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# EFFECTS OF GREEN HRM PRACTICES ON CIRCULAR ECONOMY-BASED PERFORMANCE OF BANKING ORGANIZATIONS IN AN EMERGING NATION

#### Abstract

The concept of circular economy-based performance has gained significant interest within the highly competitive business arena and environment-concerned stakeholders. This study assumes that environment oriented HRM practices have significant effects on circular economy-based performance. This study aims to investigate the contributory effect of five selected components of green HRM on the circular economy-based performance of environment-concerned banking organizations. A total of 418 managers of commercial banks are the unit of analysis, and data were derived using a structured questionnaire from the respondents who are working in managerial positions in banking organizations in Bangladesh. The gathered data has been encoded by SPSS and analyzed through PLS-SEM 4. The results of this study reveal that all components of green HRM, i.e., green employment design, planning, staffing, training, and benefits significantly contribute to the circular economy-based performance of the banking sector. Thus, green HRM effectively promotes the circular performance of banks to provide a distinctive perspective for adding value to the environmental concerns in an emerging economy.

#### Keywords

green HRM, circular economy-based performance, bank organization, emerging economy

JEL Classification

#### M11, M21, Q53, Q56

### INTRODUCTION

The idea of a circular economy has come to light as a ray of hope in a society that is becoming increasingly aware of the effects of environmental deterioration and the pressing need for sustainable practices (Lim et al., 2022). Circular economy functions are the take, make, and dispose of linear models of production and consumption. However, businesses are paying more attention to the green aspects of sustainable development (Zhang et al., 2021). Furthermore, social issues pose a global challenge due to the growing population, high unemployment, contentious corruption, inequality, rising per capita consumption, vulnerability, and alarming poverty (Goyal et al., 2021). In this regard, Majeed et al. (2022) indicated that circular economy-based performance is applicable at all levels of companies to promote sustainability by reducing economic problems, preventing resource depletion, and minimizing energy and material loops.

Although the circular economy concept has been mostly used in organizations' production, manufacturing, procurement, and supply chain functions, other scholars (for example, Marrucci et al., 2021) also focused on circular economy-based performance in service-oriented organizations. Following the concept of circular economy-based performance in service-oriented organizations, this study concentrated on the banking sector for its green concerns. Because of the campaign for a green banking movement put forward by the Bangladeshi government (Bangladesh Bank, 2011), banks in Bangladesh are instructed to include green practices in their operations and strategy (Hoque et al., 2019). The banking organizations in Bangladesh must follow the government's request to adopt green practices for internal operations and green financing policies that include ecological and environmental considerations to support green investments for sustainable performance (Masukujjaman et al., 2015).

Notably, emerging and developing nations are more vulnerable to climate change, pollution, deforestation, biodiversity loss, and arable land, making environmental conservation crucial. Their dependency on natural resources for economic growth and development necessitates sustainable resource use policies. Emerging economies are leading the way in regulating green banking practices, concentrating on the financial sector's influence on sustainable development. Banking institutions are considered the vigorous financial sector of any country and have a dual responsibility, like acting as middlemen and internal operators in the financing of sustainable projects. So, a new era of "green" finance is being accompanied by green banking, which is an extension of sustainable banking and stresses the alignment of financial practices with environmental responsibility.

However, green HRM is considered a set of activities and strategies that encourage green behavior in the workplace which ultimately leads to sustainable and circular performance (Ahmad, 2015). Green HRM consists of green staffing, a green reward system, environment-based training, green empowerment and engagement, green appraisal, and green staff involvement in the organizations (Renwick et al., 2013). Moreover, an increasingly significant question is how green HRM practices within these environment-concerned banking organizations affect performances based on the circular economy. The functions of green HRM are not only staffing, training, appraisal, reward packages, and workforce development, but they are also responsible for shaping the organizational green culture, environment protection, energy saving, waste reduction, resource maximization, re-use, re-structure, reduce, and recycling the resources of the organizations.

