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Impact of Green HRM on Institutional Performances: A Perspective of Higher Education of Institutions of India

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Abstract: The goal of this research is to assess the relationship among the initiatives of Green Human Resource Management (GHRM) in the Universities in India. The initiatives of GHRM in Green HRM practices in the higher education sector have garnered the attention of researchers and academicians worldwide. However, there is still a need to examine and investigate the relationship between GHRM initiatives and organizational performance (in Higher Education Institutions), which is underexplored. Therefore, this study aims to bridge this gap by providing empirical evidence on assessing the Green HRM initiatives and environmental performance of higher education institutions in Chennai, India. With 22 recognized and registered universities in Chennai, a survey-based questionnaire was distributed among 10 universities using a simple random sampling technique. PLS-SEM was employed in this study to analyze data from 270 responses collected from employees of the selected universities. Furthermore, this study found that the implementation of GHRM initiatives has a positive relationship with the environmental performance of higher education institutions. Taking the ability-motivation-opportunity theory into consideration, the present study makes a valuable contribution to the existing literature through a conceptual framework and empirical evidence that tests the relationship between GHRM initiatives and the environmental performance of higher education institutions.

Keywords: Green Human Resource Management; Organizational Culture; Ability-Motivation-Opportunity Theory; Environmental Performances; Organizational Performances.

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1. Introduction

For incorporating green culture and enhancing environmental performance (EP) of the organization, practices of GHRM (Green Human Resource Management), such as "green selection and hiring, green training and development, and green performance management," were required to be adopted by the firms [1]. To accelerate their sustainability practices, organizations need to have the right people in the right place by selecting and hiring personnel with environmental consciousness, relevant skills, and

expertise. Furthermore, firms can enhance the skills and knowledge of their employees by providing opportunities for training and development, which in turn lead to the effective and efficient incorporation of green activities. Lather and Goyal [2] suggested that green training has a positive impact on the environmental performance of organizations, as it helps firms achieve their predetermined green objectives by rewarding employees based on their commitment to the organization's environmental activities [3].

By implementing green performance measures, firms provide compensation to employees to promote greater environmental sustainability. To investigate GHRM practices, many studies have employed the "ability-motivation opportunity theory" [4]. For instance, the ability-motivation-opportunity (AMO) theory is used by Pinzone et al. [5] to gain insights into the practices of GHRM. According to Appelbaum [6], "The AMO theory posits that human resource management (HRM) practices, such as training, performance management and employee involvement, enhance individuals' abilities, motivation and opportunities, thereby contributing to organizational performance". Subsequently, the relationship between Green HRM (GHRM) initiatives and the Environmental Performance (EP) of the organization is mediated by management support and the organization's green culture. The present study recommends that the ability-motivation-opportunity theory can be a significant tool for firms seeking to enhance their environmental performance by understanding the dimensions that influence employees' green behavior, through which organizations can develop GHRM initiatives, ultimately leading to positive environmental outcomes [7].

Fang et al. [8] suggested that investigating green initiatives of employees may be underexplored, with no consideration of green organizational culture. Studies on GHRM have shown that the relationship between green culture and the environmental performance of organizations remains unexplored [10]; [4]. In terms of environmental management, several studies have emphasized the importance of a green organizational culture [11]. However, Jackson et al. [10] suggested that there is a lack of understanding of the relationship between green organizational culture and environmental performance. Daily and Huang [12], Perez et al. [13], and Wei et al. [14] suggested that management support is regarded as a valuable asset for consistent improvement in environmental activities and is identified as the key factor in enhancing the environmental performance of the organizations. According to Yong et al. [15], GHRM has been investigated in various sectors, including the manufacturing industry and multinational firms [16]. However, there is a notable gap in the application of GHRM to achieve sustainability in higher education institutions [17]. This study emphasizes that behavior is a crucial consideration in promoting environmental sustainability in higher education institutions [9]. However, some IAN universities play a crucial role in promoting.

The existing environmental performance conditions in India are quite distinct and complex due to the limited adoption of green initiatives [18]. Only a few investigations have been undertaken to study GHRM initiatives and their effectiveness on the environmental performance of the Indian service sector [19]; [20]. There are very limited studies examining the significant role of GHRM and green cultivation on the environmental performance of firms [21]. However, the scarce literature in this field of study emphasizes the need for further investigation to analyze the relationship between Green HRM initiatives and an organization's environmental performance. Moreover, investigating the impact of GHRM initiatives on the environmental performance of higher education institutions (a Service Industry) is crucial, as it addresses the difficulties encountered by firms in gaining and retaining volunteers and employees with high performance abilities [22]. Anwar et al. [23] and Chankseliani and McCowan [24] claimed that there is an immediate requirement for growing universities to align their operations with environmental sustainability.

