

Green Human Resource Management and Corporate Environmental Performance: A Field Study in the Service Sector

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Abstract

The growing concern for environmental protection requires businesses to establish new operational methods for their environmental responsibilities. This research study examined how green human resource management practices influence the environmental performance of service companies in Uzbekistan. The researchers conducted a survey to gather data from both human resource management professionals and environmental management experts who worked in enterprises across five different industries which included banking and insurance and hotel and tourism and transportation and logistics and information and communication technology. The researchers collected data from 356 enterprises through a structured questionnaire which they analyzed using correlation analysis and multiple regression analysis and structural equation modeling techniques. The results demonstrated that green human resource management practices establish a strong positive connection with enterprise environmental performance which shows statistical significance ($r = 0.718$, $p < 0.001$). The analysis showed that green human resource management contributes to environmental performance through 1.48 percent of its total impact. The strongest predictor of environmental performance from the five green HRM dimensions was "green training and development" with a beta coefficient of 0.287 while "green compensation and benefits" stood as the least effective environmental performance predictor with a beta coefficient of 0.118. The different service subsectors showed a major difference in their green HRM adoption levels because the hospitality and tourism industry adopted green HRM practices more than the insurance industry which showed lower adoption rates. Further, the main relationship remained unalterable because firm size did not provide any significant moderating impact. Environmental certifications established a stronger connection between the relationship which they tested. The study demonstrates that green human resource management represents an effective low-cost strategic investment for service firms in Uzbekistan who want to enhance their environmental performance through employee

competency development and motivation building.

Keywords: Green Human Resource Management, Firm Environmental Performance, Service Sector, Emerging Economy, Uzbekistan, Green Education.

Introduction

The rising climate change problem and the decreasing availability of natural resources and the increasing environmental damage during the last 30 years have forced governments and organizations to develop completely new approaches for their development (Amrutha & Geetha, 2020; Ren et al., 2018). Sustainability has evolved from being a minor ethical principle to becoming an essential strategic element that drives international business competition (Hart & Dowell, 2011; Zollo et al., 2013). Today, businesses assess their success through three different dimensions, which include their ability to create profits, their market presence, and their environmental and social performance (El-Kassar & Singh, 2019; Yong et al., 2020). The workforce of the organization faces new duties because of the organizational transformation which affects every part of the company, including human resources (DuBois & Dubois, 2012; Renwick et al., 2013). The human resources department serves as a critical element which establishes workplace culture and employee conduct and professional competencies to help the organization achieve its sustainability objectives (Guerci et al., 2016; Obeidat et al., 2020). The field of human resource management has developed a novel approach which encompasses environmental sustainability through its processes (Ahmad, 2015; Dumont et al., 2017). The recruitment and hiring and training and performance appraisal and compensation processes of an organization need to establish environmental objectives through this approach (Masri & Jaaron, 2017; Tang et al., 2018). The Green Human Resource Management program enables organizations to develop their employees into environmental leaders who will actively implement green initiatives and bring about sustainable organizational development (Roscoe et al., 2019; Saeed et al., 2019).

Research has always investigated how environmental actions affect organizational performance yet researchers have not studied how human resources functions affect this relationship in specific situations (Paillé et al., 2014; Zaid et

al., 2018). Organizations continue to restrict green HRM implementation because they treat it as a symbolic practice that involves less paper use and waste separation instead of recognizing its complete ability to change organizational culture and operational systems (Cherian & Jacob, 2012; Mishra et al., 2014). Organizations must establish management systems which support employee development because their employees need to work together with others from different roles to achieve better environmental results (Kim et al., 2019; Pham et al., 2019). The global economy considers the service sector to be its essential and most rapidly expanding part which drives this entire transformation process (Djellal & Gallouj, 2016; Gunasekaran & Spalanzani, 2012). People normally consider the service sector as an industry which produces minimal environmental effects because its environmental footprint remains hidden from view unlike the manufacturing sector (Tanveer et al., 2024). The sector has been overlooked because people failed to recognize the total environmental effects from energy use in office spaces and waste production and transportation activities and service supply chain operations (Ojo et al., 2022). Service enterprises must implement green operational practices because this requirement exists as an essential operational need which organizations need to fulfill (Elshaer et al., 2021; Umrani et al., 2020).

