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Moderating Role of Green Employee Behaviour on the Relationship between Green HRM Practices, Green Leadership and Sustainable Performance in the Resources Economy based Public Firms of UAE

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Abstract

***Introduction**: Corporate sustainable performance is a key factor in determining green output in the modern age. This research examines the relationship between green human resource management practices, green leadership, and sustainable performance in public entities in the UAE while considering the moderating effect of employee green behaviour. **Methods**: A questionnaire was developed using items from existing literature and demographic factors such as age, gender, qualification, and work experience. A valid sample of 212 respondents was collected and analysed using a two-step approach, including measurement model and structural model assessments. **Results**: The findings confirm no reliability or validity issues in the latent constructs. Structural equation modelling results indicate a significant and positive impact of green recruitment and selection, green reward and pay, and green leadership on employee performance. Additionally, employee green behaviour significantly moderates the relationships between green recruitment and selection, green reward and pay, green leadership, and sustainable performance. **Conclusion**: The findings provide valuable insights for policymakers in public entities, emphasising the importance of selected variables in enhancing green and sustainable performance.*

Major Findings: *The study finds that green recruitment and selection, green reward and pay, and green leadership significantly enhance sustainable performance in UAE public sector organisations, while green training and development does not. Employee green behaviour positively moderates these relationships, emphasizing the critical role of eco-conscious workplace culture in achieving sustainability goals.*

Keywords: *Green HRM, Green Leadership, Public Entities, Sustainable Performance, UAE*

1.0 Introduction

Over the last two decades, a significant trend has been observed in the developed and developing economies in supporting environmental sustainability due to various reasons. For example, the UN's call for sustainable development actions has made it evident that ongoing environmental issues remain a big obstacle towards economic development while harming the standard of living of community members. In this regard, one example is linked with the higher level of carbon dioxide emissions in the natural environment, greenhouse gas emissions, and air pollution, like particulate matter[1,2]. However, such environmental pollution is caused by a range of economic activities conducted by human beings on the planet. More specifically, one explanation is the

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existence of manufacturing and other business-related activities, which are inevitably causing damage to Mother Earth; therefore, decision-makers and environmental activists are more concerned regarding the sustainable performance by governments and organisations, both public and private[3,4].

To date, the adverse impact on the natural environment can be reduced through various methods and procedures, for which the role of technological innovation, along with environmental policies, is quite beneficial. Furthermore, at the organisational level, such environmental issues can be transformed into sustainable performance while changing human behaviours and adopting and integrating human resource management practices with the Environmental Management System (EMS), while integrating them with Appelbaum[5]. Additionally, both individuals and their organisations are responsible for showing their obligations towards the natural environment and its resources in an eco-friendly way and participating in corporate sustainable/environmental performance[5]. Therefore, environmental performance is regarded as organisational efforts towards decarbonization and the environment[6]. Those firms which work for sustainable environmental performance develop a green image and are often regarded as environmentally responsible. However, a pro-sustainable workforce is vital to achieving environmental objectives as the employees' attitudes and behaviour determine the organisation's environmental performance[7]. In this regard, the dependability of the organisation's sustainable performance is based on green human resource management practices and other intangible practices, which may facilitate the participation of pro-environmental employees[8]. Green HR practices are an alignment between environmental management and human resource management[9,10].

The significance of green HRM practices can be examined while focusing on titles like green recruitment and selection, green training, and green rewards and pay. A range of researchers has suggested looking at the role of internal resources, specifically those entitled human resources, towards dealing with the firm's environmental performance[11]. The review of traditional literature back in the 90s started considering HRM practices as a key factor for improving environmental performance. At the same time, one of the reviews in the last decade by Daily and Huang[12] have also confirmed that HRM practices are positively associated with environmental performance where the titles like green hiring (*i.e.*, employees with some specific environmental competence and green sensitivity in dealing with the environment issues), green training (*i.e.*, developing environmental skills and competencies while engaging them in environmental and green behaviours), are a major contributor towards the sustainable output.

In today's environment, leadership plays a major role in the organisation's success or failure[13]. From the context of organisational leadership, two major categories are under major observation, which are entitled as transformational and transactional leadership. More specifically, researchers have cleared that transformational leadership is positively linked with higher organisational performance[14]. However, the term Green Transformational Leadership (GTFL) is explained as the behaviour of leadership where the key goal is to provide the employees with a clear vision and motivation while supporting them towards their development needs, along with the achievement of organisational environmental goals[15,16]. Another view regarding GTFL is that it motivates the employees to acquire a new body of knowledge while engaging them in the green product and process innovation and related activities, which allows the organisation to introduce such products or services in the market along with the improvement of environmental performance as well[17,18].

