GREEN HUMAN RESOURCE MANAGEMENT PRACTICES, GREEN LEADERSHIP, AND SUSTAINABLE ENVIRONMENTAL PERFORMANCE: MODERATING ROLE OF GREEN EMPLOYEE BEHAVIOR AND GREEN MOTIVATION FROM PUBLIC ENTITIES OF UAE

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by

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LIST OF ABBREVIATIONS

ADNOC	Abu Dhabi National Oil Company
AMO Theory	Abilities, Motivation, and Opportunities (AMO) Theory
AVE	Average Variance Extracted
e	Error
CA	Cronbach's Alpha
CFA	Confirmatory Factor Analysis
CMB	Common Method Bias
CR	Composite Reliability
EFA	Exploratory Factor Analysis
EGB	Green Employee Behavior
EMS	Environmental Management System
GB	Green Behavior
GDP	Gross Domestic Product
GHRM	Green Human Resource Management
GHRMP	Green Human Resource Management Practices
GL	Green Leadership
GLS	Green Leadership Style
GRP	Green Recruitment and Selection
GRR	Green Rewards and Pay
GT	Green Training
GTD	Green Training and Development
GTM	Green Motivation
GTFL	Green Transformational Leadership
HR	Human Resources

HRM	Human Resource Management
HTMT	Heterotrait-Monotrait Ratio of the Correlation
KMO	Kaiser-Meyer-Olkin
MM	Measurement Model
n	Sample
N	Population
NRB	Non-Response Bias
OCBE	Organizational Citizenship Behavior for the Environment
PCA	Principal Component Analysis
PLS-SEM	Partial Least Squares Structural Equation Modelling
SD	Standard Deviation
SEM	Structural Equation Modeling
SM	Structural Model
Smart PLS	Smart Partial Least Squares
SPR	Sustainable Performance
SPSS	Statistical Package for the Social Sciences
UAE	United Arab Emirates
UN	United Nations
VIF	Variance Inflation Factor

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Appendix A Questionnaire

AMALAN PENGURUSAN SUMBER MANUSIA HIJAU, KEPIMPINAN HIJAU, DAN PRESTASI ALAM SEKITAR MAPAN: PERANAN TINGKAH LAKU PEKERJA HIJAU DAN MOTIVASI HIJAU SEBAGAI PENYEDERHANA DALAM ENTITI AWAM DI UAE

ABSTRAK

Prestasi lestari korporat dianggap sebagai pemain utama dalam menentukan hasil hijau pada zaman moden ini. Kajian kuantitatif ini menyelidik kesan amalan Pengurusan Sumber Manusia Hijau (GHRM) dan Gaya Kepimpinan Hijau (GLS) terhadap Prestasi Lestari (SPR) dalam organisasi awam di UAE. Walaupun isu kelestarian semakin mendapat perhatian ramai, terdapat jurang yang ketara dalam pemahaman tentang bagaimana amalan GHRM mempengaruhi SPR serta peranan penyederhana Perilaku Pekerja Hijau (EGB) dan Motivasi Hijau (GTM). Tujuan utama kajian ini adalah untuk menjelaskan hubungan-hubungan ini dan implikasinya terhadap amalan kelestarian. Metodologi kuantitatif telah digunakan, dan data telah dikumpulkan melalui soal selidik yang diedarkan kepada pelbagai organisasi awam dia UAE. Dapatan kajian menunjukkan bahawa Pemilihan dan Pengambilan Hijau (GRR) (H1) dan Ganjaran dan Pembayaran Hijau (GRP) (H3) telah meningkatkan SPR. Pada masa yang sama, GLS (H4) juga memainkan peranan penting sebagai pendekatan kepimpinan transformasional. Walau bagaimanapun, hubungan antara Latihan dan Pembangunan Hijau (GTD) (H2) dan SPR tidak disokong, mencadangkan bahawa latihan sahaja tidak mencukupi untuk mempromosikan hasil lestari tanpa tindakan pelengkap yang lain. Dalam meneliti kesan perantisan, EGB didapati meningkatkan hubungan antara GRR (H5a), GRP (H5c), dan GLS (H5d) dengan SPR, menekankan kepentingan menggalakkan perilaku bertanggungjawab terhadap alam