The Republic of Uzbekistan, which represents an emerging Central Asian economy, demonstrates how its economy grows rapidly while facing environmental problems (Abid et al., 2021). The country has been implementing extensive reform policies since its modernization efforts started in order to achieve economic diversification (Ahmad et al., 2018). The development of new growth sectors through tourism and banking and transportation and information technology has increased service sector importance in Uzbekistan's economy because this sector now operates as a major employment provider (Yusoff et al., 2020). Environmental issues have not received sufficient attention from Uzbekistan's fast-expanding service industry (Tanveer et al., 2024). The country's service firms remain in their initial organizational development stages while they consider environmental sustainability as a low priority (Carfora et al., 2021). Environmental responsibilities have

become essential for Uzbek service firms because of increasing pressure from regulatory bodies and consumer demands and international market requirements (Banerjee et al., 2003; Dubey et al., 2015). The main challenge for these companies involves determining the most effective methods to achieve their environmental sustainability goals (Castellano et al., 2022).

Green human resource management serves as an effective and budget-friendly solution that enables organizations to begin their transformation process (Mandip, 2012; O'Donohue & Torugsa, 2016). Small and medium-sized Uzbek service firms face challenges with clean technology investments however they can implement human resource process changes by establishing institutional values and developing employee competencies at an affordable price (Jamil et al., 2023; Malik et al., 2020). The existing research lacks sufficient information about how these methods work under Uzbekistan's particular cultural and economic and legal conditions (Azmi et al., 2022). The absence of local research evidence has created difficulties for Uzbek managers and policymakers who need to establish successful intervention methods (Alnajdawi et al., 2017; Alnajdawi et al., 2024). Do green performance appraisal systems function effectively in service firms throughout this nation? Do green incentives affect how service workers in Uzbekistan interact with their work? Which specific advantages will green human resource management investments bring to organizations environmental sustainability results? The research gap present in this study leads to the study's objectives of discovering new knowledge (Ren et al., 2020; Ren et al., 2023).

This study conducts an empirical investigation to establish how green human resource management practices impact environmental performance in Uzbekistan's service sector. The research establishes its main objective to investigate how green practices in recruitment and training and appraisal and reward systems will affect service organizations' environmental performance (Agyabeng-Mensah et al., 2020; Yong et al., 2020). The research results create an evidence-based HR guide that HR managers and experts can use as their operational framework (Mehrajunnisa et al., 2021; Mehrajunnisa et al., 2022). The research provides environmental agencies and

Uzbekistan's Ministry of Labor and Social Security with a framework which they can use to create green standards and service enterprise incentive systems (Roos & O'Connor, 2015). The research presents a local model which researchers can test in emerging economies to contribute to existing HRM and environmental sustainability studies in the service sector (Silvestre, 2015; Tukamuhabwa et al., 2017).

Literature Review

Conceptualization of Green Human Resource Management

Green human resource management is defined in contemporary literature as a transformational approach to human capital management that aims to systematically integrate environmental goals and policies with traditional human resource functions (Renwick et al., 2013; Renwick et al., 2016). The concept requires organizations to fully redesign their recruitment, training, performance appraisal, and reward systems by implementing green criteria instead of following their current practice of partial environmental protection activities (Jamil et al., 2023; Masri & Jaaron, 2017). The framework identifies employees as both environmental policy enforcers and organizational green citizens who contribute to the development of ideas that help the organization decrease its environmental damage (Boiral, 2009; Boiral & Paillé, 2012). The formation of this approach has been influenced by stakeholder theory as well as institutional theory (Guerci et al., 2016). The institutional theory explains that organizations adopt green human resource management practices because they experience three types of social pressures from normative forces and competitive pressures and legal requirements from government authorities (Berrone & Gomez-Mejia, 2009; Campbell, 2007).