While observing the association between green HRM practices, green leadership and sustainable performance, it is ant to consider the employee's green behaviour and green motivation. The phenomenon of Green Employee Behaviour (GEB) at the workplace is conceptualised as voluntary behaviour required for positive environmental outcomes[19,] providing five components to reflect the green behaviour of employees. These are entitled to work for sustainability, conserving the resources, influencing others, avoiding harm, and taking the initiative. More specifically, the required GEB states that companies are working to improve their environmental performance while introducing those duties and jobs which are green[20]. On the other side, the voluntary green behaviour of the employees allows employees can choose to go beyond what is required by their organisation to reflect their environmental behaviour. More specifically, voluntary GEB is a green behaviour covering those initiatives by the persons which exceed the organisational expectation. This would indicate the setting of environmental interest,

originating environmental policies and programs, and encouraging others[21].

2.0 Literature Review

2.1 AMO Theory

The current study used the Abilities, Motivation and Opportunities (AMO) theory as an underpinning theory. The theory which focuses on three parameters, ability, motivation and opportunity, was proposed by Higgins and Coffey[22]. The theory is one of the applied theories in management studies, which explains the relationship between HRM practices and organisational performance[23]. In prior studies, scholars have used other theories as well to examine the HRM practices and performance relationship, *i.e.*, the resource-based view theory and contingency theory. However, the AMO framework is based on the foundation of industrial/organisational psychology literature[24]. It is also to be noted that, as compared to these theoretical approaches, AMO specifically focuses on HRM practices, its green dimensions, and their impact on firm performance[25]. The theory is supported by many scholars, and a number of articles have been published since 2000 which used the AMO framework[26]. The prime assumption of theory encompasses that practices such as ability stand for (selective hiring, training, education and developing talented staff), motivation (incentive system, performance-based payments) and opportunity (involving employees in EM initiatives) positively affect discretionary behaviour[27], which ultimately leads to higher performance[28]. In the modern literature, several studies have considered the role of AMO theory in determining the trends in green HRM practices. For example, Mittal and Dhar[29] have examined the nexus between environmental management and green HRM. Based on the theoretical foundation of AMO theory, the study has conducted a review of the literature while integrating green HRM practices with the people management and environmental outcomes within the organisation. The study findings reveal that green HRM practices play their remarkable role in motivating employees to be involved in environmental management practices. Moreover, authors further highlight the importance of how the organisation develop green capabilities among their employees while keeping in mind the environmental management practices. However, it is also stated that organisations are not fully utilising their Green HRM practices towards environmental management.

2.2 Sustainable Performance

In the contemporary environment, due to rapid advancement of globalisation, organisations are aiming to adopt green practices that can address the environmental concerns, as there is a dramatic change in customer needs. More specifically, the customers and the societies are now becoming more interested in the goods and services that are working in the environment[30]. Such trends have opened the debate for the term sustainable performance, which indicates the green organisational outcomes offering vital information related to natural influence, regulatory compliance, which further signifies the efficiency and effectiveness of the natural organisational actions[31]. Muisyo *et al.*[32] claim that the community has concerns about environmental issues and abrupt changes in external environmental forces, which have constrained all stakeholders to consider reconstruction to meet the challenges. The most applicable and accepted definition of sustainability is development that meets the needs of the present without compromising the ability of future generations to meet their own needs[33]. Pham and Paillé[34] observed sustainability from the perspective of the concept of the triple bottom line of Pham *et al.*[35]. This definition has the perspective of adopting business strategies and schemes that protect, sustain, and enhance the human and natural resources for the future generation while facilitating the needs of the enterprise and stakeholders today (p.362). Porter and Linde[36] have the most accepted perspective about the natural environment, society, and economic performance, which aligns with the triple bottom line concept. Economic performance is financial performance, while environmental performance refers to a reduction in environmental damages and protection from resource exploitation. Finally, social performance deals with the well-being of employees, customers, and stakeholders[37].

2.3 Green Recruitment

The available literature has provided a remarkable debate about the significance of the recruitment and selection as among the core components of HRM practices within the organisations; however, due to changing environmental concerns and more pressure from the ecological activists and community members, there is a growing

attention among the organisations to consider the green recruitment and selection[38]. The selected term of green recruitment and selection is entirely different from the traditional hiring and recruitment of employees[39,40]. This is because green recruitment and selection refers to hiring those employees who are sensitive to the environment and are more willing to commit to environmental performance and related outcomes[41,42]. Regardless of the economic growth or recession, the term green recruitment and selection plays a vital role within the organisation due to the fact that the most advanced environmental approach is people-intensive and tacit knowledge development. Green recruitment is a key domain of GHRM[43]. It features in attracting candidates who show high environmental competencies. It simplifies recruitment as these professionals know the importance of sustainable actions for organisations. Rovira *et al.*[44] state that job opening advertisements should contain transparent messages about environmental criteria and values that suggest green recruitment. Companies that are deemed green employers tend to attract talented specialists. Innumerable research studies and surveys substantiate that environmentally friendly companies are preferred by employees[45].