Although there are few studies on GHRM in higher education institutions in the Indian context, the findings of this study help predict the role of employees' green behavior, both voluntary and otherwise. Furthermore, the study highlights the mediating effect of "green work engagement" on the relationship between GHRM initiatives and the environmental performance of higher education institutions. Considering this research gap, this study examines GHRM initiatives in Indian higher education institutions, specifically in recruiting, performance monitoring, and rewarding employees for environmental consciousness. The study insists that "educational institutions have a greater potential and response in promoting waste management, utilization of eco-friendly resources, and enhancing green culture among employees and students". In addition, the faculty of higher education institutions play a vital role in divulging and enhancing environmental responsibility, along with subject knowledge, in the minds of students.

2. Review of Literature

2.1. The Theory of AMO

GHRM is viewed as a significant source of gaining a competitive advantage and is considered a successful approach for promoting environmental sustainability [25]. GHRM may promote environmental norms and values by emphasising sustainability through employee participation [28]. Research on general human resource management (GHRM) has focused on the strategic management viewpoint, emphasising how economic issues impact resource allocation decisions [26]; [27]. However, a tendency to use a behavioural approach began to take shape, with researchers examining "how GHRM affects

employees' abilities, motivations and opportunities." Psychological theories that contribute to a fuller understanding of this connection include the theory of planned behaviour and social cognitive theory [29]; [30]. These theories provide insightful information about the dynamic mechanisms via which GHRM influences employee attitudes and behaviours. However, being the most widely used theoretical framework in GHRM research, the ability-motivation-opportunity model has become more well-known [31]; [32]. The ability, motivation, and opportunity theory combines the three primary components of GHRM. The three criteria were not examined in some earlier research; therefore, significant discrepancies exist across these studies [33]; [34].

Ability, motivation, and opportunity are the three integrated characteristics that are used to measure GHRM practices from the perspective of AMO theory. These elements must be considered in tandem since focusing on just one of them would result in erroneous assessments of how they affect workers' participation in environmental projects and activities [35]. The AMO framework was created by Appelbaum [6]. It can be used to describe HRM methods that enhance employees' competence, motivation to perform their job, and engagement in opportunities that improve organisational performance. According to AMO theory, human resources (HR) and special practices are grouped to generate high-performance work practices. These practices are integrated depending on factors such as ability, motivation, and opportunity [6]. Ability refers to the information and training that people need to perform their jobs, based on a series of procedures that include hiring, training, and development plans. Employee motivation increases their efforts to meet performance goals through financial and non-financial incentives, as well as performance reviews.

Lastly, opportunity is described as a collection of behaviours such as participation, information exchange, and actions that improve autonomy. All of these techniques enhance employee engagement in various jobs and activities. Green training is one way to increase staff capacity; in certain cases, it can be more effective than innate green competence [36]. Training plays a part in raising employee commitment levels, even if it cannot guarantee motivation and involvement in environmental concerns [37]; [38]. For skilled workers, performance reviews and encouragement are seen as motivational techniques [39]. Greener [40] identifies two components of the AMO model: organisational culture and the role of front-line managers in implementing HR policy. Workplace culture has a significant impact on potential and ability due to the assumptions, conventions, and beliefs that shape employees' conduct. It may also have a big impact on how well individuals learn and grow [40]. In addition, if the corporate culture encourages learning and information exchange, skills and capacities will organically improve. Additionally, developing individual abilities by fostering team cohesiveness and performance through peer learning. According to Arulrajah and Opatha [41], the ability-motivation-opportunity hypothesis may contribute to the final performance of GHRM.

2.2. GHRM, Green Culture, and Performance of Organisation Towards Environment

The departments of Human Resource Management provide a valuable contribution to creating a green culture by implementing HRM functions, such as GHRM, which encourages sustainable development by enhancing employee engagement and actions. Organisational cultures are shaped by a variety of elements, including HRM departments [42]. The hiring, training, assessment, and incentive methods used by this department shape the norms, beliefs, and behaviours of its workforce [43]. "To facilitate organisational transformation and achieve sustainable development, the HR department creates HR practices that are crucial for improving employee behaviour" [44]. To empower managers and staff, HR departments should also support environmental themes and initiatives through training, workshops, and performance reviews [4]. Organisational sustainability culture development is thought to depend heavily on GHRM [45]. According to Harmon et al. [46], HR departments make a significant contribution in helping organisations build a green culture. GHRM practices are crucial for workers in any company attempting to foster a green culture, as they shape the impact of their behavior on the environment [47]. Through training, GHRM promotes the culture [28]. Following this conversation, the following hypothesis is proposed:

- **H1:** The organization's green culture is positively impacted by GHRM practices.