### **1. LITERATURE REVIEW**

The implementation of circular economy-based performance by any organization has the potential to guide enterprises toward sustainable growth. There are connections between the circular economy and various organizational aspects, including organizational sustainability, improvement of firm performance, and other corporate activities (Geissdoerfer et al., 2017). Circular economy-based performance accelerates company sustainability, environmental safety, waste minimization, decrease in energy consumption, decent employment, and economic development (Schroeder et al., 2019). Previous scholars such as Kwarteng et al. (2022) have shown that circular economy-based performance is closely linked to employee performance, which in turn leads to the overall success of the firm. Moreover, several researchers (for example, Geissdoerfer et al., 2017; Ghisellini et al., 2016) have shown that the optimal level of employee productivity and job performance can be achieved only in an efficient work environment. Pertinently, Zhang et al. (2021) provided more support for this theory by stating that the ultimate outcome of effective circular company performance is prolonged organizational sustainability. Literature on green marketing (Testa et al., 2020), green procurement (De Giacomo et al., 2019), lifecycle assessment (Spreafico, 2022), and bioeconomy (Lakner et al., 2021) have been studied extensively, but there is very limited investigation found about the relationships between environmental workforce system and circularity in organizational performance level. However, policymakers, academics, researchers, practitioners, and corporate and public organizations focused on green HRM (Marrucci et al., 2021; Benevene & Buonomo, 2020).

Among those several components of green HRM, green recruiting is the most fundamental aspect (Rawashdeh, 2018). In this pertinent, Amin and Salehin (2021) and Shen et al. (2018) emphasized

that green employment strategy and evaluation are particularly successful aspects of green HRM; and human capital planning is a significant aspect of effective green HRM practices. Additionally, the scholars suggested that the selection process is a comprehensive approach to understanding the relationship with the green environment. Saeed et al. (2019) indicated green recruiting as an efficient method for developing suitable green workforce management. In addition, Veleva et al. (2017) acknowledged the significance of green training programs in promoting ecological preparedness, cultural integration, and fostering a responsible working environment. The author also indicated that remuneration serves as a crucial catalyst for improved job performance. Based on the existing literature, the present study mainly concentrates on the traditional selected green HRM components.

Green employment design is particularly concerned with managing, developing, and accessing career prospects that are socially useful, ecologically harmless, and economically feasible. Moreover, designing and assessing environmentbased employment entails establishing employment possibilities that support social justice, economic prosperity, and environmental sustainability, whereas these jobs are intended to deal with environmental issues, lower carbon emissions, encourage resource efficiency, and support sustainable development (Marrucci et al., 2021). In addition to generating threads, observed technical and climatic changes also present some prospects for the development of green employment design, which assist in contributing to the staff performance focusing on a circular management system (Sulich & Sołoducho-Pelc, 2022). However, green employment design and analysis are connected to a new method of corporate management that aims to stop environmental damage, increase the material and energy efficiency of production processes, and lower unemployment, all of which directly impact circular economy performance in the organization (Sulich et al., 2020).

Green workforce planning assists the organization in utilizing resources efficiently, minimizing waste, fostering a culture of innovation, enhancing brand reputation, and attracting environmentally conscious customers, all of which contribute

to the circular outcome of an organization (Zaid et al., 2018). Adopting a circular system focuses on 'reducing,' 'reusing,' 'recycling,' and 'recovering' company resources while replacing the traditional end-of-product or service life concept. According to Christensen et al. (2020), green staff planning is anticipated to benefit an organization's circular performance. Besides, Dordmond et al. (2021) stated that this process enhances employee performance. Consequently, environmental workforce planning is a crucial method of supporting organizations in acquiring positions through dynamic managerial techniques, which assist in maintaining circular economy-based activities to grow the overall organization's performance (Rawashdeh, 2018). In another study, Moktadir et al. (2020) explained empirical data for environmental planning that helps organizations achieve circular economy-based work outcomes.