2.4 Green Training and Development

The green management system could be effectively administered if the enterprises befit employees with competencies[45]. Not all employees have suitable competencies when they are recruited. Green training generates green competencies and promulgates ecological awareness amongst employees. Therefore, organisations with GHRM should train all of their staff. As per Rubel *et al.*[46], green training is one of the sustainable human resource development tools. According to Schmit *et al.*[47], it is important to have environmental protection training programs tailored for each individual in an organisation. Moreover, employees should also be rewarded for green skill acquisition. Green Training (GT) is a pivotal part of Green HRM for multiple reasons[48]. All departments of an organisation should conduct employee training and development programs that discuss social and environmental issues. These training/ programs can range from training on the shop floor covering health and safety to strategic sustainability issues at executive management[48]. This helps to take cognisance of the company's activities for any environmental impacts[49], inculcate staff about energy conservation and waste reduction, and also bring about eco-literacy in the organisation[49]. According to Tang *et al.*[50], GT comprises three elements: awareness enhancement, knowledge management, and climate building.

2.5 Green Rewards and Pay

It is underlined in the field of green job performance that green rewards help achieve employee satisfaction, which ultimately contributes to better environmental performance[51]. Thus, by rewarding the employees for their involvement in environmental practices, the corporation can accomplish its green goals[24]. In addition, EM could benefit from reward and compensation systems if it emphasises engaging in eco-friendly behaviour. To acquire this, the designs of reward systems need to be in such a way that they reflect the management's commitment to EP, while strengthening and prompting the employee's environmental behaviour[12]. Employees' engagement increases by participating in eco-friendly initiatives, hence developing a more environmentally responsible attitude[43]. A reward program that motivates the employees' environmental behaviour should align with the results of green projects in the organisation or firm[52]. Green reward practices could be of any sort, *e.g.*, monetary-based EM rewards (bonus, cash), nonmonetary-based EM rewards (gifts, leaves), recognition-based EM rewards (awards, publicity, daily praise), and positive rewards in EM (positive feedback)[43]. These awards/ prizes are awarded to the most dedicated employees who put in efforts to achieve environmental goals and contribute to environmental sustainability.

2.6 Green Leadership

Businesses that are unaware of environmental issues can be considered obsolete[50]. Green entrepreneurs are also innovators who believe that a business they lead must adopt green values as part of its core identity[51]. These values can aid the business in gaining competitive advantages in the market[51]. Green leaders ought to have a positive attitude to steer the enterprise toward the vision of the future for the betterment of the environment[45]. Yong *et al.*[52] indicates that organisations must engage in new forms of eccentric management and leadership to match the prerequisites of ecological sustainability.

Consequently, green leaders must consolidate and strengthen their values and integrate them into eco-

friendly internal operations within the enterprise[46]. To put it in another way, green leaders should be able to direct their subordinates and lead the company toward achieving the long-term organisational vision of ecological sustainability[50]. Thus, green leaders must identify new business opportunities, reinforce the core values of sustainable development, lead organisational change, and achieve growth and competitive advantage for the firm[51]. The three aspects of the green leaders explored in this study are (a) openness to change, meaning that green leaders should be willing to make significant changes in the current social and organisational green values or ecologically unsustainable practices of the enterprise[52]; (b) Self-enhancement, meaning that green leaders must stick to self-transcendence values and attain the company's environmental goals; (c) Ethical and Eco motives, implying that the green leaders must make ethical decisions to engage in the greening of businesses[52].

2.7 Employee Green Behaviour

Yusliza *et al.*[53] refer to green employee behaviour as individual behaviour that tends to contribute to or reduce environmental aspects in a work context. Yong *et al.*[52] stated that green employee behaviour is essential to sustainable organisational performance. This measurable construct helps improve companies' environmental performance by giving environmental tasks to their employees[51]. Employee green behaviour is an individual activity that minimises the harmful impact that is present in the environment. Yusliza *et al.*[53] employee green behaviour activities include saving energy, utilising resources efficiently, reducing waste, *etc.* Yong *et al.*[52] argued that the entire success of the green approach could only be successful when employee behaviour is aligned with the green goals.

Employee green behaviour is the pro-environmental attitude instilled in and practised by the workforce in organisations. Various environment-centric behaviours and attitudes characterise it. According to Tang *et al.*[50], these are measurable actions and contribute towards environmental protection and sustainability. Moreover, these may be externally enforced or voluntarily adopted. Taking care of the environment is of great importance because it greatly impacts the core value formation and task performance at the workplace. According to[53], many companies are looking for ways and strategies to incorporate EGB into their organisational cultures. These range from evolving organisational policies according to the vision of EGB, changing work methods, and choosing responsible and sustainable alternatives[54]. EGB aligns with organisational citizenship, where employees take ownership of the social, psychological, and material environment[53]. Figure 1 shows the framework of the study.

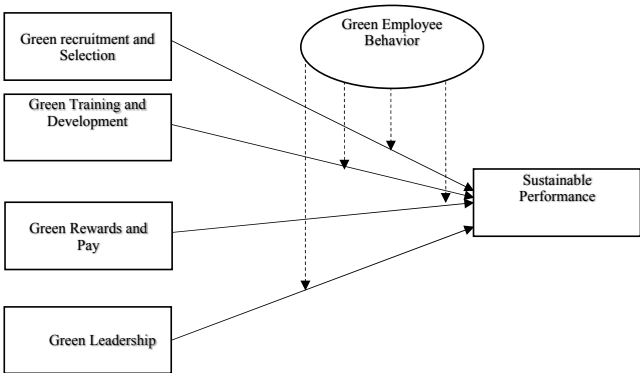


Figure 1. Research framework.
Note: Solid lines show the direct relationship, and dotted lines show the indirect relationship.