2.3. GHRM and Organizational Performance on Environment

According to Ansari et al. [48] and Mandip [43], GHRM is a subset of HRM that emphasizes environmentally friendly actions, policies, and initiatives. It is developed using a variety of sources, including green management policies and procedures [49]; [50]. According to Wagner [50], attaining employee participation is essential for attaining EP, and achieving sustainable development depends on effective HRM. Organisational and performance development are significantly impacted by the GHRM bundle, which encompasses procedures such as hiring, training, and remuneration. The GHRM bundle also creates GHRM [51]. Nevertheless, some businesses may find it expensive to adopt GHRM practices, and it might not be easy to develop a reward system that is inclusive of all employees. Haddock-Millar et al. [37] state that the primary driver of environmental performance improvement is greening efforts. Understanding green HR practices might help organisations perform better environmentally [52]. Researchers have studied the connection between GHRM approaches and environmental performance in higher education. Gilal et al. [53] examined the effects of GHRM in higher education to investigate this connection. Their

research shows that when an employee has strong green values, the adoption of GHRM practices has a good impact on EP. In a similar vein, Oppong and Agyemang [54] emphasized the importance of disseminating GHRM principles and raising awareness to achieve environmental sustainability. When considered collectively, these studies contribute to our understanding of the relationship between GHRM and environmental performance in academic settings, underscoring the importance of implementing sustainable practices to achieve favorable environmental outcomes [55]. Therefore, the second hypothesis follows from this discussion:

- **H2:** Environmental Performance is favourably impacted by GHRM practices.

The study supports the claim that environmental performance (EP) is positively influenced by a green culture. The relationship between environmental performance and green culture has received relatively little attention in studies [56]. The term "green culture" in an organisation refers to the common values, attitudes, customs, and societal preconceptions that workers hold regarding environmental management [57]. Employers may increase their EP by integrating green efforts into their statements of mission and involving their workforce. An organization's GHRM strategy can alter worker participation to promote a green culture, fostering long-term, sustainable growth. According to Schlegelmilch et al. [58], a green culture inside an organisation serves as a strategic lens to improve environmental performance and is crucial to raising the calibre of environmental management. A recent study discovered that the relationship between GHRM and environmental performance is significantly influenced by a green culture, as evaluated by message credibility, leader focus, peer engagement, and employee empowerment [59].

Proactive, eco-oriented activities are typically implemented by organisations with a green culture, resulting in improved environmental performance. Scholars have examined a range of mediators between GHRM and EP, including green workplace behaviour and green culture and innovation [60]. The application of GHRM methods fosters the development of green culture enablers and enhances environmental performance [61]. If organizations value green activities and practices, they may use their culture to promote GHRM and green practices. Additionally, they aim to enhance the positive effects of their work on the environment while minimizing the negative ones. To support the environmental performance of an organization, a green culture values green projects and activities, promoting employment, training, assessment, appraisal, and environmentally friendly incentive programs [42]. Based on these factors, the following hypothesis is generated:

- **H3:** The relationship between environmental performance and GHRM activities is mediated by green organizational culture.

2.4. Green HRM, MS, and Performance of Organisation Towards Environment

Environmental practices encompass a range of actions designed to enhance environmental management and minimize the environmental impact of operations. These procedures enhance an organization's environmental performance [62]. Moreover, GHRM can boost managerial support. Employee commitment to the environment increases when they perceive that a company values the environment, and GHRM plays a key role in fostering this commitment. With senior management's backing, GHRM may become a key component of the HR strategy [63]. Through workshops, human resources may support managers in gaining behavioural competencies and soft skills related to cooperation, diversity, teamwork, and change management [64]. Environmental training, support from upper management, employee empowerment, cooperation, and rewards are essential HRM practices that facilitate environmental management [12]. Organisations must have the support of top management to accomplish their objectives and enhance environmental management procedures. There is a clear correlation between the environmental performance of an organisation and the dedication of its senior management.

Support from top management is essential for allocating resources and making informed decisions, which is crucial for creating successful green projects. Environmental practices adapt more readily when senior management is very committed to environmental problems [65]. The dedication of managers to these concerns determines the effectiveness of green practices. According to Savely et al. [66], "encouraging environmental awareness and pro-environmental behaviours among staff members requires the commitment and support of senior management". Social identity theory has been applied in earlier studies to explain the connection between GHRM practices and pro-environmental conduct among staff members in higher education [67]. Through environmental initiatives, top management can convey the green message to employees, increasing attention to environmental preservation and playing a vital role in fostering internal awareness. The adoption of a green culture is facilitated by the existence of environmental legislation and a dedication to green goals [68]. With the backing and dedication of upper management, staff members become more ecologically aware and participate in eco-friendly activities. The final hypothesis was derived from an empirical investigation that supported this and identified managerial support as a mediating component.

- **H4:** The relationship between environmental performance and GHRM activities is moderated by management support.