Green staffing is considered vital and has an extensive relationship with circular economy-based performance in organizations. Additionally, green staffing is described as the practice of implementing environmentally friendly tactics during the recruiting and selection process to draw in and keep individuals who support the circular economy's guiding principles (Kang et al., 2013). Environmentally conscious talent acquisition strategies are becoming more required for corporations (Mayangsari & Nawangsari, 2019). Pertinently, Pham and Paille (2020) stated that in order to build circular performance, organizations need to hire professionals with a wealth of green insights into expertise with environmentally friendly techniques and maintenance abilities. The green-based recruiting process is a strategic way to find and hire outstanding individuals who enhance circular performance. It investigates how a team that believes in sustainability can be more productive, innovative, and creative, all of which contribute to the overall success of the company (Böhlmann et al., 2018).

Green training enhances employees' knowledge of sustainability principles, environmental concerns, and their roles in promoting an ecologically friendly workplace and society (Joshi & Dhar, 2020). Green training programs create staff's understanding of pollution, resource depletion, waste production, and climate change. Subsequently, green training may be linked to circular economy principles, educating employees about the concept of recycling, reusing, and repurposing resources to minimize waste and create a more sustainable economic model (Pinzone et al., 2019). Additionally, green training is recognized as crucial indicators of organizational performance, which support circular economic principles and the long-term economic growth of an organization (Dumont et al., 2017). Henceforth, the application of circular economy principles and green training in a company might develop a circular system in an organization. Similarly, the green-oriented training approach is a highly helpful one for the efficient use of all resources, which assists in growing the circular economy in the organization (Teixeira et al., 2012).

The green reward system is regarded as the practice of encouraging and rewarding eco-friendly behaviors and practices within organizations, which includes offering financial and non-financial rewards, benefits for eco-friendly practices, and support of the organization's sustainability goals (Mandago, 2018). Besides, the green reward system is frequently used as a motivating technique to get people to align their behavior with sustainable practices, support circular economy projects, cut back on waste, and have a minimal negative impact on the environment regarding circularity (Marrucci et al., 2021). According to Aboramadan et al. (2022), employees who get eco-friendly benefits or prizes for meeting sustainability goals exhibit better levels of engagement and motivation to implement circular economy ideas for better performance in the organization. Besides, Al-Hawari et al. (2021) stated that employees respond favorably that are environmentally friendly to achieve circularity. Thus, we assume that green remuneration is essential for influencing organizations' performance based on the circular economy.

### 2. AIMS AND HYPOTHESES

This study investigates the critical relationship between green HRM and circular economy-based performance in banking organizations. Hence, the management of the banking institutions must follow green banking practices for healthier performance in the context of the circular economy. Thus, the main objective of this study is to fill the research gap by investigating the relationship between green HRM practices and the circular economy-based performance of banking companies in Bangladesh. Based on the objective of this study and thorough literature evaluation, the present study proposes the following research framework:

Based on the current research objective, and literature support, the present study develops the following hypnoses:

- H1: Green employment design is positively associated with circular economy-based performance.
- H2: Green workforce planning is positively associated with circular economy-based performance.
- H3: Green staffing is positively associated with circular economy-based performance.
- H4: Green training is positively associated with circular economy-based performance.
- H5: Green reward system is positively associated with circular economy-based performance.

### 3. RESEARCH METHODOLOGY

This research employs suitable and pertinent data to examine the potential correlation between the variables. The research has gathered data specifically for achieving the study objectives and conducted a cross-sectional analysis. In cross-sectional research, Sekaran and Bougie (2016) justified that data is gathered at a specific point in time and from respondents. This study gathers data from respondents who are the managers in green banking practicing in Bangladesh. A well-constructed questionnaire was created to gather this primary data. A questionnaire survey approach is suitable for investigating the potential connection among the specified variables and constructs (Salkind, 2012).