3.0 Research Methodology

This study focuses on the questionnaire approach for collecting data from the public entities of the UAE. Table 1 provides the description related to the sample being targeted, response and valid response rate. As the nature of the problem (sustainable performance) has its organisational context, and for this reason, the study population under current research is all the public sector organisations working in the region of the UAE. As per the data from the official web portal of the Government of the UAE[53], it is found that currently, there are 224 public sector entities working in the region of the UAE. Therefore, the total population under the present study has been regarded as 224. More specifically, there are several authorities working under the shadow of the public sector

Table 1. Data filtration and response rate

Questionnaire	Frequency	Percentage
Total Distributed and Returned	224	100
Missing Cases	7	3.13
Outliers Detected	5	2.23
Unusable Cases	12	5.35
Usable for Analysis	212	94.64

of the UAE. These authorities include Accountability authority, agriculture and food safety, airport company, center for technical and vocational education and training, fund for development, Housing authority, Media company, national oil company, public health center, securities exchange, Department of civil aviation, department of economic development, and many others[54].

4.0 Data Analysis

4.1 Demographic Analysis

The demographic outcomes have been well presented through the given Figures 2-5.

4.2 Descriptive Statistics

The descriptive analysis in this study was conducted using SPSS, which involved the computation of various indicators for each construct. Descriptive statistics, such as mean, standard deviation, skewness, and kurtosis, provided valuable insights into the data distribution[55]. Descriptive statistics for the distributions of the variables are shown in Table 2. Using the standard deviation and mean, the central tendency of the data was found. This gave an idea of each component's average number and range of responses. The findings indicate that most of the items have their mean score of above three and approaching to four. On the other side, the relative value of the standard deviation also indicates that most of the items have shown a deviation of above 1 but less than 2.

4.3 Assessment of the Measurement Model (MM)

The measurement model assessment has been conducted through Smart PLS 4 while focusing on the reliability of the latent constructs, loadings of the relative items, composite reliability, AVE and discriminant validity. Figure 6 shows the outcome for the measurement model, showing the factor loadings of the relative items.

The accuracy and precision of a measurement scale are paramount considerations in data analysis, and instrument reliability plays a crucial role in ensuring their attainment. Establishing instrument reliability is vital to ensure that the

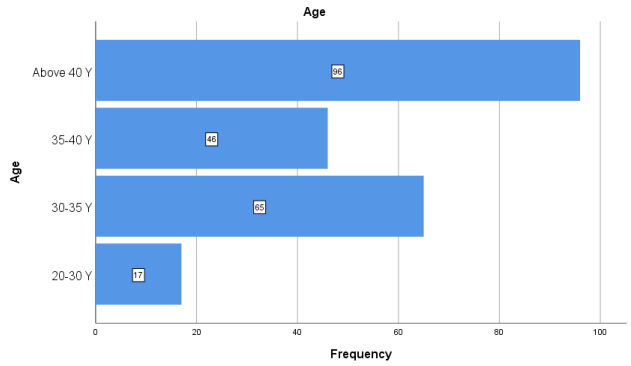


Figure 2. Bar charts of age.

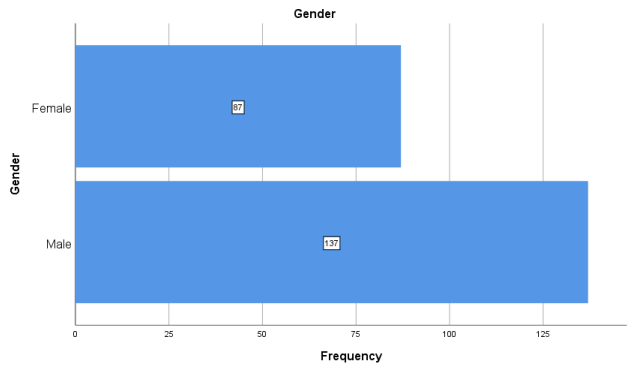


Figure 3. Bar charts of gender.

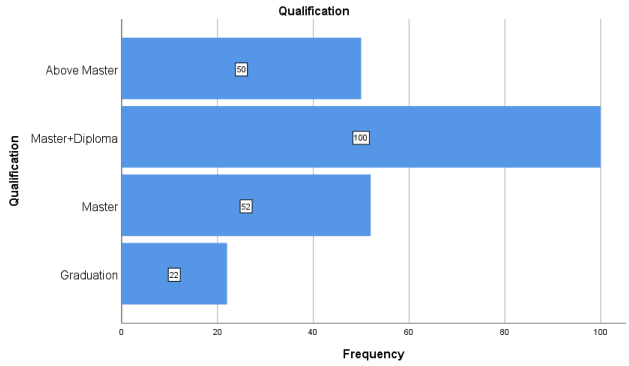


Figure 4. Bar charts of qualifications.