sekitar dalam kalangan pekerja. Sebaliknya, tiada kesan penyederhana EGB yang signifikan terhadap GTD dengan SPR yang diperhatikan (H5b). Selain itu, GTM tidak secara signifikan mempengaruhi hubungan antara GRR dan SPR (H6a). Walau bagaimanapun, GTM secara signifikan mengubah kesan GTD terhadap SPR (H6b) dan meningkatkan kesan GRP terhadap SPR (H6c). Tambahan pula, GTM secara positif mempengaruhi hubungan antara GLS dan SPR (H6d). Hasil ini menekankan peranan penting yang dimainkan oleh motivasi pekerja dalam mencapai hasil lestari dalam organisasi awam. Kajian ini memberikan sumbangan teori yang signifikan dengan meningkatkan pemahaman tentang SPR dalam kerangka Kemampuan-Motivasi-Peluang (AMO), terutamanya dalam konteks organisasi sektor awam di UAE. Ia menekankan kepentingan pendekatan holistik terhadap kelestarian. Dari sudut praktikal, kajian ini percaya akan keberkesanan GRR dan GRP dalam memupuk tenaga kerja untuk terlibat dalam amalan lestari secara aktif, sekali gus memperbaiki prestasi alam sekitar secara keseluruhan. Di peringkat masyarakat, penemuan ini menunjukkan bahawa organisasi awam berfungsi sebagai pemangkin untuk kelestarian, mempengaruhi sektor-sektor lain dengan memperlihatkan amalan hijau yang berjaya dan menyumbang kepada matlamat kelestarian nasional dan antarabangsa. Akhirnya, penekanan terhadap motivasi dan perilaku pekerja telah membantu potensi organisasi awam untuk memacu perubahan sistemik, memupuk budaya kelestarian yang boleh memberi manfaat alam sekitar yang jauh menjangkaui.

GREEN HUMAN RESOURCE MANAGEMENT PRACTICES, GREEN LEADERSHIP, AND SUSTAINABLE ENVIRONMENTAL PERFORMANCE: MODERATING ROLE OF GREEN EMPLOYEE BEHAVIOR AND GREEN MOTIVATION FROM PUBLIC ENTITIES OF UAE

ABSTRACT

Corporate sustainable performance is considered a key player in determining green output in the modern age. This quantitative study examines the impact of Green Human Resource Management (GHRM) practices and Green Leadership Style (GLS) on Sustainable Performance (SPR) in public organizations in the UAE. Despite growing interest in sustainability, a significant gap remains in understanding how specific GHRM practices affect SPR and the potential moderating roles of Green Employee Behavior (EGB) and Green Motivation (GTM). The primary aim of this study is to elucidate these relationships and their implications for sustainable practices. A quantitative methodology was employed, and data were collected through survey questionnaires distributed to employees in various public organizations. The analysis yielded mixed results across the hypothesized relationships. Significant positive effects were found, indicating that Green Recruitment and Selection (GRR) (H1) and Green Rewards and Pay (GRP) (H3) substantially enhance SPR. At the same time, GLS (H4) also plays a crucial role as a transformational leadership approach. However, the relationship between Green Training and Development (GTD) (H2) and SPR was not supported, suggesting that training alone is insufficient to promote sustainable outcomes without complementary actions. In examining moderating effects, EGB was found to enhance the relationships between GRR (H5a), GRP (H5c),