The measurement indicators or items of the constructs in this study were adapted from previous similar kind of studies, for instance, among all the five scales for each component of green HRM; the exogenous variables were collected; a few from Chen et al. (2021), whereas the other scales were indicated from Yong et al. (2020), Ren et al. (2020), and Yusliza et al. (2017). Similarly, the endogenous variable, circular economy-based performance, was measured with six scales derived from Pinheiro et al. (2022) and Marrucci et al. (2021). However, all the independent and dependent constructs were assessed using a 5-point Likert scale, i.e., from 1 = strongly agree to 5 = strongly disagree.

The target population of this study is the managers of banking organizations that prioritize environmental criteria set by the Bangladeshi government. Thus, managers who have permanent positions in green-practicing banks in Bangladesh are the sample unit for analyzing this research. In total, 418 managers of 36 commercial banks that achieved government certification of their green banking activities were interviewed to collect their perception-based data. The respondents for this study were chosen using a 'judgmental purposive' sampling method which is a 'non-probability' sampling method. In this respect, Malhotra and Dash (2016) recommended that in case of unlisted populations or unavailability of a sampling frame, a 'non-probability' sampling technique can be utilized. According to Hulland et al. (2018), judgmental purposive sampling is reliable, welltimed, realistic, and dependable for the researcher. Pertinently, Malhotra and Dash (2016) indicated that sometimes it becomes very difficult to use probability sampling, especially in the context of South Asian countries. Therefore, the current study employs a judgmental purposive sampling method to collect data. Questionnaires were sent to the participants with the help of the HR or administrative managers, and they also confirmed the inclusion criteria.

The researchers of this study circulated 1,000 questionnaires; out of these, 447 were returned. Among the returned questionnaires, 418 were considered accurate, useable, and correctly completed, while the remaining were deemed invalid. Thus, the present investigation determined the final sample size to be 418. In the context of Bangladesh, 418 questionnaire data were processed for data analysis, representing a response rate of 41.8%. This response rate was justified by previous studies by Amin and Rubel (2020), who obtained a response rate of 33% in the context of Bangladesh. Thus, the sample size of 418 for this present study is deemed acceptable, considering the support provided by past research. Additionally, the data collection period was from August 1st, 2023, to October 31st, 2023, totaling three months. This timeframe was chosen since the research followed a cross-sectional design, as described by Sekaran and Bougie (2016).

Two software approaches were used for data input and analysis. SPSS version 25 was used to input, assemble the data, and perform descriptive statistical analysis. Following the suggestion of Hair et al. (2013), this study employs the partial least squares method, specifically SMART-PLS version 4, to conduct SEM-based factor analysis, i.e., confirmatory factor analysis, which is the method to assess the composite reliability and item-validity; also evaluate the discriminant validity of all the present constructs and perform hypothesis testing in order to obtain the outcome.

### 4. **RESULTS**

This study identified several demographic factors within the sample of green banking organizations in Bangladesh. Table 1 indicates that around 68% of managers of banking companies are male; thereby 32% are found female in gender. Besides, the present study revealed that 34% of the participants obtained an MBA degree, while 29% finished a General Master's program. Additionally, 24% of the respondents earned a Bachelor's degree focusing on Business, and 13% got a General Bachelor's degree. In addition, most respondents (51%) respond that they have been employed at their current organization for five to ten years, while a significant proportion (32%) has been working there for ten to fifteen years. The demographic scenario is presented in Table 1.

A Confirmatory Factor Analysis (CFA) was performed to assess the validity and reliability of the items used in this study as part of the first data review phase. This study analyzed the item loadings, average variance extracted (AVE), and composite reliability to evaluate convergent validity. Table 2 demonstrates that each item load-

Demographic factors	Percentage	Demographic factors	Percentage		
Gender		Academic Qualification			
Male	68%	MBA	34%		
Female	32%	General Masters	29%		
Age Category		Bachelors in business	24%		
30-35	19.4%	General Bachelor	13%		
35-40	45.6%	Marital Status			
40-45	21%	Married	81%		
45-50	11%	Unmarried	19%		
55-55	3%	Unmarried	19%		
Employment Experi	ence	Religion			
1-5 Years	9%	Muslim	76%		
5-10 Years	51%	Non-Muslim	24%		
10-15 Years	32%				
15-20 Years	6%	_			
Above 20 Years	2%				

