEB	0.369	0.369	0.085	4.336	0.000	Supported
H1 b	GT →FS	0.107	0.111	0.089	1.208	0.228	Rejected
	GT→PEB	0.269	0.269	0.079	3.407	0.001	Supported
	PEB→FS	0.587	0.583	0.056	10.411	0.000	Supported
Specific Indirect Effects							
H2c	GC→PEB→FS	0.217	0.214	0.050	4.365	0.000	Supported
H2b	GT→PEB→FS	0.158	0.157	0.050	3.136	0.000	Supported
H2a	GH→PEB→FS	0.073	0.194	0.057	3.472	0.000	Supported

Note: SD stands foe standard deviation, p value less 0.05 indicates significance

Asymmetric Analysis:

This study uses fsQCA, a technique for determining the way various variables affect a result. Because it bases its determination of whether a condition is sufficient or necessary on its influence on the result, fsQCA is useful in managing intricate interactions between variables and conditions. When more than one condition influences the result, it can handle multi-causal outcomes. In contrast to Smart PLS, fsQCA integrates qualitative and quantitative methods while taking into account several circumstances at once. Because fsQCA can handle real-life complexity, it is therefore preferred for assessing hypothetical outcomes in domains like management.

Four processes are involved in FsQCA: (1) case and causal condition identification; (2) condition calibration; (3) truth table development; and (4) truth table reduction to produce non-contradictory but distinct solutions. Coverage (the percentage of cases with a sufficient path) and consistency (the extent of condition membership in a configuration) are important metrics in fsQCA. Green Hiring (GH), Green Training (GT), Green Compensation (GC), Pro-Environmental Behavior (PEB), and the outcome Future Sustainability of the company (FS) are among the conditions included in this study. Setting thresholds for complete membership (1), complete non-membership (0), and crossover (0.5) is part of the calibration process. PEB is the most significant because it has the lowest deviation and the highest mean value.Results are presented in truth tables and include parsimonious, complex, and intermediate solutions. Coverage and consistency are key indicators for evaluating conditions' impact on the outcome.

Table 8: Summary of Variables and Calibration Thresholds for Future Sustainability Analysis

Conditions	**FS**	**GH**	**GT**	**GC**	**PEB**
Mean	4.0	3.6	3.4	3.4	4.1
SD	0.8	1.0	1.1	1.2	0.9
Minimum	1.0	1.0	1.0	1.0	1.0
Maximum	5.0	5.0	5.0	5.0	5.0
Calibration					
0.9	3.6	3.2	3.1	3.0	3.7
0.5	2.0	1.8	1.7	1.7	2.1
0.1	0.4	0.4	0.3	0.3	0.4

Note: Calibration thresholds: [full member = 0.9, non-member = 0.1, and cross over = 0.5]

Note: FS= Future Sustainability; GH= Green Hiring; GT= Green Training; GC= Green Compensation; PEB= Pro-Environmental Behavior.

Analysis of Necessary Conditions:

Table 9summarizes necessary conditions for FS and its absence (~FS). PEB is identified as the most important necessary condition for FS, while ~GC is crucial for preventing the absence of FS. Organizations need to invest in PEB to support FS and avoid neglecting new employees' ~GC to prevent ~FS.

Table 9: Consistency and Coverage of Conditions for Future Sustainability (FS) and its Absence (~FS

Outcome variable					
FS			**~FS**		
Conditions	**Consistency**	**Coverage**	**Conditions**	**Consistency**	**Coverage**

GH	0.894888	0.980174	GH	0.856848	0.144348
~GH	0.218799	0.908571	~GH	0.882313	0.563517
GT	0.856886	0.983477	GT	0.842395	0.148706
~GT	0.258283	0.914200	~GT	0.906401	0.493444
GC	0.837515	0.986534	GC	0.794219	0.143890
~GC	0.273208	0.896181	~GC	0.925671	0.467014
PEB	**0.971737**	0.958847	PEB	0.874054	0.132651
~PEB	0.120991	0.861991	~PEB	0.728836	0.798642

Note: FS= Future Sustainability; GH= Green Hiring; GT= Green Training; GC= Green Compensation; PEB= Pro-Environmental Behavior. ~ denotes absence of the condition.