and GLS (H5d) with SPR, underscoring the importance of fostering environmentally responsible behaviors among employees. Conversely, no significant moderating effect of EGB on GTD with SPR was observed (H5b). Additionally, GTM does not significantly moderate the relationship between GRR and SPR (H6a). However, GTM significantly moderates the impact of GTD on SPR (H6b) and enhances the effect of GRP on SPR (H6c). Additionally, GTM positively moderates the relationship between GLS and SPR (H6d). These results underscore the crucial role that employee motivation plays in achieving sustainable outcomes within public organizations. This study makes significant theoretical contributions by enhancing the understanding of SPR within the Ability-Motivation-Opportunity (AMO) framework, particularly in the context of public sector organizations in the UAE. It emphasizes the importance of holistic approaches to sustainability. Practically, it highlights the effectiveness of GRR and GRP in fostering a motivated workforce that actively engages in sustainable practices, thereby improving overall environmental performance. On a societal level, the findings suggest that public sector organizations serve as catalysts for sustainability, influencing other sectors by showcasing successful green practices and contributing to national and international sustainability goals. Ultimately, the emphasis on employee motivation and behavior highlights the potential for public organizations to drive systemic change, fostering a culture of sustainability that can yield far-reaching environmental benefits.

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter primarily provides initial information on the study variables, topic, and targeted industry. This section begins its discussion by providing background support for the key arguments outlined in the problem statement presented in Section 1.3. Furthermore, based on the background and problem statement of this study, direct and indirect research questions and objectives are presented in sections 1.4 and 1.5, respectively. Additionally, the significance of the study, based on eight aspects, is presented in Section 1.6. Meanwhile, this chapter also outlines the study scope, defines key terms, and presents the thesis structure, covering sections 1.7 to 1.8. Lastly, the chapter summary is covered.

1.2 Study Background

It is believed that the sustainability title has now become a critical issue in the contemporary environment for the betterment of the future (Buchari et al., 2024; Istrate et al., 2017). It is directly linked to the business communities in the world economy. Various social, physical, biological, and environmental factors are linked to organizations as they are affected by them (Pislaru, Herghiligiu, & Robu, 2019). It is essential and natural for organizations to play their role in the sustainability of their respective region. The term "sustainability," as considered by private and public sector organizations, represents a consensual solution for those individuals and policymakers primarily responsible for business decision-making processes (Engert & Baumgartner, 2016).

Sustainability is integrated into decision-making processes in both private and public sector organizations through a framework that balances environmental, social, and economic factors. This involves aligning organizational strategies with sustainability goals, such as minimizing ecological impact, enhancing social equity, and ensuring economic viability. Policies and practices are enacted that promote resource efficiency, socially responsible investments, and stakeholder engagement, enabling organizations to evaluate the long-term implications of their decisions. By embedding sustainability into their core operations, organizations can develop comprehensive strategies that address the needs of the present while safeguarding the environment and society for future generations.

Meanwhile, sustainability also creates a sense of synergy between plants, people, and profit (Pislaru, Herghiligiu, & Robu, 2019). Organizations are directly encouraged by the United Nations (UN) to adopt and consider the principles of sustainable development practices in their governance mechanism (Declaration Rio, 1992; ten Have & Neves, 2021). More specifically, with the utilization of such principles, corporations may achieve their objectives regarding the protection of the natural environment, economic prosperity, and social equity, where the results would be reflected through transparency while reporting the Sustainable Development Agenda (Heemskerk & van der Kooye, 2003; Tsalis et al., 2020).

Over the last two decades, a significant trend has been observed among both developed and developing economies in supporting environmental sustainability for various reasons. For example, the UN's call for sustainable development actions has made it evident that ongoing environmental issues remain a significant obstacle to economic development while harming the standard of living of community members. In this regard, one example is linked to the higher levels of carbon dioxide emissions in the natural environment, greenhouse gas emissions, and air pollution, such as particulate matter (Geng et al., 2021; Rovira, Domingo, & Schuhmacher, 2020). However, such environmental pollution is caused by a range of economic activities conducted by humans on the planet Earth. More specifically, one explanation is the 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 (SPR) by governments and organizations, like public and private (Barros, Falcão, & Sarmento, 2021; Hao, Liu, & Goh, 2021; Yusliza et al., 2020).