#### Table 1. Respondent profiles

ing achieved a score of more than 0.70 (Hair et al., 2013). The researchers had to remove items such as GWP3 (0237), GS5 (0.663), GT1 (0645), GRS5 (0.494), CEP2 (0.283), CEP5 (0.344), and CEP6 (0.623) as the loading score were below 0.70 (Hair et al., 2013). On the other hand, the scores of AVE and Composite Reliability (CR) for all the constructs were found to be satisfactory as they show above the recommended threshold values of

0.5 (AVE) and 0.7 (CR), as suggested by Hair et al. (2013). Therefore, it is reasonable to infer that the proposed measurement model in the research achieved convergent validity.

In addition, the researchers used the Fornell-Larcker criteria to evaluate the discriminant validity of this study (Hair et al., 2013). The Fornell-Larcker criterion states that the square

Constructs	Items	Item Loading	AVE	CR	Cronbach's Alpha
Green employment design	GED1	0.855			0.904
	GED2	0.884			
	GED3	0.891	0.722	0.928	
	GED4	0.812			
	GED5	0.803			
	GWP1	0.833			
Green workforce	GWP2	0.909	0.751	0.022	0.890
planning	GWP4	0.889	0.751	0.923	0.889
	GWP5	0.833			
	GS1	0.819			0.829
Care an ataffin a	GS2	0.826	0.661	0.886	
Green stalling	GS3	0.828	0.661		
	GS4	0.779			
	GT2	0.776		0.898	0.850
Croop training	GT3	0.796	0.000		
Green training	GT4	0.871	0.689		
	GT5	0.873			
	GRS1	0.897			0.927
Green reward	GRS2	0.925	0.010		
system	GRS3	0.920	0.819	0.948	
	GRS4	0.877			
	CEP1	0.870			0.768
Circular Economy-	CEP3	0.859	0.684	0.866	
pased Performance	CEP4	0.748			

Variable	CEP	GRS	GWP	GED	GS	GT
CEP	0.827	-	-	-	-	-
GRS	0.400	0.905	-	-	-	-
GWP	0.409	0.233	0.867	-	-	-
GED	0.434	0.287	0.250	0.850	-	-
GS	0.684	0.283	0.329	0.330	0.813	-
GT	0.363	0.165	0.157	0.273	0.221	0.830

Table 3. Discriminant validity test result through the Fornell-Larcker criterion

*Note:* Diagonals (in bold) signify the square root of the AVE whereas rest of the values symbolize the corresponding inter correlations.

Variable	CEP	GRS	GWP	GED	GS	GT
CEP	-	-	-	-	-	-
GRS	0.467	-	-	-	-	-
GWP	0.494	0.259	-	-	-	-
GED	0.517	0.309	0.279	-	-	-
GS	0.851	0.322	0.385	0.377	-	-
GT	0.447	0.179	0.174	0.313	0.260	-

Table 4. Heterotrait-monotrait ratio (HTMT) analysis

*Note:* GED = Green employment design, GWP = Green workforce planning, GS = Green staffing, GT = Green Training, GRS = Green reward system, CEP = Circular Economy-based Performance.

Table 5. Predictive relevance of the endogenous construct

Endogenous Construct	Q <sup>2</sup> Value	R²	Adjusted R <sup>2</sup>
Circular Economy-based Performance	0.391	0.590	0.585

root of the AVE should be greater than the correlations between the latent variables of the corresponding off-diagonal variables. The current research successfully met these requirements, demonstrating satisfactory discriminant validity (refer to Table 3).