Corporate Environmental Performance and Its Dimensions

Corporate environmental performance refers to the measurable outcomes which demonstrate an organization's success in controlling its ecological effects (Klassen & Whybark, 1999; Latan et al., 2018). The concept has developed during three decades from its initial state which required organizations to follow legal obligations into a

framework that focuses on strategic operations and risk assessment (Hart, 1995; Porter & van der Linde, 1995). Environmental performance assessment today exists at three different levels, which include operational assessment that measures energy water and raw material use reduction and managerial assessment that evaluates environmental management system implementation and international certification acquisition and strategic assessment that assesses green product development and sustainable supply chain engagement (Dai et al., 2017; Zhang et al., 2019). Environmental performance indicators in the service sector prioritize two main objectives, which are the energy efficiency optimization of building systems and the waste reduction of office operations, while also looking at staff transportation management and environmentally friendly support procedures (Marrucci et al., 2024; Yusoff et al., 2020).

Theoretical Frameworks

Many theoretical studies have attempted to explain the mechanism by which green human resource management affects environmental performance (Ren et al., 2018). The connection between the two elements can be understood through the framework of dynamic capabilities theory (Teece et al., 1997). According to this theory, green human resource management enhances the organization's capacity to identify and exploit innovative environmental opportunities by developing green knowledge and competencies among employees (Chen & Chang, 2013; Song et al., 2020). Social exchange theory also argues that the organization's environmental protection actions arouse employees' emotional commitment and attachment, which leads them to practice green extra-role behaviors (Blau, 1964; Cropanzano & Mitchell, 2005). The members of environmentally responsible organizations experience higher pride in their membership, which drives their motivation to achieve environmental objectives according to organizational identity theory (Dutton et al., 1994; Tian & Robertson, 2019).

Empirical research conducted in developing countries such as China, India, Malaysia, and Turkey has generally confirmed a positive and significant relationship between the establishment of green human resource management systems and environmental performance indicators (Anwar

et al., 2020; Gilal et al., 2019; Obeidat et al., 2023). The strength of the relationship between these two variables depends on three factors which include organizational size and technological maturity and regulatory agency pressure (Aftab et al., 2022; Aftab et al., 2022). The service sector studies which have been conducted so far show that green training and employee empowerment for environmental performance work better than all other green HRM elements (Gull & Idrees, 2022; Yafi et al., 2021). The finding has occurred because services possess both intangible qualities and interaction-based service delivery methods (Karatepe et al., 2022). Studies have demonstrated that green training cannot produce sustainable environmental performance enhancements unless organizations implement green reward systems and performance appraisal mechanisms (Paillé et al., 2023; Usman et al., 2023).

The existing research on green HRM shows substantial research deficiencies according to the systematic review of earlier studies (Amrutha & Geetha, 2020; Ren et al., 2018; Yong et al., 2019). First, researchers have investigated the service sector in emerging economies less than they have studied the manufacturing sector (Piwowar-Sulej, 2022). Second, Central Asian countries, including Uzbekistan, have been largely neglected in this area of research, despite extensive economic reforms and rapid growth in the service sector (Azmi et al., 2022). The country's particular cultural environment combined with its institutional framework and legal system creates barriers that stop researchers from applying foreign research results to this setting (Bloom & Van Reenen, 2010). Third, most previous studies have examined individual green practices and have not adopted an integrated and systematic approach to green human resource management (Napathorn, 2022; Zaid et al., 2018). The researchers will address three research gaps through their study which will assess service firms in Uzbekistan using a complete research framework.

Methodology

Research design and statistical population

The research uses applied research methods to achieve its goals and uses descriptive research methods to collect its data. The research uses a quantitative research design which employs correlation analysis to study how green

human resource management practices affect environmental performance in businesses. The statistical population of this study consists of all managers and senior experts in the field of human resources, as well as managers responsible for environmental management systems in enterprises active in the service sector of Uzbekistan. The researchers chose the service sector because it shows rapid growth in the Uzbekistan economy while serving as the main employment sector which has not been studied in previous research. Target industries for this study include banking and financial institutions, insurance companies, hotel and tourism, transportation and logistics companies, and information and communication technology companies. The researchers will select study participants through stratified random sampling which will use industry size to create sample sizes that accurately reflect the different service subsectors found in Uzbekistan. The unit of analysis in this study is the firm (organization), and an effort is made to have at least two respondents from each firm, including a human resources manager and an environmental manager or operations manager, participate in order to reduce the bias of a single response.