To date, the adverse impact on the natural environment can be mitigated through various methods and procedures, for which the role of technological innovation, combined with environmental policies, is highly beneficial. Furthermore, at the organizational level, such environmental issues can be transformed into SPR while changing human behaviors and adopting and integrating human resource management practices with the environmental management system (EMS) (Paillé, 2019). Additionally, both individuals and their organizations 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 (Paillé, 2019). Therefore, environmental performance is regarded as organizational efforts towards decarbonization and the environment (Pham et al., 2020).

Those firms that 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 employees' attitudes and behavior significantly determine the organization's environmental performance (Jerónimo et al., 2020). In this regard, the dependability of the organization's SPR is based on green human resource management practices and other intangible practices that may facilitate the participation of pro-environmental employees (Jerónimo et al., 2020). Green HR practices are an alignment between environmental management and human resource management (Muisyo et al., 2021; Paillé, 2019; Rubel, Kee, & Rimi, 2021).

The significance of green HRM practices can be examined by focusing on titles such as GRR, green training, and GRP. 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 (Guerci, Longoni, & Luzzini, 2016). The review of traditional literature in the 1990s began considering HRM practices as a key factor in improving environmental performance. At the same time, Renwick, Redman, and Maguire (2013) 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 EGB), are a major contributor towards the sustainable output.

In today's environment, leadership plays a crucial role in determining an organization's success or failure (Abdulmuhsin et al., 2021). Within the context of organizational leadership, two major categories are under significant observation, referred to as transformational and transactional leadership. More specifically, researchers have shown that transformational leadership is positively linked with higher organizational performance (Singh et al., 2020). However, the term green transformational leadership (GTFL) is defined as the leadership behavior that focuses on providing employees with a clear vision and motivation, while supporting them in meeting their development needs and achieving organizational environmental goals (Mittal & Dhar, 2016). 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 organization to introduce such products or services in the market along with the improvement of environmental performance as well (Andriopoulos & Lewis, 2010).

While examining the relationship between green HRM practices, GLS, and SP, it is essential to consider the EGB and GTM. The phenomenon of EGB at the workplace is conceptualized as voluntary behavior required for positive environmental outcomes. Ones and Dilchert (2012) provide five components to reflect the GTB of employees. These individuals are entitled to work towards sustainability, conserve resources, influence others, avoid harm, and take the initiative to make a positive impact. More specifically, the required EGB states that companies are working to improve their environmental performance while introducing those duties and jobs that are green (Schmit et al., 2012). On the other hand, the voluntary GTB of employees allows them to choose to go beyond what is required by their organization to reflect their environmental behavior. More specifically, voluntary EGB is a GTB that covers initiatives undertaken by individuals who exceed organizational expectations. This would indicate the setting of environmental interest, originating environmental policies and programs, and encouraging others (Norton et al., 2015).

On the other hand, it is believed that when employees become motivated by gratitude for the green approaches, the specific organization gains a competitive advantage in the market. At the same time, when priority is given to creative management, employees will be more willing to adopt green approaches. Meanwhile, employees' motivation towards environmental dimensions is primarily linked to factors such as their concern for the environment and organizational support in achieving environmental objectives (Li et al., 2020).

More specifically, employee motivation can be divided into intrinsic and extrinsic factors. The former is explained as it is only operative when employees are more interested in environmental issues. On the other side, extrinsic motivation is operative only when the employees are performing a task to receive monetary and non-monetary benefits from their respective organizations (Li et al., 2020). However, the moderating effect of EGB and GTM in determining the association between green HRM practices, GLS, and environmental performance is a big question in both theoretical and empirical literature.

1.3 Problem Statement

Sustainability has emerged as a crucial priority, not only for current global challenges but also for future generations (Bottani, Gentilotti, & Rinaldi, 2017). Organizations play a vital role in promoting sustainability within their respective regions (Phillis & Davis, 2009). The concepts of sustainability, Sustainable Performance (SPR), and development have gained prominence in recent decades due to the increasing environmental degradation caused by human activities. Sustainable development is defined as fulfilling present needs without compromising the needs of future generations (Al-Qudah et al., 2022). This concept is relevant across various sectors, encompassing both public and private organizations.