3. Methods

3.1. Sample and Collection of Data

Ten accredited and registered institutions in Tamil Nadu were selected using a simple random sample approach, and their active GHRM practice implementation was examined. The population of universities in Chennai, included in the Indian University Rankings 2023, was also a source of data for the study. Universities were selected based on their demonstrated commitment to environmental awareness, as evidenced by the implementation of several environmental initiatives [69]. The study population comprises ten Indian institutions located in Chennai, Tamil Nadu, that are actively implementing green initiatives. HR managers, as well as teaching and non-teaching faculty (administrative personnel), were given a survey-style questionnaire via online and offline means. Administrative staff members were also included because they frequently participate in environmental initiatives and have the power to affect the campus's environmental performance. Top and middle managers were also included since they are essential in promoting green practices. Both in-person and online techniques were used to survey HR managers, workers, and administrative personnel. English versions of the surveys were provided. Administrative staff members were also included because they frequently participate in environmental initiatives and have the power to influence campus environmental policy (EP). Additionally, top and middle managers were included, as they play a crucial role in promoting green practices.

For this study, a sample size of 270 participants is required, comprising administrative staff, instructional staff, and HR managers. The survey, which inquired about the existence of green practices and invited participation in the study, was distributed via email and conducted during field visits. The data collection period, which targeted HR managers and workers as well as other managers and staff from institutions in Tamil Nadu, India, ran from December 2023 to mid-March 2024. It was done both online and by manual distribution. The data for this study were collected using several methods. First, the survey was distributed, and the study's goal was explained over the phone to the pertinent universities. Emails containing the online survey and a cover note emphasizing the confidentiality of the information were sent. All institutions received a reminder email emphasising the importance of their participation three weeks after the poll was distributed. Only thirty-three surveys were received, despite these attempts. As a result, the researchers made in-person visits to each university to complete the survey with the intended respondents. Following four months, 316 questionnaires were received; 23 of them were completed online, and the remaining ones were filled out in person with the respondents. All 270 surveys, except for 46 replies, had complete data.

3.2. Measures

The items on the measurement scale for the constructs included in this investigation were modified from earlier research. According to Renwick et al. [35], “GHRM practices are conceived of in this study as a bundle of integrated and interconnected green HR practices that have an impact on environmental performance”. This bundle is a collection of HR procedures that are complementary to one another and internally consistent. It is believed that incorporating these practices has a direct and significant impact on an organization's overall performance and competitive advantage [70]. Additionally, the construct of management support included five items adopted from Savely et al. [66], while the building of green culture included five items taken from Wang [55]. According to Zhu et al. [70] environmental performance can be described as an organization's ability to minimize air emissions and discharges, limit the use of hazardous and toxic products, and reduce the frequency of environmental events. Two items from Zhu et al. [70] and four questions adapted from Yong et al. [71] were used to measure environmental performance. A Likert-type scale, with 1 denoting an extremely low extent and 5 denoting a very high extent, was used to measure the items [72]. The Likert scale is seen to function more like an interval scale since it is symmetric and equidistant. The questionnaire was sufficiently clear and had all the required questions for every part. Table 2 provides an overview of the measuring items employed in this empirical investigation.

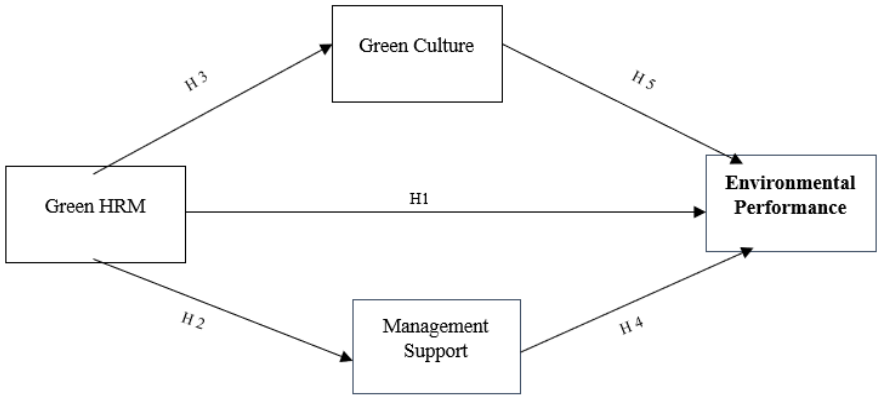
3.3. Statistical Strategy

To assess the assumptions in this work, structural equation modeling (SEM) with the partial least squares (PLS) approach is the primary statistical technique employed. Because it can handle multidimensional constructs, this approach's selection is preferred [73]. PLS-SEM was implemented using the SmartPLS 3.9.2 program [74]. An incremental PLSSEM technique was employed to assess the increased explanatory power of the following factors and account for the effect of preceding variables on changes in R^2. In contrast to other covariance-based methods, PLS-SEM does not impose restrictions on the interaction strategies employed in moderation testing. PLS-SEM enables the assessment of sophisticated models with effect chains, including mediation and other intricate relationships. According to Hair et al. [75], “another benefit of PLS-SEM is its capacity to deal with both reflective and formative assessment models. Additionally, it requires fewer data points than other techniques”. With these benefits in mind, PLS was deemed the most suitable approach for assessing the proposed research paradigm in this investigation. The assessment process consisted of two steps: first, the measuring model was examined for the relevance and dependability of the first-order constructs, as demonstrated by earlier studies. The measurement model assesses the association