This study examines the sufficient conditions for achieving future sustainability. Table 10 presents these conditions, and the presence of multiple conditions suggests equifinality, indicating various paths to attain sustainability. The study employs Ragin's method to identify these conditions, generating a truth table of all possible combinations. Table 10 displays intermediate solutions with cutoff values, and parsimonious solutions are proposed. These solutions adhere to specific consistency and coverage thresholds: >0.25 for coverage, ≥0.75 for solution consistency, and >0.80 for configuration consistency.

Table 10: Sufficient configurations predicting future sustainability

Intermediate solution (FS) **Model: FS = f (PEB, GC, GT, GH)**					**Intermediate solution (~FS)** **Model: ~FS = f (PEB, GC, GT, GH)**	
	Configurations				**Configurations**	
	1	2	3	4	1	2
PEB	●	●			⊗	⊗
GT	●		⊗	●	⊗	●
GH		●	⊗	●	⊗	●
GC			⊗	●	⊗	●
Consistency	0.991076	0.990158	0.911366	0.993204	0.876298	0.823814
Raw coverage	0.846406	0.883879	0.177411	0.789034	0.638678	0.585684
Unique	0.0236053	0.0534562	0.0185245	0.00677472	0.123193	0.0701997

coverage						
solution coverage: 0.9367					solution coverage: 0.708878	
Solution consistency: 0.969435					solution consistency: 0.820064	

For future sustainability (FS), the configurations with the highest raw coverage and consistency (>0.8) are PEBGH, PEBGT, and GCGTGH. PEB is essential in all these solutions, indicating its mediating role in achieving sustainability. In Figure 3, two logical deductions emerge: the absence of green training, hiring, and compensation negatively affects the outcome (~GC~GT~GH = 0.177411). However, (~PEBGCGTGH = 0.585684) and (GCGT*GH = 0.789034) indicate that some respondents believe in achieving the outcome even without PEB, provided they have GH, GT, and GC. PEB significantly influences the outcome when combined with other variables.

Table 11. presents result for intermediate and parsimonious solutions for FS, emphasizing PEB's importance.

Intermediate solution (FS) **Model: FS = f (PEB, GC, GT, GH)**			
frequency cutoff: 1 **consistency cutoff: 0.895184**			
Causal Configuration	Raw Cov.	Unic. Cov.	Cons.
PEB*GT	0.846406	0.0236053	0.991076
PEB*GH	0.883879	0.0534562	0.990158
~GC*~GT*~GH	0.177411	0.0185245	0.911366
GC*GT*GH	0.789034	0.00677472	0.993204
solution coverage: 0.9367			
solution consistency: 0.969435			
Parsimonious solution (FS) **Model: FS = f (PEB, GC, GT, GH)**			
frequency cutoff: 1			

consistency cutoff: 0.895184			

For the absence of the outcome (~FS), Figure 3 reveals that GH, GT, GC, and PEB are vital conditions, while negation of PEB (~PEB) should be avoided. PEB's importance is evident in both FS and ~FS configurations.

Table 12 Displays results for intermediate and parsimonious solutions for ~FS, highlighting PEB's central role.

Intermediate solution (~FS)			
Model: ~FS = f (PEB, GC, GT, GH)			
frequency cutoff: 1			
consistency cutoff: 0.823814			
Causal Configuration	Raw Cov.	Unic. Cov.	Cons.
~PEB*~GC*~GT*~GH	0.638678	0.123193	0.876298
~PEB*GC*GT*GH	0.585684	0.0701997	0.823814
solution coverage: 0.708878			
solution consistency: 0.820064			

Parsimonious solution (~FS)			
Model: ~FS = f (PEB, GC, GT, GH)			
frequency cutoff: 1			
consistency cutoff: 0.823814			
~PEB	0.728836	0.728836	0.798642
solution coverage: 0.728836			
solution consistency: 0.798642			