Sustainable development primarily encompasses three dimensions: economic, environmental, and social. Numerous authors have highlighted the importance of measuring firm performance in the context of sustainable practices; however, this study focuses specifically on the environmental aspect of SPR due to its significant implications and broader acceptance in the literature. In this study, the definition of sustainable performance (SPR) has been intentionally limited to focus specifically on its environmental aspects. This emphasis is particularly relevant given the substantial environmental challenges faced by the public sector in the UAE.

By concentrating on the environmental dimension of SPR, the study directly addresses the most pressing issues impacting public organizations in the region, enabling a more in-depth analysis of the factors influencing their sustainability outcomes. Limiting the scope to environmental performance enables a comprehensive examination of specific influences, including green human resource management (HRM) practices, leadership styles, and employee behavior. This focused approach not only clarifies how these practices affect sustainable performance but also avoids diluting the analysis by complicating it with broader social and economic dimensions of sustainability.

The complexity of sustainability, which encompasses economic, social, and environmental dimensions, would complicate the research design if all aspects were considered simultaneously. By narrowing the definition, this study can effectively identify and analyze the relationships among the key variables involved in environmental sustainability, leading to more precise conclusions and insights. Additionally, the existing literature reveals a notable gap in empirical studies focused on the environmental aspects of SPR within public organizations.

By emphasizing this limited definition, the study aims to make a meaningful contribution to academic discourse, providing insights that are both theoretically informed and practically applicable. Establishing a clear connection between specific HRM practices, transformational leadership, and environmental performance can inform policy decisions within public organizations, ultimately leading to the development of effective sustainability strategies. This targeted approach is crucial for driving meaningful change at the organizational level, enabling public sector organizations to improve their sustainable environmental performance and contribute positively to the ecological integrity of the UAE.

Ahi and Searcy (2013) emphasize that measuring SPR requires a structured and comprehensive approach that considers all facets of enterprise sustainability. Various indicators can be utilized to assess SPR, including environmental factors (e.g., carbon dioxide intensity, emissions per capita, forest area ratio, public green space proportion, and emissions of pollutants such as methane and sulfur dioxide), energy consumption metrics (e.g., renewable energy sources and access to electricity), financial indicators (e.g., research and development expenditures), and social development parameters (e.g., life expectancy and literacy rate) (Chien et al., 2021). Among these indicators, environmental factors gain significant attention in the context of sustainability and SPR (Ahmad et al., 2021; Majeed & Ozturk, 2020; Shittu et al., 2021; Wang & Dong, 2019). Therefore, this study concentrates specifically on the environmental perspective of SPR.

Furthermore, the concept of SPR has increasingly gained relevance in public sector organizations across various economies. Historically, performance measurement has served as a vital tool for evaluating departmental operations. Recent literature indicates a growing interest in examining SPR in the public sector context (Adams et al., 2014). SPR reflects an organization's effectiveness in achieving long-term sustainability objectives alongside traditional performance metrics. It encompasses not only financial indicators but also social and environmental dimensions, ensuring that organizations operate ethically while being economically viable. This approach shifts focus from short-term profit to a more balanced view that considers stakeholder impacts, resource efficiency, and community well-being. Thus, it emphasizes a holistic understanding of success by integrating non-financial performance with sustainability outcomes in the public sector.

There is an escalating concern regarding sustainability, as the impact of organizational activities on the environment and society becomes increasingly critical for policymakers and stakeholders (Adams et al., 2014; Harangozó & Zilahy, 2015). The public sector holds a significant responsibility in promoting economic and social sustainability, necessitating engagement in sustainable organizational practices. Both public and private sector organizations are now compelled to evaluate their sustainability performance, where the role of environmental data becomes crucial (Ramos et al., 2021). The emergence of sustainability performance as a key focus among public sector organizations can be traced back to the late 20th century, particularly in the development of performance assessment indicators related to environmental and sustainability issues (Ramos et al., 2021). Despite the growing attention to sustainability performance in contemporary studies, investigations focusing on public sector organizations remain in their early stages (Manes-Rossi et al., 2020).