between each latent variable and its corresponding indicators to determine the validity, internal consistency, and reliability of each variable. In the second stage, the structural model was examined before the hypotheses were formulated. A crucial part of assessing structural models is analysing construct links, predictive usefulness, and the strength and calibre of the model's structure.

3.4. Conceptual Framework

The Figure 1 illustrates how Green HRM influences Environmental Performance directly and indirectly through the mediating roles of Green Culture and Management Support. This structured model visually represents the hypothesized relationships (H1–H5) within organizational sustainability practices.



Source: *Adopted Model*

Figure 1: Conceptual framework of the study

4. Findings of the Study

4.1. Respondents' Demographic Characteristics

A total of 350 questionnaires were issued and returned by HR managers, other department managers, and administrative personnel at ten institutions in Chennai, India, to gather data for the study. Over 89% of participants are employed by large institutions with more than 230 staff members. Over 25% of the staff members has a master's degree, while over 20% have a bachelor's degree. 32.59% in total with 10 years of expertise. Seventy percent of staff members believe that environmental management, such as ISO 14001, is integrated into business operations at their institutions. The following Table 1 displays the respondents' demographic information.

Table 1: Participants' characteristics

Measure	Item	Frequency(N = 270)	Percentage
Gender	Male	157	58.15
	Female	113	41.85
Age	20 years and below	012	04.44
	20 to 30 years	054	20.00
	31 to 40 years	106	39.25
	41 to 50 years	067	24.81
	Above 50 years	031	11.50
Income	Below 15,000	032	11.85
	16,000 to 30,000	058	21.48
	31,000 to 45,000	076	28.15
	46,000 to 60,000	061	22.59
	Above 60,000	043	15.93
Education	Diploma	043	15.93
	Under Graduate	056	20.74
	Post Graduate	074	27.40

	Doctorate	058	21.48
	Others	039	14.45
Experience	Below 5 years	068	25.19
	5 to 10 years	114	42.22
	Above 10 years	088	32.59
Designation	HR Officials	035	12.96
	Teaching Faculty	098	36.30
	Non-Teaching Faculty	081	30.00
	Admin Employee	056	20.74
Frequency of green management incorporation	Fully Incorporated	191	70.75
	Partially Incorporated	077	28.51
	Prefer not to say	002	00.74

4.2. Common Bias Method

Several statistical tests were run to guarantee the data's validity and representativeness. To compare responders and non-respondents based on their current position and company size, a t-test was first performed. The findings suggested that the respondents accurately reflected the initial sample, as no significant differences ($p > 0.05$) were found between these groups. Following the methodology suggested by Fornell and Larcker [77], an evaluation of non-response bias was conducted by comparing early responders (first-invite respondents, 44%) with later respondents (reminder-invite respondents, 56%). The means of all the variables for these two groups were compared using a one-way ANOVA, and the results showed no significant differences, suggesting non-response bias was not an issue. Using Harman's single-factor test, common technique bias was investigated. For this test, unrotated exploratory factor analysis was used for every variable. The factor analysis findings showed that no one factor could explain more than a quarter of the variation (<24.56%). According to this result, common method bias is not a major problem in the current investigation, which is consistent with the methodology suggested by Podsakoff et al. [76].

4.3. Assessment of the Measurement Model

In line with prior research, which has established that a coefficient alpha of 0.70 or above is sufficient and that a coefficient alpha of 0.60 or above is acceptable in exploratory studies, the pilot study's results demonstrated that the questionnaire was acceptable and internally consistent, with Cronbach's alpha values ranging from 0.892 to 0.940. Tests such as factor loadings, composite reliability (CR), and average variance extracted (AVE) are used in convergent validity analyses to determine how well items measuring a single concept agree. Composite reliability values between 0.70 and 0.95 are regarded as "satisfactory to good," and a loading item has to be more than 0.70. A CR value of more than 0.95 indicates that the items may be duplicated, which is undesirable. To satisfy the validity requirements, the AVE must be greater than 0.50 [75]. The measuring model is shown in Figure 2. Table 2 illustrates the strong convergent validity of the study's results, which exceeded the threshold values with composite reliability ranging from 0.918 to 0.939 and AVE ranging from 0.709 to 0.771.