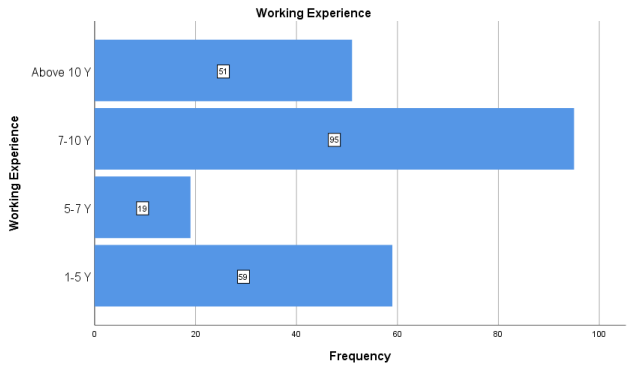


Figure 5. Bar charts of working experience.

Table 2. Descriptive statistics

Items	Minimum	Maximum	Mean	Std. Dev.	Skewness	Kurtosis
GRR2	1.00	5.00	3.533	0.939	0.388	-0.840
GRR3	1.00	5.00	3.669	0.865	0.282	-0.423
GTD1	1.00	5.00	3.801	0.955	0.341	-0.496
GTD2	1.00	5.00	2.795	0.903	0.183	-0.525
GRP1	1.00	5.00	3.350	1.156	-0.367	0.536
GRP2	1.00	5.00	3.416	0.966	-0.725	0.085
GRP3	1.00	5.00	3.180	1.051	-0.283	-0.696
GRP4	1.00	5.00	3.306	1.060	-0.444	0.574
GLS1	1.00	5.00	2.552	1.059	0.233	-0.654
GLS2	1.00	5.00	3.565	1.111	0.547	-0.518
GLS3	1.00	5.00	3.593	1.202	0.528	0.657
GLS5	1.00	5.00	3.524	1.066	0.395	-0.310
GLS6	1.00	5.00	3.432	1.105	0.711	0.179
SPR1	1.00	5.00	3.580	1.051	0.329	-0.494
SPR2	1.00	5.00	3.558	1.059	0.506	-0.414
SPR4	1.00	5.00	3.521	1.042	0.553	0.296
SPR5	1.00	5.00	4.008	1.090	0.334	-0.752
EGB1	1.00	5.00	3.502	1.321	-0.542	-0.915
EGB2	1.00	5.00	3.562	1.250	-0.444	0.923
EGB3	1.00	5.00	3.508	1.247	-0.541	-0.781
EGB4	1.00	5.00	3.429	1.290	-0.483	-0.875

Note: EGB: Green Employee Behaviour, GLS: Green Leadership, GRP: Green Rewards and Pay, GRR: Green Recruitment and Selection, GTD: Green Training and Development, SPR: Sustainable Performance. Items with the lower factor loadings have been removed.

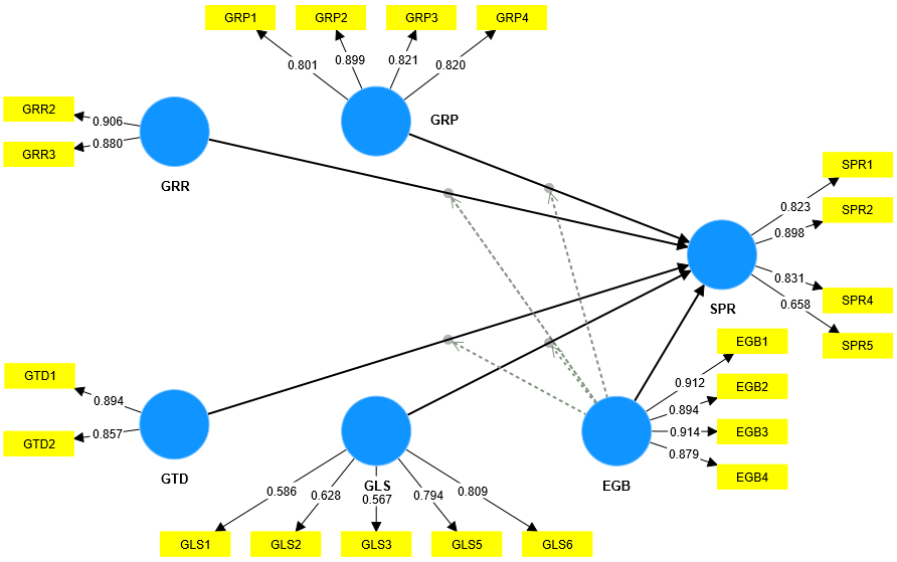


Figure 6. Measurement model output.

indicators employed to measure a specific construct yield consistent and genuine results. A research instrument is deemed reliable if it consistently produces the same outcomes under consistent conditions[17]. Moreover, a key reliability aspect is that all measurements should capture the same underlying concept and faithfully represent the intended constructs. A higher level of reliability in a scale indicates greater precision and accuracy in measurements. Furthermore, high reliability signifies that the indicators effectively capture the fundamental essence of the corresponding field of research. In practice, two common indicators, α and CR, are employed to assess the reliability of a scale[55]. As per the findings under Table 3, the outer loadings are above 0.50, whereas the alpha scores as also above 0.70. Moreover, the convergent validity in terms of AVE is also achieved.