When analyzing the UAE's economy, it is evident that public sector organizations are uniquely positioned to address significant environmental challenges. They significantly contribute to the economy through sectors such as oil and gas production, with entities like the Abu Dhabi National Oil Company (ADNOC), as well as infrastructure development, job creation, and the facilitation of key areas including tourism, finance, education, real estate, and technology. While public organizations generate substantial economic and financial benefits, their operations have also led to environmental degradation, characterized by excessive energy consumption and the overuse of natural resources. For instance, carbon dioxide emissions have alarmingly increased from 111.79 million tons in 2000 to 150.27 million tons in 2020 (Ritchie & Roser, 2023). These figures highlight the direct responsibility of public sector organizations for environmental damage, underscoring the urgent need to prioritize their sustainability performance.

Furthermore, comparative analyses reveal that consumption-based carbon emissions increased from 103.09 million tons to 201.76 million tons between 2000 and 2019, while production-based carbon emissions rose similarly from 111.79 million tons to 150.27 million tons during the same period (Ritchie & Roser, 2023). This evidence suggests that sustainability performance and related issues in the UAE cannot be overlooked, particularly as rising carbon emissions correlate with increased energy consumption levels among various organizations, notably in the public sector, which are inherently responsible for serving local communities using non-renewable energy sources. The environmental impact of public sector organizations is crucial, as these entities are major contributors to the UAE's economic prosperity while simultaneously being responsible for substantial environmental degradation.

Several factors contribute to the poor sustainable environmental performance among public sector firms in the UAE. One primary reason is the country's heavy reliance on fossil fuels, particularly from the oil and gas industries. This reliance leads to significant emissions and environmental harm, often prioritizing economic benefits over ecological considerations. Additionally, regulatory pressure may be insufficient, as existing sustainability initiatives may lack the stringent enforcement needed to drive compliance among public organizations. Without strong regulations, many organizations may not feel compelled to prioritize sustainability.

Cultural factors also play a vital role; a lack of emphasis on sustainability within the organizational culture can inhibit commitment to green practices. If public sector organizations fail to cultivate an environmental mindset among their employees, initiatives aimed at improving sustainability may falter. Moreover, resource allocation decisions often prioritize short-term economic goals over long-term sustainability, leading to missed opportunities for investment in green initiatives with potential long-term benefits. Furthermore, public firms may also lack innovation and investment in sustainable technologies due to their focus on traditional operational efficiencies, which can stifle advancements in environmental performance. Employee engagement is another critical area that impacts sustainable performance. Public organizations may struggle to foster an engaged workforce committed to environmental responsibility, which can result in lower overall performance in sustainability. When employees do not actively participate in green initiatives, the effectiveness of these programs diminishes significantly.

Considering the identified issues linked to environmental degradation in the UAE, literature highlights the constructive role of GHRM practices in enhancing SPR (Harel & Tzafrir, 1999; Mousa & Othman, 2020). Specifically, HR plays a pivotal role in implementing sustainability-related policies and practices. Moreover, effective HR practices contribute to developing competitive advantages and fostering innovation, which further influences SPR outcomes (Mousa et al., 2020). Scholars have acknowledged the importance of internal resources, particularly human capital, in pursuing positive environmental performance (Guerci, Longoni, & Luzzini, 2016). Historical literature dating back to the 1990s recognized HRM practices as key to enhancing environmental performance. Research by Redman and Maguire (2013) demonstrates a positive association between HRM practices and environmental performance.