However, for determining discriminant validity, the Heterotrait-Monotrait Ratio (HTMT) analysis criteria work empirically more accurately than the Fornell-Larcker criterion, according to the recommendations of Henseler et al. (2015). Using HTMT analysis, this study demonstrated that all HTMT values are lesser than the threshold, 0.850, indicating sufficient discriminant validity (refer to Table 4), in line with suggestions made by Henseler et al. (2015). In addition, the measurement model's predictive significance was calculated using Stone-Geisser's  $Q^2$  approach. Pertinently, Hair et al. (2013) indicated that the cross-validation redundancy of the construct's score in  $Q^2$  should exceed zero (0). The present investigation also produced favorable results (please see Table 5). Nevertheless, the composite reliability ratings of the unobserved variables exceeded the threshold level of 0.70.

The study assessed the reliability and validity of the questions and then developed a structural model. The model included five dimensions of green HRM as independent variables and CEP as the dependent variable. The findings indicate that all elements or parts of green HRM contribute considerably to CEP, for instance, GRS  $\rightarrow$  CEP ( $\beta$  =

Paths	Std. Beta	Std. Error	T Statistics	P Values	Decisions
$GRS \rightarrow CEP$	0.155	0.154	4.722	0.000	Supported
$\mathrm{GWP} \rightarrow \mathrm{CEP}$	0.144	0.145	4.300	0.000	Supported
$GED \to CEP$	0.140	0.139	4.228	0.000	Supported
GS  ightarrow CEP	0.510	0.512	8.847	0.000	Supported
GT  ightarrow CEP	0.163	0.162	3.779	0.000	Supported

#### Table 6. Structural model

*Note:* GED = Green employment design, GWP = Green workforce planning, GS = Green staffing, GT = Green Training, GRS = Green reward system, CEP = Circular Economy-based Performance.

0.155, p < 0.05), GWP  $\rightarrow$  CEP ( $\beta$  = 0.144, p < 0.05), GED  $\rightarrow$  CEP ( $\beta$  = 0.140, p < 0.05), GS  $\rightarrow$  CEP ( $\beta$  = 0.510, p < 0.05), and GT  $\rightarrow$  CEP ( $\beta$  = 0.163, p < 0.05), which aligns with the initial premise. Table 6 presents the results of hypothesis testing conducted on the structural model.

The guideline of Hair et al. (2013) states that if a T statistic value is greater than 1.96, specifically T  $\geq$  1.96, it indicates a substantial direct impact or association between independent and dependent constructs at a 95% confidence level. The managers of green banking organizations in Bangladesh assert that all components of green HRM could expedite organizational CEP.

## 5. DISCUSSION AND IMPLICATIONS

This study investigated the impact of green HRM on the circular economy-focused performance of green banking companies in Bangladesh. The initial hypothesis of this research posits a positive correlation between GDJA and circular economy-based performance, which has been experimentally validated. The present result contributes to the existing research that previously examined and validated this correlation in diverse contexts (e.g., Yong et al., 2020; Geissdoerfer et al., 2017). The current study highlights the need to use green employment design to a greater extent by implementing a complete environment-focused HRM system at the corporate level (Al-Hawari et al., 2021). The second hypothesis demonstrated a clear and direct correlation between environment-based workforce planning and the circular economy-based performance of green banks. This current result aligns with previous research undertaken in the service industry (for example, Mandago, 2018), showing a favorable correlation between green workforce planning and circular economy-based performance as a significant strategic objective and fundamental business value. An innovative aspect of this research is the proposed connection between green staffing and circular economy-based performance in the third hypothesis.

This study provides additional empirical evidence supporting the positive correlation between green staffing and their effectiveness in waste reduction, energy efficiency promotion, and maximizing resource utilization, altogether circular economy-based performance. These findings align with the results of Marrucci et al. (2021), which indicate that green staffing has a beneficial impact on organizational performance within the circular economy framework. Besides, the present research findings support the fourth hypothesis, which posits a direct positive correlation between green training and circular economy-based performance. This finding indicates that staff that get green training are motivated to attain performance objectives interconnected with circular economy-based performance. Prior research has mainly focused on investigating the correlation between green training and sustainable circular performance (Saeed et al., 2019; Dumont et al., 2017). The fifth hypothesis of this study demonstrates the favorable impact of the environment-focused reward system on circular economy-based performance; green HRM practices may enhance the sustainability of organizations by effectively managing resources and using creative strategies to address avoidable waste and environmental risks.