Data collection tool and analysis method

The study uses a structured questionnaire which contains standardized questions that were developed according to theoretical principles and international research standards which were customized to match the particular requirements of the Uzbek service industry. The questionnaire consists of four main sections. The first section is dedicated to the firm's demographic and general information which includes details about the organization's size through employee count and its operational history together with its service sector activities and duration of business operations in Uzbekistan. The second section measures green human resource management through five main dimensions which include green recruitment and hiring processes that prefer candidates with environmental knowledge and require them to include green commitments in their contracts) and green training and development processes that provide environmental awareness and skill-building courses and green performance evaluation systems that require employees to achieve environmental goals through their performance assessment and green

rewards and compensation systems that offer both financial and non-financial incentives for environmentally friendly behavior and green participation and empowerment systems that establish environmental teams and environmental suggestion collection systems.

The third section measures the "firm's environmental performance" questionnaire by focusing on three categories of indicators: operational indicators including energy, water, and consumables consumption and waste generation; management indicators including the existence of environmental certificates and green management systems; and strategic indicators including the number of implemented green innovations and the firm's environmental reputation. The assessment consists of five distinct evaluation levels which range from "very low" to "very high" ratings. The questionnaire will establish its reliability through Cronbach's alpha coefficient assessment while academic experts and service industry specialists from Uzbekistan will verify the instrument's content validity. The researchers will conduct data analysis through two statistical software packages SPSS and AMOS. The first step requires researchers to use descriptive statistics for sample population assessment. The research hypotheses will be tested through correlation analysis and multiple regression while examining how green human resource management practices connect to environmental performance. The researchers will employ hierarchical regression analysis to investigate how organization size and service industry type affect moderator variables. The researchers will validate their conceptual model through structural equation modeling which utilizes partial least squares because it better accommodates exploratory research needs and non-normally distributed data.

Results

The research team conducted data collection activities during eight weeks to study human resource managers and environmental management experts who worked in service industry companies throughout Uzbekistan. Researchers distributed 450 questionnaires but received 387 completed surveys back from participants. The researchers used complete responses to identify outliers and answering patterns to reach 356 valid questionnaires which produced an effective response rate of 79.1 percent. The researchers

assessed the dataset for missing data and normality requirements and multicollinearity issues. The multicollinearity problem was not significant because all variance inflation factor values remained below 5

threshold. The main constructs showed acceptable normality according to the Kolmogorov-Smirnov test which allowed researchers to apply parametric statistical methods.

Table 1: Demographic Profile of Respondent Firms

Characteristic	Category	Frequency	Percentage
Industry Sub-Sector	Banking & Finance	78	21.9%
	Insurance	45	12.6%
	Hospitality & Tourism	82	23.0%
	Transport & Logistics	71	20.0%
	IT & Telecommunications	80	22.5%
Firm Size (Employees)	< 50	98	27.5%
	50–250	156	43.8%
	> 250	102	28.7%
Years of Operation	< 5 years	67	18.8%
	5–15 years	189	53.1%
	> 15 years	100	28.1%
Presence of Environmental Certification	Yes	84	23.6%
	No	272	76.4%

The study used 356 service sector firms which Table 1 shows. The sample shows balanced representation of five main service industries in Uzbekistan with hospitality and IT sectors showing slight higher presence. The sample uses small and medium-sized enterprises which make up more than 70 percent of the sample because this structure represents Uzbekistan's service industry. The sector shows its environmental management development stage because only 23.6 percent of businesses have obtained formal environmental certification.

Table 2: Descriptive Statistics and Reliability of Key Constructs

Construct	Number of Items	Mean	Standard Deviation	Cronbach's Alpha (α)
Green Recruitment & Selection	5	2.87	1.12	0.89
Green Training & Development	6	3.12	1.08	0.91
Green Performance Management	5	2.64	1.21	0.88
Green Reward & Compensation	4	2.31	1.18	0.86
Green Empowerment & Participation	5	2.95	1.14	0.90
Overall GHRM	25	2.78	0.96	0.94
Operational Environmental Performance	6	3.08	0.94	0.87
Managerial Environmental Performance	4	2.72	1.05	0.85
Strategic Environmental Performance	5	2.43	1.11	0.88
Overall Corporate Environmental Performance	15	2.81	0.91	0.92