Key green HRM practices, including green hiring (selecting employees with environmental competencies), green training (developing environmental skills), and green performance management (assessing employee performance with a focus on green behaviors), are essential contributors to achieving sustainable outcomes. Despite the logical link between green HR practices and SPR, a gap remains in theoretical and empirical findings on the role of green HR practices in the public sector context of the UAE. In addition to green HRM practices, leaders who exhibit green transformational leadership inspire employees to acquire new knowledge while actively engaging them in green product and process innovations. Such initiatives facilitate the introduction of eco-friendly products and services, further enhancing environmental performance (Andriopoulos & Lewis, 2010). However, within the UAE's public sector, empirical studies examining the interplay between green HRM practices and transformational leadership in enhancing SPR are lacking.

The potential for achieving positive SPR through green HRM practices and leadership is also contingent on the moderating effects of Green Motivation (GTM) and Green Employee Behavior (EGB). Motivating employees towards environmental practices is crucial for achieving sustainability goals, as is fostering positive green behaviors. Nonetheless, no empirical studies presently exist that explore the moderating roles of GTM and EGB in the relationship between green HRM practices, green leadership, and SPR in the context of public organizations in the UAE. This study aims to address these gaps by examining the interplay between GHRM practices, green leadership, and SPR, considering the moderating roles of GTM and EGB. This analysis provides insights that can inform both academic discourse and practical applications in fostering sustainability within public organizations in the UAE.

The following research questions and objectives have been defined based on the above discussion.

1.4 Research Objectives

The primary aim of this study is to investigate how green human resource management practices and green leadership style influence sustainable performance in public organizations in the UAE, with a particular focus on the moderating roles of green employee behavior and green motivation. Thus, the objectives of this study are as follows.

1. To examine the impact of green HRM practices like GRR on the SPR of public organizations in the UAE.
2. To examine the impact of green HRM practices like GTD on the SPR of public organizations in the UAE.
3. To examine the impact of green HRM practices like GRP on the SPR of public organizations in the UAE.
4. To examine the impact of GLS (i.e., transformational leadership) on the SPR of public organizations in the UAE.
5. To examine the moderating role of EGB on the relationship between GRR and SPR of public organizations in the UAE.
6. To examine the moderating role of EGB on the relationship between GTD and SPR of public organizations in the UAE.

7. To examine the moderating role of EGB on the relationship between GRP and the SPR of public organizations in the UAE.
8. To examine the moderating role of EGB on the relationship between GLS (i.e., transformational leadership) and SPR of public organizations in the UAE.
9. To examine the moderating role of GTM on the relationship between GRR and SPR of public organizations in the UAE.
10. To examine the moderating role of GTM on the relationship between GTD and SPR of public organizations in the UAE.
11. To examine the moderating role of GTM on the relationship between GRP and the SPR of public organizations in the UAE.
12. To examine the moderating role of GTM on the relationship between GLS (i.e., transformational leadership) and the SPR of public organizations in the UAE.

1.5 Research Questions

Following the study objectives outlined above, the questions addressed in this study are as follows.

1. What is the impact of green HRM practices like GRR on the SPR of public organizations in the UAE?
2. What is the impact of green HRM practices like GTD on the SPR of public organizations in the UAE?
3. What is the impact of green HRM practices like GRP on the SPR of public organizations in the UAE?
4. What is the impact of GLS (i.e., transformational leadership) on the SPR of public organizations in the UAE?

5. What is the moderating role of EGB on the relationship between GRR and the SPR of public organizations in the UAE?
6. What is the moderating role of EGB on the relationship between GTD and SPR of public organizations in the UAE?
7. What is the moderating role of EGB on the relationship between GRP and the SPR of public organizations in the UAE?
8. What is the moderating role of EGB on the relationship between GLS (i.e., transformational leadership) and the SPR of public organizations in the UAE?
9. What is the moderating role of GTM on the relationship between GRR and SPR of public organizations in the UAE?
10. What is the moderating role of GTM on the relationship between GTD and SPR of public organizations in the UAE?
11. What is the moderating role of GTM on the relationship between GRP and SPR of public organizations in the UAE?
12. What is the moderating role of GTM in the relationship between GLS(i.e., transformational leadership) and the SPR of public organizations in the UAE?