In addition, this aligns with the findings of a recent study by Pinheiro et al. (2022), which validates that implementing green HRM principles leads to decreased expenses associated with energy waste minimization, promotes the effective utilization of resources, and boosts the organization's public image. This phenomenon may be elucidated by the fact that implementing green HRM practices can accelerate sustainable performance by substituting technology to diminish polluting emissions and minimize waste creation via re-use, recycling, reducing, and remanufacturing, hence enhancing the organization's overall efficiency. Thus, implementing a circular economy business model may be achieved by adopting various environmental management systems, such as Green HRM, particularly in service industries like green banking.

The present investigation has both theoretical and practical implications. This study has significant theoretical implications as it contributes to the advancement of research on the relationship between green HRM and circular economy-based performance in multiple aspects. This study is one of the unique efforts to experimentally verify the connections between green HRM and circular economy-based performance in the context of any emerging Southeast Asian Country, including the green banking sector. Subsequent investigations (such as Pinheiro et al., 2022; Amin & Salehin, 2021) might investigate similar postulated connections in other national circumstances and diverse sectors. Additionally, the present study addresses the deficiency in prior research that has shown the connection between green HRM and circular economy-based performance in green banking.

Exploring a more robust conceptual model is necessary to examine the potentially significant influence on the hypothesized connections between green HRM and circular economy-based performance. Additionally, this study enhances the existing knowledge in this area by establishing a connection between green HRM and sustainable performance utilizing circular economy practices within the service sector. This industry should be considered more when examining this correlation. Using a comprehensive approach, this study validates the existing literature's recognition of the selected current aspects of green HRM. Therefore, the present study is regarded as one of the handful that has successfully validated the beneficial connections between green HRM and circular economy-based performance. Moreover, the present study makes an additional contribution by using sophisticated analytic techniques to examine the study findings. This investigation adhered to the suggestion put forward by Hair et al. (2013) regarding the use of SEM analysis. This

approach was adopted to enhance the validity and reliability of our findings.

The current investigation has significant management implications. This research indicates that organizations in the service industry should adopt and encourage green HRM practices and circular economy-based performance models to address environmental concerns and circular performance effectively. The results suggest that circular economy-based performance might operate as a means by which green HRM practices enhance sustainable performance in service firms. The service sector can be crucial in the transition towards a circular economybased performance. Practitioners must understand that each sector of the economy needs a distinct strategy for circular economy-based performance (Pinheiro et al., 2022). Another significant consequence is the need to integrate a green effort at the strategic level. The research results demonstrate the significance of integrating green HRM with an organization's green strategic aim. Service sector organizations that include green practices in their strategic agenda are likely to decrease future compliance costs and achieve a competitive advantage by anticipating and meeting future regulatory and marketplace demands. When such commands lead to modifications in the competitive framework of the industry, being ahead of rivals may be a crucial factor in achieving long-term success and survival (Lim et al., 2022).

### CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH DIRECTIONS

This study aims to examine the correlation between the five most significant elements of green HRM and circular economy-based performance. The findings illustrate the favorable impacts of green HRM on circular economy-based performance in green banking. Furthermore, the findings validate the beneficial impact of every aspect of green HRM on circular economy-based performance. The findings of this investigation have significant consequences for both theoretical understanding and practical application. The present research supports the idea that implementing green HRM, and the circular economy-based performance model might enhance organizational sustainability, with significant theoretical implications. This study provided data supporting the significance of including green HRM within a broader environmental framework and using a circular economy-based performance model in the service sector to enhance the sustainable performance of organizations operating in this sector. Although the present study specifically examined the green banking industry in Bangladesh, it is essential to note that different outcomes may arise if the same paradigm is applied to other businesses and circumstances.