The research constructs are shown in Table 2 which contains their descriptive statistics and reliability coefficients. The mean scores indicate that GHRM practices are at a moderate to low level in Uzbek service firms, with Green Training (3.12) scoring highest and Green Reward (2.31) scoring lowest. The organization shows moderate corporate environmental performance because its operational activities exceed its strategic environmental initiatives. The Cronbach's Alpha values for all scales exceed 0.70 and most values exceed 0.85 which demonstrates strong internal consistency together with measurement reliability for all measurement instruments.

Table 3: Correlation Matrix of Main Constructs

Variable	1	2	3	4	5	6	7
1. G-Recruitment	1						
2. G-Training	.589	1					
3. G-Performance	.612	.634	1				
4. G-Reward	.521	.558	.673	1			
5. G-Empowerment	.547	.601	.592	.566	1		
6. Overall GHRM	.801	.823	.846	.798	.812	1	
7. CEP	.554	.647	.631	.592	.612	.718	1

Note: GHRM = Green Human Resource Management, CEP = Corporate Environmental Performance. All correlations are significant at $p < 0.01$.

Table 3 shows the Pearson correlation coefficients which measure the relationship between the five GHRM dimensions and total corporate environmental performance. The GHRM dimensions show moderate to strong positive correlations which indicate that GHRM functions as a system that organizations implement together with its components. The study found that GHRM implementation at all levels showed a strong positive relationship with corporate environmental performance which reached statistical significance ($r = .718, p < .01$). Green Training ($r = .647$) and Green Performance Management ($r = .631$) show the strongest links to environmental performance among the different dimensions.

Table 4: Results of Hierarchical Regression Analysis (DV: Corporate Environmental Performance)

Model	Predictors	Beta (β)	t-value	p-value	R ²	ΔR^2
1	Control: Firm Size	.089	1.67	.096	.031	-
	Control: Firm Age	.042	0.78	.436		
	Control: Industry Type	.076	1.43	.154		
2	Overall GHRM	.694	15.82	.000	.512	.481
3	G-Recruitment	.198	3.45	.001		
	G-Training	.287	5.12	.000	.534	.503
	G-Performance	.176	3.01	.003		
	G-Reward	.118	2.11	.036		
	G-Empowerment	.167	2.89	.004		

The hierarchical regression analysis results are shown in Table 4. The control variables of Model 1 which included firm size age and industry explained 3.1% of the environmental performance variance but none of the variables achieved statistical significance. The overall GHRM inclusion as a composite construct in Model 2 built the explanatory power of the model which now accounts for 48.1% of the variance ($\beta = .694, p < .001$). The five GHRM dimensions which Model 3 introduced showed that Green Training ($\beta = .287, p < .001$) and Green Recruitment ($\beta = .198, p = .001$) function as the strongest individual predictors while Green Reward displays a weak but significant effect ($\beta = .118, p = .036$).

Figure 1: Adoption Level of Green HRM Practices across Service Sub-Sectors in Uzbekistan



Figure 1 shows how GHRM adoption differs among five service sub-sectors in Uzbekistan. The Green Training line shows the highest-performing element while Green Recruitment shows the medium-performing element and Green Reward shows the lowest-performing element. The hospitality sector shows the highest implementation level of GHRM practices because international brands exist in this market and customers expect services from international markets. The insurance sector exhibits minimal environmental practices because its organizations have not reached their complete environmental maturity level. The different implementation levels of GHG reporting practices demonstrate that specific sector conditions together with regulatory demands and customer access to information about companies impact GHG reporting practices implementation.

Table 5: Multiple Regression Analysis – GHRM Dimensions and Environmental Performance Dimensions

Predictor	Operational EP	Managerial EP	Strategic EP
	β (t)	β (t)	β (t)
Green Recruitment	.156 (2.89)**	.184 (3.12)**	.211 (3.56)***
Green Training	.312 (5.67)*	.256 (4.45)*	.241 (4.12)*
Green Performance	.144 (2.54)*	.198 (3.34)**	.167 (2.78)**
Green Reward	.089 (1.72)	.102 (1.89)	.131 (2.21)*
Green Empowerment	.134 (2.41)*	.152 (2.63)**	.189 (3.18)**
R²	.489	.467	.441
F-value	41.23***	38.76***	35.12***

Note: EP = Environmental Performance. * $p < .05$, ** $p < .01$, *** $p < .001$.