4.4 Assessment of Structural Model

Here, we provide the results of experiments designed to evaluate direct and indirect (moderation) hypotheses. Table 4 details all of these. The findings show that there is a significant and positive impact of GRR on SPR, where the Tvalue is 3.112, significant at 1%. However, the impact of green training and development on the SPR is found to be positively insignificant under full sample consideration. Additionally, our findings report that green reward and pay and green leadership are positively and significantly linked with the sustainable performance of the public firms in the UAE.

As per the stated findings, the benefit of GRR is the development of qualified and skilled personnel in the field of sustainability. Public sector organisations have access to talent that may contribute creative approaches

Table 3. Model measurement: Reliability and convergent validity

Constructs	Items	Outer loadings	VIF	α	rho_A	CR	AVE
Employee Green Behaviour	EGB1	0.913	2.357	0.922	0.930	0.944	0.810
	EGB2	0.895	2.961				
	EGB3	0.913	2.290				
	EGB4	0.878	2.912				
Green Leadership	GLS1	0.592	1.803	0.747	0.791	0.813	0.570
	GLS2	0.631	1.992				
	GLS3	0.571	2.069				
	GLS5	0.791	1.973				
	GLS6	0.805	1.978				
Green Reward and Pay	GRP1	0.801	1.869	0.858	0.902	0.903	0.699
	GRP2	0.898	2.300				
	GRP3	0.821	1.880				
	GRP4	0.821	2.050				
Green Recruitment and Selection	GRR2	0.908	1.551	0.746	0.756	0.887	0.797
	GRR3	0.878	1.551				
Green Training and Development	GTD1	0.895	1.403	0.798	0.708	0.868	0.767
	GTD2	0.857	1.403				
Sustainable Performance	SPR1	0.800	1.941	0.819	0.825	0.882	0.653
	SPR2	0.889	2.678				
	SPR4	0.836	2.068				
	SPR5	0.694	1.393				

Note: EGB: Green Employee Behaviour, GLS: Green Leadership, GRP: Green Rewards and Pay, GRR: Green Recruitment and Selection, GTD: Green Training and Development, GTM: Green Motivation, SPR: Sustainable Performance. The items entitled GRR1, GTD3, GTD4, GLS4, SPR3, GTM5, and EGB5 were deleted due to lower factor loadings.

to environmental concerns by actively pursuing applicants with knowledge in managing the environment, renewable energy, and other related areas[56]. This specialist workforce aids in developing and implementing green strategies, resulting in more successful and impactful sustainability projects. As a result of the effective execution of environmentally responsible practices, the organisation's SPR improves. GRR also has a favourable impact on the reputation of UAE public sector entities. Organisations that embrace green principles are perceived more positively as sustainability becomes an increasingly essential concern for citizens, investors, and other stakeholders[57]. Organisations improve their image as socially and ecologically responsible enterprises by committing to environmental stewardship through GRR. This strong reputation attracts stakeholders that value sustainability, which may result in improved support from the public[57], enhancing the organisation's SPR.

GRR can result in cost reductions for public sector organisations and reputation benefits. Employees who are environmentally sensitive and knowledgeable about resource management can help reduce energy use, trash output, and total resource usage. These efficiencies result in cash savings, which can then be used to fund further sustainability efforts or development projects[58]. Cost-effective green practices contribute to the organisation's SPR by guaranteeing optimal resource utilisation and appropriate financial management. Based upon the above findings, H1 is accepted, which claims that Green Recruitment and Selection (GRR) significantly affects Sustainable Performance (SPR).

GRP positively impacts SPR (beta: 0.081, t-value: 1.822). The impact is significant at a 10% level of significance. As a result, the H3 of GRP's significant influence on SPR is maintained. GRP can have a major and far-reaching positive impact on the SPR of public sector enterprises in the UAE. Green rewards and pay are rewards and systems that recognise and compensate employees for environmentally friendly behaviour and contribute to the organisation's SPR. Introducing green aspects into public sector firms' rewards and compensation systems can create a strong alignment between employee behaviours and environmental targets[52], resulting in improved SPR. Therefore, H3 is supported, which indicates that Green rewards and pay (GRP) significantly affect SPR.