Table 2: Factor loadings, average variance extracted (AVE), reliability (Cronbach's alpha), and composite reliability (CR)

Items	Loadings	Cronbach's alpha	CR	AVE
Green HRM	.829	.918	.937	.749
Green HRM 1	.868			
Green HRM 2	.879			
Green HRM 3	.899			
Green HRM 4	.871			
Green HRM 5	.877			
Green HRM 6	.861			
Green Culture	.878	.919	.939	.730
Green Culture 1	.841			
Green Culture 2	.869			
Green Culture 3	.850			
Green Culture 4	.821			
Green Culture 5	.872			
Environmental Performance	.931	.939	.941	.771
Environmental Performance 1	.898			
Environmental Performance 2	.908			

Environmental Performance 3 Environmental Performance 4	.871 .821			
MS Management Support 1 Management Support 2 Management Support 3 Management Support 4 Management Support 5	0.848 0.867 0.881 0.850 0.854 0.766	.920	.943	.709

Note: *(GHRM – Green HRM practices, GC – Green Culture, MS – Management Support, EP – Environmental Performance).*

Levene's test was employed to determine whether the variance was homogeneous. Following that, the respondents were split up into a couple of categories: "48 people for the HR replies and 303 people for the non-HR responses". The results indicated that all variable variances were nearly equal. In the two-tailed test, there were no significant differences between respondents who identified as HR and those who did not. The descriptive statistics and correlations between the research constructs are shown in Table 3. There are notable and favourable relationships between the variables, according to the data.

Table 3: Descriptive statistics, correlations, and the square root of AVE in the diagonal

Variables	Mean	SD	GHRM	GC	MS	EP
GHRM	3.011	0.731	0.716			
GC	3.409	0.791	0.729**	0.848		
MS	3.271	0.832	0.806**	0.836**	0.844	
EP	3.639	0.848	0.669**	0.656**	0.648**	0.872

In addition, the model meets the Fornell–Larcker criterion as the square root of the AVE is greater than the correlation values between the constructs [77]. In fact, there are strong correlations across the constructs, which makes sense given the current model, as the majority of latent variables reflect aspects of organizational culture as well as human behaviour. These robust correlations can be explained by the fact that the latent variables are evaluated by people working for the same company and are conceptualized at the organizational level. However, when assessing the latent variable measurement model to derive factor scores as the primary goal, conducting a confirmatory factor analysis within the framework of PLS-SEM may prove advantageous. Using Jamovi 2.3.28 and the method described by Hair et al. [72] to assess the discriminant validity, the model's standardized root mean square residual (SRMR) value is 0.0476, which is less than 0.05. This implies a good fit of the model. There is no discernible link between the exogenous components, as shown by the HTMT ratios in Table 4, which are all below the limiting requirement of 0.9.

Table 4: HTMT measurement

Variables	GC	MS	EP
GC	-		
MS	0.828	-	
EP	0.709	0.741	_

This demonstrates that the discriminant factors are valid. "The variance inflation factor (VIF) measure was used in this study to evaluate the multicollinearity of the data [75]. The lack of multicollinearity in the data is indicated by the VIF values and the fact that all VIF values for the elements remain below the suggested threshold of 3".

4.4. Structural Model Assessment

The structural model has been analyzed, as indicated in Figure 2, to examine the relationship between the study's factors. However, "the structural model of this study was evaluated in the context of PLS-SEM analysis using the assessment criteria, significance and magnitude of path coefficients and coefficients of determination (R2) were taken into consideration". When it came to endogenous concept evaluation, R2 values of 0.75, 0.50, and 0.25, respectively, were classified as considerable, moderate, and weak. The combined impacts of the GHRM, management support, and green culture of the organisation on environmental performance were found to have an estimated R2 value of 0.547, which is considered moderate according to the PLS methodology. This suggests that the GHRM package may explain 54.3% of the variation in environmental performance among Indian institutions in conjunction with green culture and managerial support.