Nevertheless, more investigation is necessary to assess the postulated connections in other contexts. Thus, the research findings indicate that to fulfill the objectives of green HRM practices effectively, they should be

implemented at the strategic level. Subsequent investigations might expand upon this discovery by examining the extent of strategic integration of green HRM. Qualitative research methods such as in-depth interviews might be conducted with decision-makers at the highest management level to investigate this issue. Although the current study has made a significant contribution, it is essential to acknowledge its shortcomings. According to a prior study, implementing environmentally friendly practices in organizations differs across organizations, sectors, and nations (Lim et al., 2022). Based on this rationale, green HRM and circular economy-based performance implementation would also differ across other sectors within the service industry, including education, hospitality, and manufacturing organizations.

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### **APPENDIX A**

### Table A1. Questionnaire items adapted from literature sources

Source: A literature review.

Variables	Items	Literature source(s)			
Green Job Design and Analysis (GJDA)	<b>GJDA1:</b> In my organization, job positions enable employee involvement in environmental management activities				
	<b>GJDA2:</b> The job positions in our organization enable the acquisition of knowledge about environmental management	Yong et al. (2020); Yusliza et al. (2017)			
	GJDA3: In my company, Job positions demand knowledge about environmental management				
	<b>GJDA4:</b> In my organization, job positions are designed for employees contribute to green management activities	-			
	<b>GJDA5:</b> Employee Job positions in our organization requires knowledge and experiences about green management				
	GHRP1: Our HR develops programs to link with green goals				
Green HR Planning	<b>GHRP2:</b> Our company believes that HR's credibility comes from helping to make green- oriented planning				
(GHRP)	GHRP3: Our HR is an active participant in business green planning	Yusliza et al. (2017)			
	GHRP4: HR makes plans for the organization to accomplish business goals				
	GHRP5: HR is measured by its ability to help creating business green strategies				
	GRS1: Our company prefers to hire employees who have environmental knowledge				
	GRS2: All selection steps of our company consider environmental questions	-			
Green Recruitment and Selection (GRS)	<b>GRS3:</b> Our HR system attracts green job candidates who use green criteria to select Yong et al. (202 organizations Chen et al. (20				
	GRS4: Our HR department recruits employees who have green awareness				
	GRS5: Our company uses green employer branding to attract green employees				
	<b>GTD1</b> : The training programs in our company are developed to increase environmental awareness, skills, and expertise of employees				
	<b>GTD2:</b> Our training facilities are to create the emotional involvement of employees in environment management	Ren et al. (2020); Chen et al. (2021)			
Green Training and Development (GTD)	<b>GTD3:</b> We develop training programs based on environment management to increase environmental awareness, skills, and expertise of employees				
	<b>GTD4:</b> We have integrated training to create the emotional involvement of employees in our environment management				
	<b>GTD5:</b> Our training programs included green knowledge management education and knowledge for the development of preventative solution behavior				
	<b>GCOM1:</b> We are provided with financial rewards to recognize environmental performance				
	<b>GCOM2:</b> We are provided with non-financial rewards to recognize environmental performance				
Croop Componention	GCOM3: In our company, environmental performance is recognized publicly	Vong of al (2020)			
Green Compensation (GCOM)	<b>GCOM4:</b> We make green benefits (transport/travel) available rather than giving out pre- paid cards to purchase green products	Yong et al. (2020); Chen et al. (2021)			
	<b>GCOM5:</b> In our company, there are financial or tax incentives (bicycle loans, use of less polluting cars)				
	<b>GCOM6:</b> Our organization has recognition-based rewards in environment management for staff (public recognition, awards, paid vacations, time off, gift certificates)				
	CEP1: Our company has reduced atmospheric emissions (polluting gases)				
	CEP2: Our company has reduced the waste of water and energy				
Circular Economy-	<b>CEP3:</b> Our company has reduced the generation of solid waste	Pinheiro et al. (2022)			
CEP)	CEP4: Our company has increased its market share (market share)				
· ·	CEP5: Our company has launched products in new markets				
	<b>CEP6:</b> Our company has improved its image and reputation				