The analysis also suggests that GLS significantly influences SPR (beta: 0.306, t-value: 5.553). This result lends support to H4 of GLS's significant effect on SPR. GLS is critical in driving SPR inside the UAE public sector organisations. GLS is a strategy for leadership that emphasises environmental sustainability, ethical standards, and responsible decision-making in all facets of business operations. Adopting GLS concepts in the public sector can have a wide range of positive effects on their SPR. Firstly, GLD sets an example for the company's sustainability activities and fosters employee dedication to environmental responsibility. Sustainability-focused leaders display real care for environmental issues and serve as role models for the rest of the organisation. This commitment from senior management develops an environmental consciousness culture in which workers at all levels are encouraged to contribute to environmentally friendly procedures and take responsibility for the company's environmental goals[58]. Second, GLS promotes innovation and the adoption of environmentally responsible practices. Leaders committed to sustainability are more likely to encourage and support innovative activities that contribute to SPR. This can involve implementing energy-efficient technologies, trash reduction programs, and environmentally conscious purchasing habits[58]. GLS may help public sector organisations become positive environmental change agents and create new norms for sustainable practices in the UAE. For this reason, H4 is accepted, which claims that Green Leadership (GLS) significantly affects SPR.

4.5 Analysing the Moderating Effects

H5a: Green employee behaviour (EGB) moderates the relationship between GRR and SPR.

Table 4 (H5a-H5d) presents the analysis results on the influence of EGB on the relationship between GHRM practices and SPR. In the direct effects section of Table 4.8, the coefficient for EGB (0.096) is statistically significant. This indicates that EGB has a significant impact on SPR. Furthermore, the Table also shows the coefficient for the interaction term between EGB and GRR, which is 0.179. The corresponding t-value of 1.842 suggests that the coefficient is statistically significant at a 10% significance level. These results demonstrate that EGB significantly moderates the relationship between GRR and SPR. This means that the presence of EGB strengthens the positive effect of GRR on SPR. The findings from Table 4.8 support H5a. The study's findings show that EGB substantially moderates the relationship between GRR and SPR.

This suggests that the presence and development of environmentally conscious behaviours among employees strengthens GRR's positive influence on SPR inside UAE public sector organisations.

The significance of this result resides in its implications for human resource strategic management in the context of sustainability. GRR processes are intended to attract and select employees with a strong environmental focus and are committed to SPR[58]. Public sector enterprises hope to establish a workforce aligned with their sustainability objectives. They can effectively contribute to environmentally responsible operations by incorporating green principles and practices into recruitment[58].

On the other hand, the study's finding of EGB's moderating impact adds an important layer to this relationship. It implies that only applying GRR processes may not achieve optimal SPR[59]. Instead, as represented in environmentally conscious practices, actual employee behaviour and actions are critical in establishing the extent to which GRR positively promotes SPR. GRR efforts can be maximised by organisations that promote and encourage EGB. Employees who actively engage in environmentally conscious procedures and behaviours, such as reducing waste, conserving energy, and responsible utilisation of resources[55], contribute to the overall SPR of the firm. As a result, government agencies in the UAE should prioritise GRR methods and the development of an ecologically conscious culture among their personnel. This could be accomplished through targeted training, public awareness campaigns, and incorporating sustainable objectives into daily work routines.

H5b: Green employee behaviour (EGB) moderates the relationship between GTD and SPR.

Table 4 (moderating effects) reveals that the interaction term between EGB and GTD is statistically insignificant, with a beta coefficient of 0.010 and a t-value of 0.241. This outcome indicates that EGB does not moderate between GTD and SPR. Consequently, H5b is rejected. The above finding implies that the existence or absence of EGB has no discernible effect on the impact of GTD programs on SPR. While GTD initiatives aim to improve employees' understanding of the environment, skills, and awareness, the study's findings suggest that these efforts may be independent of employees' degree of green behaviour[59]. To put it another way, the effectiveness of GTD programs in contributing to SPR appears to be independent of employees' actual participation in ecologically friendly practices. This study could have ramifications for the design and execution of GTD efforts in government agencies. It implies that while planning and evaluating the achievements of their GTD activities, organisations should not rely exclusively on employees' existing green practices[59]. The emphasis should instead be on developing extensive and organised training programs that target specific sustainable goals and objectives[59]. Furthermore, the findings emphasise the importance of considering additional aspects that may influence the relationship between GTD and SPR. For example, the organisation's culture, leadership support, and the incorporation of sustainability concepts into overall corporate strategy may all play important roles in determining the performance of GTD programs[58].

H5c: Green employee behaviour (EGB) moderates the relationship between GRP and SPR.

Based on the analysis presented in Table 3 (moderating effects), it is evident that the product term involving EGB and GRP is statistically significant, with a beta coefficient of 0.072 and a t-value of 1.849. This significant result indicates that EGB plays a substantial moderating role between GRP and SPR. As a result, H5c is supported. Thus, the study's findings show that EGB strongly moderates the link between GRP and SPR in UAE public sector enterprises. This suggests that the presence of EGB amplifies the favourable influence of GRP on the SPR.

GRP systems are intended to incentivise and compensate employees for practising environmentally responsible conduct and contributing to the organisation's SPR. According to the study's findings, when employees actively display green behaviour, green rewards, and remuneration are more effective in boosting SPR[59]. In other words, when green incentives are linked to the intended eco-friendly actions, the alignment between the company's environmental objectives and employee behaviour is reinforced. The moderating influence of EGB on the connection between GRP and SPR emphasises the necessity of cultivating an environmentally conscious culture inside the organisation[60]. Employees are more likely to embrace sustainable practices and match their behaviour with the organisation's environmental goals when they are rewarded and recognised for their green efforts[60]. This, in turn, adds to the organisation's enhanced SPR outcomes.