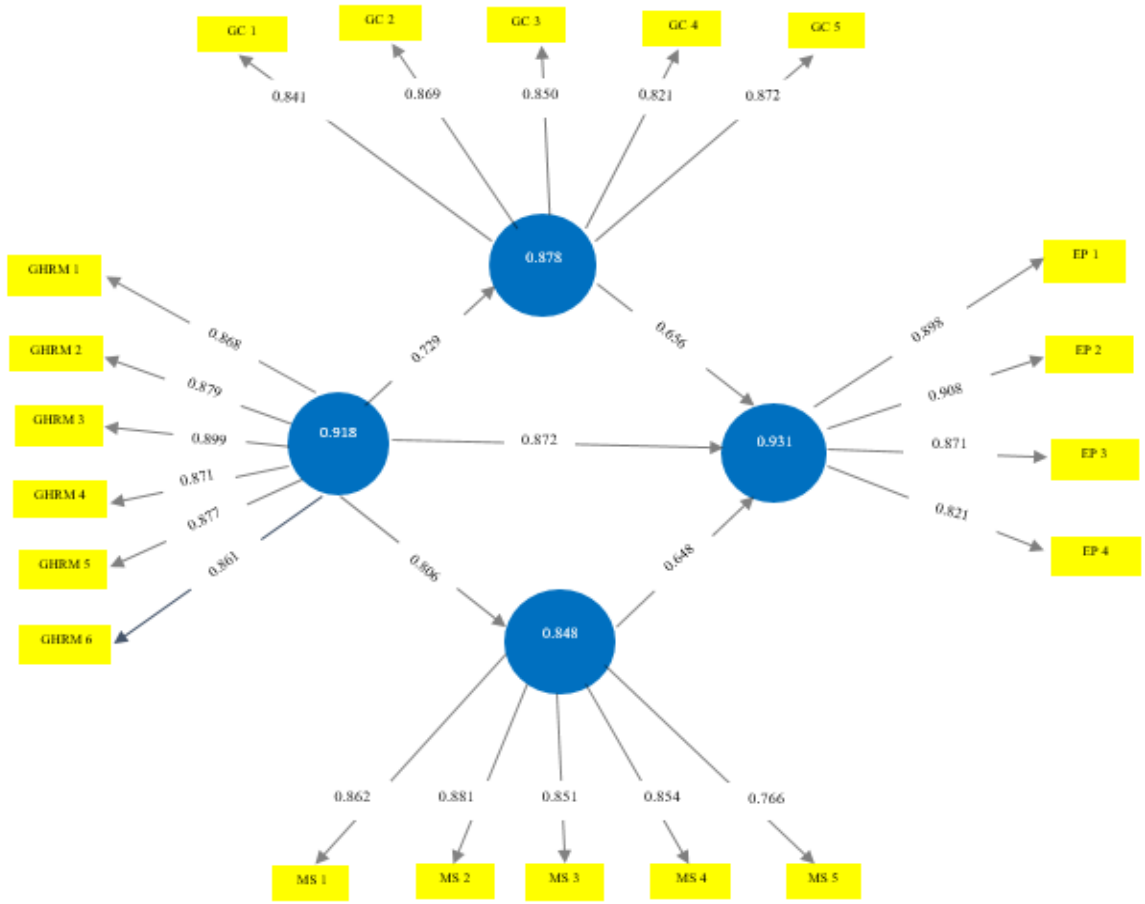


Figure 2: Structural model

4.5. Test of Hypothesis

Once the PLS algorithm is run and bootstrapping is performed to evaluate the assumed relationships, it is crucial to recall the tested hypothesis, especially when considering the importance of path coefficients in PLS. The hypotheses (H1 to H5) tested in this investigation are presented in Table 5.

Table 5: Test of hypothesis

Hypothesis	ß	t-value	SE	p-value	Action
GHRM → EP	0.547	12.921**	0.031	0.006	Supported
GHRM → GC	0.358	7.003**	0.064	0.003	Supported
GHRM → MS	0.413	7.104***	0.057	0.000	Supported
GC → EP	0.318	6.096**	0.065	0.001	Supported
MS → EP	0.281	7.0186**	0.067	0.002	Supported

It is imperative to take into account and recognize the paths if they are noteworthy or exhibit signs that align with the expected direction [73]. Additionally, Figure 3 illustrates the estimation process used in this study's model.

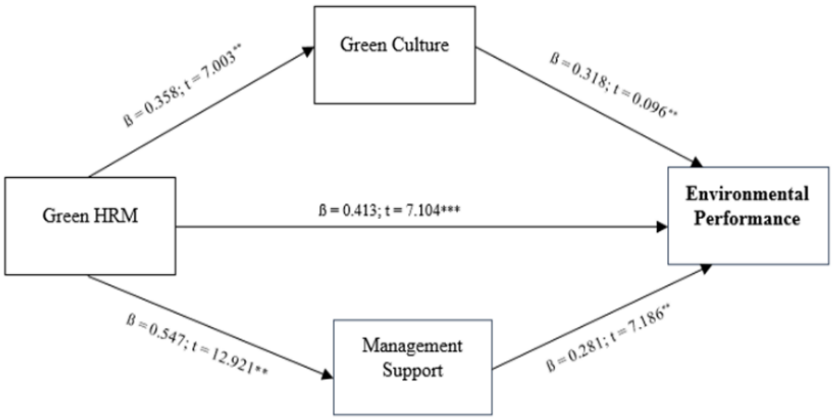


Figure 3: Model estimation

5. Discussion

The study's findings confirm the theories positing that higher education institutions that implement the GHRM achieve better environmental performance. According to the findings, GHRM practices can enhance an organization's green culture and environmental performance, which aligns with previous studies. The study supports the notion that GHRM activities, including training, can increase staff members' awareness of environmental sustainability and promote a green workplace culture. The study also highlights the critical role company culture can play in motivating staff to engage in green efforts, particularly for individuals who have strong personal environmental ideals. The results, as mentioned above, are consistent with other studies, suggesting the importance of GHRM in advancing environmental sustainability and enhancing the environmental performance of organisations. This research presents a case for corporate cultures that address environmental issues through their vision and mission. Selecting applicants with knowledge and skills in environmental protection is the first step in the green employment process. To gauge a candidate's dedication to environmentally friendly activities, interview questions may touch on environmental concerns. Universities should also offer instruction to promote environmental principles and enhance staff members' environmental awareness and responsibilities.