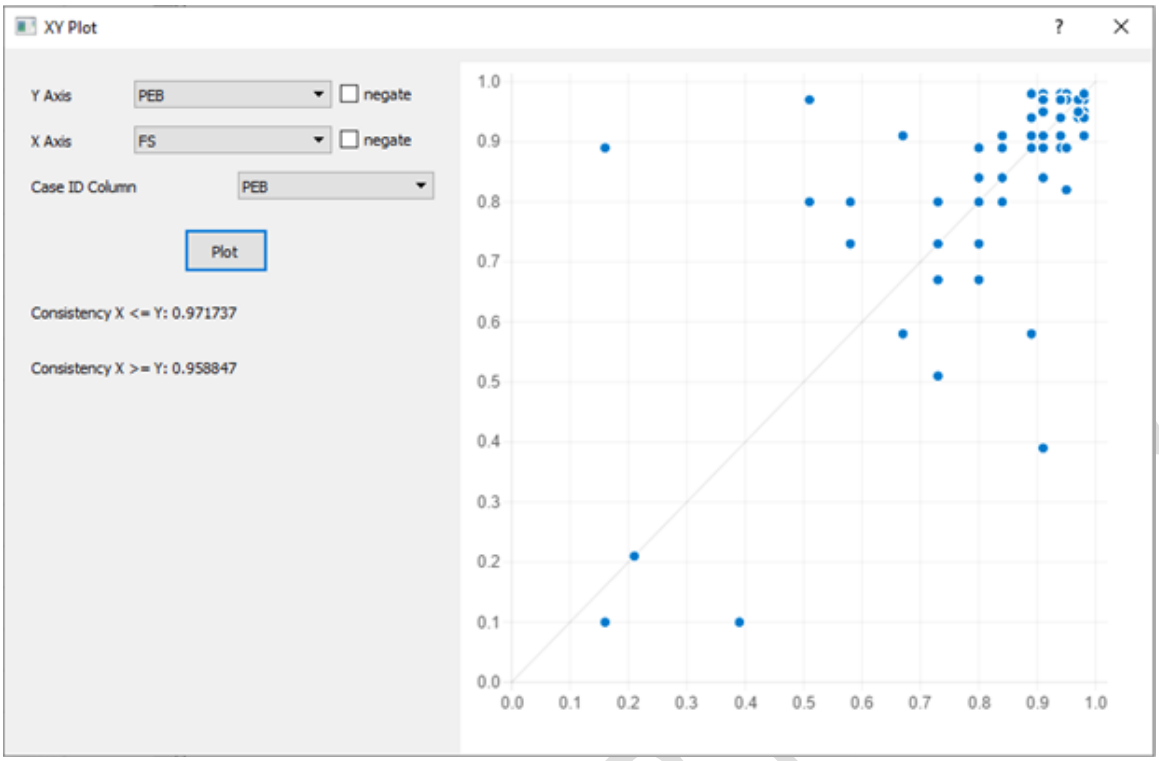


Figure 3. illustrates a plot of PEB against FS, showing consistency above 0.9 and coverage exceeding 0.8.

In summary, the study demonstrates a solution coverage of 0.9367 and solution consistency of 0.969435, indicating equifinality in achieving sustainability. Coverage reflects configuration importance and the proportion of full memberships, analogous to the square of the R value in correlational methods. Set theory confirms the reliability of the configurations, suggesting that employee intention to achieve a sustainable future is justified by six configurations, all exhibiting high consistency and coverage (>0.8 and >0.25, respectively).

DISCUSSIONS

The findings of this study have important significance for academics and groups working to promote a future that is more environmentally sustainable. We concentrate on the implementation of green HRM (Human Resource Management) methods, which include green hiring, green training, green remuneration, and pro-environmental actions by personnel (Fawehinmi et al., 2020). These methods present a viable substitute for conventional HRM techniques. Our research looks on the relationship between an individual's environmental behavior and the sustainability of an organization, as well as the usefulness of HRM policies in attaining this sustainability. We assess the combined effect of individual and group factorssuch as pro-environmental conduct, green recruiting, green training, and green compensationon a firm's long-term viability (Ansari et al., 2021). This new approach may enhance companies' long-term viability while progressively replacing traditional human resource management

practices that could be environmentally harmful. In addition, our study uses the non-symmetrical (fsQCA) approach to examine several elements in terms of their configurations, equifinality, complexity, and causal relationships while keeping the intended result in mind (Prentice et al., 2017).