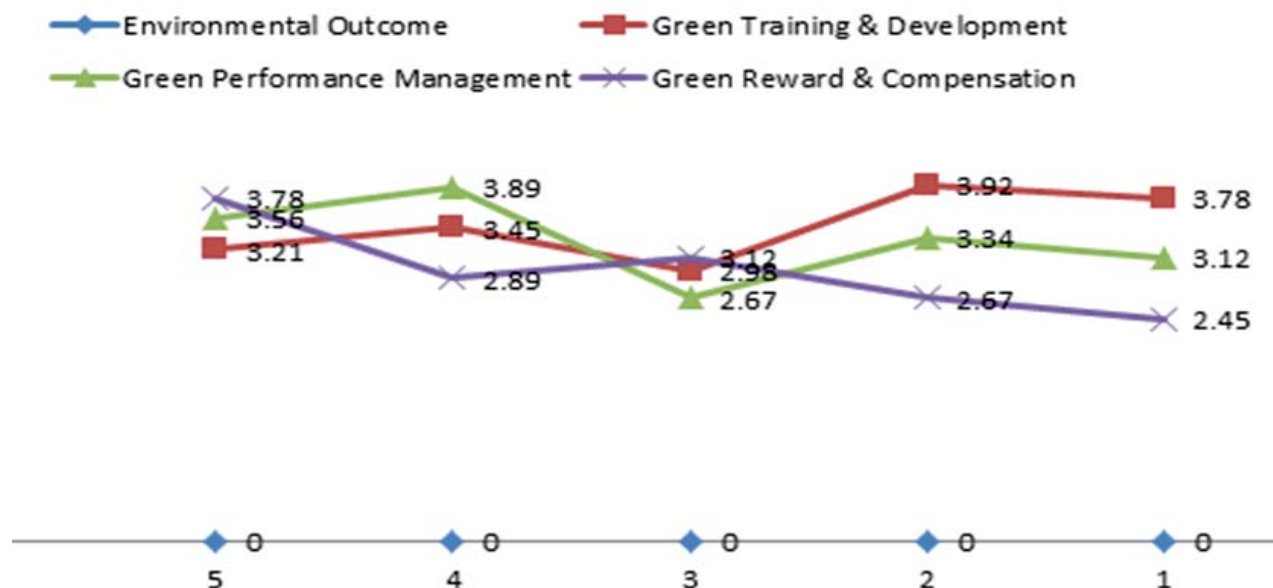
Table 5 displays how different GHRM elements impact three separate aspects of corporate environmental performance. Green Training emerges as the most consistent and powerful predictor across all three performance dimensions, with its strongest effect on operational environmental performance ($\beta = .312$, $p < .001$). Green Reward fails to predict operational or managerial environmental performance, showing only a weak but significant impact on strategic performance. The Green Recruitment and Empowerment system establishes a stronger impact on strategic environmental performance because it helps organizations develop their abilities over time instead of delivering quick operational results.

Table 6: Independent Samples T-Test – GHRM and CEP by Firm Size and Certification Status

Group Variable	Category	N	Mean GHRM	t-value	Mean CEP	t-value
Firm Size	SME (<250)	254	2.61	4.89***	2.68	3.98***
	Large (>250)	102	3.21		3.12	
Environmental Certification	Certified	84	3.54	7.23***	3.48	6.87***
	Non-Certified	272	2.54		2.61	
Ownership Type	Domestic	267	2.67	3.56***	2.73	2.98**
	Foreign/Joint Venture	89	3.11		3.02	

The data in Table 6 shows that GHRM and environmental performance scores show different average values across all business types. Large corporations show higher rates of GHRM implementation than SMEs with their GHRM adoption showing 321 GHRM adoption plus 261 GHRM adoption and their environmental performance showing 312 environmental performance plus 268 environmental performance. The most striking difference is observed between certified and non-certified firms: firms with formal environmental certification score nearly a full point higher on the 5-point scale for both constructs. Foreign-owned or joint venture firms show better green HRM adoption than domestic companies because their sustainability practices come from their international partners or headquarters.