Furthermore, the study's findings highlight the importance of ongoing monitoring and evaluation of

the efficiency of GRP systems in driving SPR. Regular evaluations of EGB and the impact of GRP on performance can assist firms in fine-tuning their reward programs and ensuring that they stay in line with the organisation's sustainability objectives[61].

H5d: Green employee behaviour (EGB) moderates the relationship between GLS and SPR.

Based on the results presented in Table 4.8, it is evident that the interaction term involving EGB and GLS is statistically significant, with a beta coefficient of 0.067 and a t-value of 2.423 at a 5% significance level. This significant finding indicates that EGB plays a significant moderating role in the relationship between GLS and SPR. Therefore, H5d, which suggests that EGB moderates the relationship between GLS and SPR, is supported. This research implies that EGB enhances the favourable impact of GLS on the organisation's SPR.

GLS entails adopting environmentally sensitive actions and promoting organisational sustainability projects. The study's findings reveal that when employees actively exhibit green behaviour, green leadership's efficacy in fostering SPR improves (61). This suggests that when leaders actively encourage and support environmentally friendly behaviours, the congruence between the business's sustainability vision and employee behaviour is reinforced[56]. The role of EGB in moderating the interaction between GLS and SPR emphasises the significance of employee participation in initiatives related to sustainability. Employees are more likely to be inspired and encouraged to follow suit if they see their leaders advocating green activities and reflecting eco-friendly principles[62]. This produces a positive feedback loop in which GLS fosters green behaviour among employees, resulting in enhanced organisational SPR. Furthermore, the findings emphasise the need for a supportive workplace culture that promotes and recognises green behaviour. Establishing a workplace that values and recognises environmentally friendly behaviours can strengthen the influence of GLS on SPR. Green incentives and feedback mechanisms can be implemented by organisations to promote and reinforce green behaviour among employees[62].

5.0 Conclusion

The study mainly focuses on the nexus between green HRM practices, green leadership and sustainable performance, moderated by the employee green behaviour among the public entities of the UAE. The study findings provide evidence that, except green training and development, there is a significant and positive impact of green recruitment and selection, green reward and pay, and green leadership are positively and significantly linked

Table 4. Hypotheses testing

Path	Coefficients	Std. Dev.	f^2	T-Stat.	Remarks
Direct Effects					
GRR → SPR	0.132	0.042	0.430	3.112***	H_1: ☑
GTD → SPR	0.006	0.048	0.396	0.117	H_2: ☒
GRP → SPR	0.081	0.045	0.324	1.822*	H_3: ☑
GLS → SPR	0.306	0.055	0.109	5.553***	H_4: ☑
EGB → SPR	0.096	0.044	0.066	2.192**	---
Moderating Effects					
EGB x GRR → SPR	0.179	0.043	0.382	1.842*	H_{5a}: ☑
EGB x GTD → SPR	0.010	0.042	0.290	0.241	H_{5b}: ☒
EGB x GRP → SPR	0.072	0.039	0.413	1.849*	H_{5c}: ☑
EGB x GLS → SPR	0.067	0.028	0.165	2.423**	H_{5d}: ☑

Note: ***, ** and * indicate level of significance at 1%, 5% and 10% respectively; f^2: effect size, Std. Dev.: standard deviation, EGB: green employee behaviour, GLS: green leadership, GRP: green rewards and pay, GRR: green recruitment and selection, GTD: green training and development, SPR: sustainable performance.

with sustainable performance. Moreover, the results also reveal that EGB significantly moderates the relationship between green recruitment and selection, green reward and pay, green leadership and sustainable performance among the public sector organisations of the UAE. The results also highlight the significant benefits that eco-friendly leaders, incentives, and HR practices have on SPR. This supports the idea that public organisations in the UAE can benefit socially and environmentally by adopting sustainable HRM practices and efficient leadership strategies. The study also emphasises how vital the EGB is to SPR. SPR depends on a solid commitment to sustainability and green behaviour in the workplace. This highlights the need to encourage an ecologically conscious business culture and boost eco-friendly behaviours among employees. These findings have valuable implications. Public sector organisations in the UAE should implement green HRM practices, cultivate GLS competencies, and promote EGB to improve their long-term performance outcomes. Organisations may develop an environmentally aware and socially responsible workforce by integrating sustainability into hiring, rewarding, and leadership practices. Fostering GLS and implementing sustainable HR practices can help create an organisational culture that aligns with the UAE's broad sustainability objectives. The study also underlines the importance of rewarding eco-friendly behaviours to motivate staff and improve overall sustainability performance. Organisations can instill a feeling of purpose and commitment in their workforce by providing incentives for sustainability-related initiatives and recognising employees' contributions to environmental and social responsibility.

6.0 References

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