Green HRM practices and future sustainability

The findings of this study shown that all the necessary factors are in place for both the attainment of future sustainability (FS) and its lack (~FS). Pro-environmental behavior, or PEB, stands out as the most important requirement among the configurations (Baba et al., 2023). PEB influences how staff members view their company's dedication to sustainability and green initiatives. As a result, companies get two benefits: first, they actively participate in green employment procedures by selecting staff members who exhibit pro-environmental behavior (Jerónimo, 2020). Second, because these workers embrace the company's commitment to sustainability and green practices, the organization's long-term viability is strengthened (Jerónimo, 2020). Therefore, our analysis recommends that companies give top priority to hiring workers who exhibit pro-environmental behavior, teach current employees, and compensate all workers who follow green practices. This strategy gives the company a competitive edge in addition to ensuring its long-term viability. The study we conducted highlights the critical impact that employees' pro-environmental conduct plays in an organization's future sustainability, which is consistent with the idea that employees' perceptions matter more than the actual actions of the organization (Jennifer Tosti-Kharas, 2016). Moreover, green employment positively affects future sustainability, although green compensation and green training have no such effect, according to our symmetrical study of PLS-SEM.

Pro-Environmental behavior as a mediator

In **Table 13** In addition to working as a common variable, we find that PEB works well in conjunction with GH (green hiring), GT (green training), and GC (green compensation). Moreover, Table 14 shows that whether GH, GT, and GC are present or not, the lack of PEB always results in the absence of FS. Actually, an organization's future sustainability is more significantly impacted by the lack of PEB (cons = 0.798642).

People under the age of 34 make up the majority of our sample population (54% of the responses). This implies that younger generations are more likely to engage in pro-environmental activities and to care about sustainability, which makes sense given the era's pervasive emphasis on these issues (Wallis et al., 2021). However, in order to assist future sustainability and become more proficient in green behaviors, elderly people might need some training (Jerónimo, 2020). Organizations could offer incentives in the form of compensation to encourage staff members to adopt environmentally friendly habits and contribute to sustainability in the future. Furthermore, the majority of participants in our research (65%) are men, suggesting that many firms continue to employ a workforce that is mostly male and has fewer female employees. Nonetheless, prior

research suggests that women are typically more environmentally conscious and dedicated to sustainable behaviors, which makes them important contributors to sustainability in the future (Jerónimo, 2020). Our PLS-SEM results lead us to the conclusion that future sustainability and green HRM practices are mediated by pro-environmental behavior.

Limitations and Future directions

The present study is subject to specific limitations, including a sample that is influenced towards males over females, difficulties in obtaining data due to participants' reluctance to share, and a preponderance of staff members. To better understand their effects on financial sustainability, future studies should examine other organizational characteristics such as employee performance, innovation, workgroup dynamics, and environmental certifications (Amui et al., 2017). It would be beneficial to look at the implementation of green HRM practices in industries where they have not yet been adopted or to analyze their impact in companies with varying sustainability goals (Pham et al., 2019). These paths can improve our comprehension of organizational sustainability activities in general.

CONCLUSION

In conclusion, this study emphasizes how important green practices are for encouraging environmentally conscious behavior and ensuring the long-term viability of organizations. Results from our wide-ranging sample of 139 respondents highlight the role that pro-environmental behavior has in promoting the adoption of green practices. This study provides useful advice, highlighting the need for careful selection of environmentally conscious candidates, thorough training for current employees, and incentives for green involvement. To ensure a sustainable future and promote an environmentally conscious culture, these tactics are ultimately crucial for organizations. The study adds to the field of pro-environmental behavior, green practices, and future sustainability despite its acknowledged limits, and further research is needed in this area. To sum up, firms that want to ensure a sustainable future must incorporate green HRM practices.

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