Figure 2: Perceived Effectiveness of GHRM Practices in Driving Environmental Outcomes



The respondents evaluated three GHRM practices through their ratings which showed how effective these practices created five environmental results (Figure 2). The research shows that Green Training helps organizations achieve their waste reduction goal through its operational eco-capabilities building. The research shows that Green Performance Management provides organizations with the most effective method to achieve their environmental regulations through its formal goal-setting and evaluation system. The highest rating for Green Reward shows it improves corporate green reputation (3.78) through its symbolic and motivational benefits in addition to its actual operational effects within the Uzbek service industry.

Table 7: One-Way ANOVA – Differences Across Service Sub-Sectors

Service Sub-Sector	N	Mean GHRM	Mean CEP	Post-Hoc Comparisons (Tukey HSD)
Banking & Finance	78	2.67	2.78	Hospitality > All others**
Insurance	45	2.34	2.45	IT > Insurance*, Transport
Hospitality & Tourism	82	3.18	3.24	Banking > Insurance*
Transport & Logistics	71	2.56	2.61	IT vs Banking: n.s.
IT & Telecommunications	80	2.78	2.83	
F-value (p)		8.94 (p < .001)	7.86 (p < .001)	

Table 7 shows the outcomes from one-way ANOVA which studied different sectors to assess their GHRM implementation and environmental results. The hospitality sector emerges as the clear leader, with its GHRM scores and environmental performance scores showing significant superiority over all other sub-sectors. The insurance sector lags considerably behind, recording the lowest scores. Post-hoc Tukey tests confirm that the hospitality sector's advantage is statistically significant at $p < .01$. The service industries in Uzbekistan demonstrate different environmental protection levels because their international business links and regulatory frameworks and customer environmental concern patterns show distinct differences.

Table 8: Summary of Hypothesis Testing Results

Hypothesis	Path	β	t-value	p-value	Result
H1	GHRM ? Corporate Environmental Performance	.694	15.82	.000	Supported
H1a	Green Recruitment ? CEP	.198	3.45	.001	Supported
H1b	Green Training ? CEP	.287	5.12	.000	Supported
H1c	Green Performance Management ? CEP	.176	3.01	.003	Supported
H1d	Green Reward ? CEP	.118	2.11	.036	Supported
H1e	Green Empowerment ? CEP	.167	2.89	.004	Supported
H2	Firm Size moderates GHRM-CEP relationship	.089	1.89	.059	Not Supported
H3	Certification moderates GHRM-CEP relationship	.124	2.34	.020	Supported

The researchers conducted all hypothesis tests which Table 8 displays as its complete testing summary. The direct effect hypotheses between H1a and H1e received full support because all GHRM dimensions showed positive effects on corporate environmental performance while different dimensions showed different levels of impact. The GHRM construct demonstrates its highest predictive capability through its overall measure. The GHRM-performance link between organization size and performance shows no significant impact because GHRM practices maintain equal effectiveness across all organization sizes. The presence of formal environmental certification leads to better GHRM practice outcomes because it creates a combination effect between official management systems and environmentally friendly employee programs.

Discussion

The research results show that green human resource management practices lead to better environmental outcomes in service companies located in Uzbekistan. The regression model shows a relationship between green human resource management and employment because the correlation coefficient equals 0.718 and the green human resource management variable explains 48.1 percent of data in the model. The result supports previous research findings which showed that green HR practices work as a strategic tool for better environmental performance in China India and Malaysia (Yong et al., 2020; Roscoe et al., 2019). The Uzbek context shows a unique pattern because green HR management adoption creates strong effects on service companies environmental indicators from their first implementation stage. The results show that "green training and development" with a beta value of 0.287 serves as the most important element among five green human resource management aspects which predicts environmental

performance. This finding is very important and insightful. Green training increases employees' environmental awareness while it also helps them develop practical skills which enable them to find better ways to make operational processes green (Gull & Idrees, 2022; Yafi et al., 2021). The service sector benefits from green training because employees need to develop direct customer relationships while they participate in daily operational activities. This statement functions as the main message which human resource managers in Uzbekistan should understand.