In a circular economy, green separation and an organisational learning culture are essential to building a sustainable organisation. And last, to honour staff members' dedication to environmental practices, a green award and appraisal system should be established. This system should include both monetary and non-monetary benefits. Furthermore, the outcomes showed that GHRM improves managerial support. However, the study's outcomes highlight that the association between GHRM and environmental performance is mediated by managerial support. For organisations to successfully adopt green initiatives, such as GHRM, senior management support is necessary. Employee engagement is necessary for this support, which spreads environmental practices at all levels and persuades. The achievement of internal environmental orientations so depends heavily on the commitment of senior management. Universities should track a variety of metrics to keep an eye on and assess their environmental performance, including "cutting back on waste, energy use, and harmful emissions; boosting the use of renewable energy sources; and switching to an online platform in place of paper documents". Employee input from universities should be gathered, and the HR division should oversee the procedure.

6. Implications

This research enhances the literature body by highlighting the role that "green culture and management support play as mediators between GHRM and environmental performance, even though its restricted data collection from colleges within a single nation limits its generalizability". In an emerging economy setting, the current research offers empirical proof of the beneficial effects of green culture on environmental performance. In developing nations, the relationships between Green HRM, management support, and green culture in enhancing environmental performance are not well understood. For this reason, this study helps fill a vacuum in the GHRM literature. Focusing on green culture may help organisations transform their ecologically proactive goals into performance, making it an effective way to apply GHRM practices. Middle and upper management are impacted by green culture. Moreover, HR managers take the lead in encouraging green practices among staff members, resulting in a high degree of environmental sustainability. Employee involvement and active participation in environmental sustainability-promoting events strengthen the link between green hiring practices and green culture. When hiring and choosing

staff, universities should consider sustainability, as they want their staff to actively engage in initiatives that promote environmentally friendly growth.

Furthermore, environmental performance would be further reinforced by combining staff green training programmes with recruiting tactics, institutional efforts, management assistance, and performance management. Universities can also foster a green culture and offer incentives to staff members who demonstrate sustainable behavior, signaling to them that they are being routinely evaluated and rewarded for their conduct. The conceptual model created and tested in an educational institution includes an information body that previously existed on green culture, environmental sustainability, and GHRM. GHRM is a crucial tactic for improving university performance in environmental sustainability from a management standpoint. There are both scientific and practical implications for the disciplines in terms of environmental sustainability and human resource management. By emphasizing the organization's green culture, GHRM can effectively promote eco-friendly practices by persuading HR managers, middle managers, senior managers, and workers to participate in green projects. Employees are a vital resource for businesses and are crucial to achieving environmental objectives. Organizations may implement green hiring procedures, teach staff members on environmental issues, and offer incentives for environmental performance to fully reap the benefits of GHRM. Environmentally conscious behavior must be promoted by top management, who should also involve staff in developing environmental plans and promote eco-friendly behaviors through policies and procedures. Top management should also focus on promoting environmental values and beliefs, increasing staff understanding of environmental concerns, and accepting suggestions and ideas for enhancing and advancing the university's environmental performance. Managers might, however, implement a system of sanctions for those who disregard environmental regulations.

7. Conclusion

By demonstrating how GHRM affects sustainable environmental performance in Indian institutions, this study clarifies environmental challenges in emerging nations. It validates the positive correlation between GHRM and the organization's performance in its environment, as well as the role of green culture and management support in mediating and moderating this connection. Through departments like the HR department, which plays a crucial role in promoting green practices, educational institutions play a vital role in addressing environmental challenges. Universities should ensure that their organization's green culture and top management support environmental efforts. We recommend that colleges utilize GHRM techniques to enhance staff understanding of environmental challenges. To improve the generalizability of the findings, further research in a larger geographic region is recommended. Furthermore, the measuring technique was constrained, as it took into account the viewpoints of managers and administrative staff members exclusively. Although the volume of research on GHRM is expanding, further studies are needed to fully comprehend its effects on businesses and workers. Future studies should consider the perspectives of other staff members, including administrative, technical, and operational staff, as their diverse responsibilities may impact the campus's environmental performance. In addition, a more comprehensive survey and an examination of student viewpoints may be the main objectives of future study.

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