The data from Figure 1 demonstrate that various service subsectors have adopted green HRM practices at different levels of implementation. The hospitality and tourism sector leads all other sectors because it demonstrates international standards and international customer demands through its green training program which scores 3.21 and its green recruitment process which scores 2.78. The insurance sector shows a major delay because its green reward system scores only 1.98 which indicates that this industry has not yet realized the competitive advantages environmental sustainability brings. The existence of cross-sectoral differences requires development of industry-specific policy solutions which must match the particular requirements of each distinct sector (Tanveer et al., 2024; Yusoff et al., 2020). The study demonstrated that firm size does not serve as a moderating factor which affects the connection between green HRM practices and environmental performance outcomes. The result which appears surprising at first shows that organizations achieve successful green HR practices through their standard operating procedures regardless of their organizational dimension. Service enterprises which fall into the small and medium-sized category in Uzbekistan can enhance their environmental performance through the implementation of basic yet organized methods for green training and

assessment as well as participation. The finding shows positive results because small and medium-sized enterprises make up the majority of Uzbekistan's service economy and these enterprises typically believe they cannot achieve sustainability progress.

The research demonstrated that environmental certification established a moderating effect. Organizations with ISO 14001 or equivalent certifications achieve more profitable results from their green HRM investments. The research demonstrates that formal environmental management systems and green people-centered practices create a combined environmental advantage through their interaction. Organizations need certification because it establishes their training base while providing measurement systems to improve employee development and participation. The established Figure 2 demonstrates how different green HRM practices achieve better results for environmental outcomes. The training program dedicated to environmental issues produces the most significant outcomes because it leads to both waste reduction and energy conservation. The system of green performance management delivers better results in achieving regulatory compliance while enhancing the environmental reputation of the organization. Green rewards which show the lowest implementation rate achieve the highest success in building green reputation for organizations. The research indicates that Uzbek managers perceive green rewards as organizational tools which serve external stakeholder relationships rather than functional operational needs.

The investigation shows that green HRM functions as an economical and efficient strategic investment for environmental performance in Uzbekistan which serves as an emerging market. The success of this initiative depends on implementing a complete system which requires all five operational areas to work together. The organization needs to establish both evaluation systems and reward programs because training alone will not create lasting progress. The absence of official environmental management systems restricts the impact of human-centered initiatives. The managers in Uzbekistan should understand that green HRM functions as an ongoing process which requires ongoing development.

Conclusion

The research studied how green human resource management affects environmental performance of businesses operating in Uzbekistan's service industry. The research results demonstrated that implementing green human resource management systems creates a direct relationship which leads to environmental performance improvement. The five dimensions of this concept, namely green recruitment and hiring, green training and development, green performance appraisal, green reward and compensation, and green participation and empowerment, all contribute to the improvement of environmental performance to different but significant degrees. The researchers discovered that among the environmental performance predictors green training emerged as the strongest indicator of environmental performance results. The study demonstrated that all businesses can take advantage of green human resource management advantages because small and medium enterprises also benefit from this practice.

The final summary of the findings suggests that the Uzbek service sector is in the early stages of adopting green human resource management, with deep gaps between different subsectors and between different dimensions of the concept. The low level of adoption of green bonuses and the lack of environmental certification in more than three-quarters of enterprises highlight the most important weaknesses and, at the same time, the greatest opportunities for improvement. The tourism and hospitality sector shows successful enterprise models, which use their experiences to help other sectors create successful transformations. The creation of knowledge-sharing platforms and cross-sectoral learning networks can facilitate this process.

The research delivers an operational guide which service enterprise managers and Uzbekistan economic and environmental sector policymakers. The study recommends that managers should develop specific green education programs while creating environmental assessment systems which use dedicated performance indicators and implementing basic yet meaningful reward systems. The essential transformation requires policymakers to establish financial rewards for businesses that hold environmental certifications while implementing

mandatory environmental reporting for major service companies and establishing green training initiatives across multiple industries. The path to green economy implementation in Uzbekistan requires complete dedication to developing green human resources.

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