1.6 Significance of this study

The significance of this study can be discussed in eight aspects as follows.

1.6.1 Contribution to Academic Knowledge

This study contributed to academic knowledge by expanding the existing literature on green human resource management (GHRM) and sustainable performance in the public sector. It provided a comprehensive framework for understanding the interplay between GHRM practices and green leadership style within the UAE's unique socio-economic context. By employing a quantitative approach, this study offered robust empirical data that validated the theoretical constructs surrounding GHRM's effectiveness in enhancing sustainable performance. The findings deepened insights into the roles of green employee behavior and green motivation as critical moderating factors, thus enriching scholarly discourse.

This study also identified specific gaps in the current literature regarding sustainability practices in the public sector, particularly in emerging economies, laying a foundation for future studies to build upon. Overall, this study advanced theoretical perspectives on sustainability in organizational contexts by highlighting the intrinsic relationships between human resource practices and sustainable outcomes.

1.6.2 Practical Implications of this study

The practical implications of this study were far-reaching, particularly for public sector organizations in the UAE. This study provided actionable insights into the implementation of green human resource management practices and the cultivation of green leadership style. Policymakers and organizational leaders gained valuable insights into how to effectively integrate sustainability into their workforce strategies, fostering a culture that prioritizes environmental responsibility while enhancing overall performance. This study also provided recommendations for training and development programs designed to enhance green employee behavior and motivation, ultimately driving sustainable performance. By translating theoretical concepts into practical applications, this study equipped organizations with the tools necessary to align their operational goals with sustainability objectives, thereby promoting long-term success and resilience in the face of environmental challenges.

1.6.3 Impact on Policy and Decision-Making

The findings of this study had a significant impact on policy and decision-making within public sector organizations in the UAE. By highlighting the importance of integrating green human resource management practices and leadership into organizational frameworks, this study informed policymakers about the vital role of sustainability in public administration. This prompted a reassessment of current policies related to human resource management, emphasizing the need for sustainability-focused governance. Furthermore, this study catalyzed the development of new regulatory guidelines and standards that encourage public organizations to adopt green practices. As decision-makers utilized the insights gained from this study, it fostered a paradigm shift towards prioritizing sustainable practices in resource allocation, project planning, and community engagement, ultimately contributing to a more sustainable future for the UAE.

1.6.4 Benefits to Specific Industries or Sectors

This study provided substantial benefits to specific industries and sectors, particularly those heavily reliant on public sector services, such as oil and gas, infrastructure development, and education. By elucidating the relationship between green practices and sustainable performance, this study offered tailored recommendations that these sectors could adopt to mitigate their environmental impact. For industries such as oil and gas, adopting green human resource management practices can enhance operational efficiency and reduce carbon footprints, aligning with global sustainability trends. Similarly, educational institutions within the public sector could leverage the findings to integrate sustainability into their curricula and operations, thus preparing future leaders to prioritize environmental stewardship. As these industries adapted their practices based on the study's insights, they made significant contributions to the UAE's overall sustainability goals, fostering a collaborative approach to environmental management across various sectors.

1.6.5 Advancing Professional Practices

This study advanced professional practices within the field of human resource management by integrating sustainability as a core principle. It illustrated the utility of green human resource management practices in fostering not only a sustainable workplace culture but also enhancing employee engagement and performance. By providing empirical evidence supporting the effectiveness of these practices, this study encouraged HR professionals to adopt innovative strategies that prioritize environmental and social initiatives alongside traditional productivity measures. This advancement promoted a holistic view of employee development, emphasizing the importance of aligning individual motivations with organizational sustainability goals. Additionally, the insights gained from this study fostered professional networks and communities centered around sustainability, enabling practitioners to share best practices and collaborate on initiatives that would drive positive environmental outcomes.

1.6.6 Enhancing Societal and Community Well-Being

The significance of this study extended beyond organizational boundaries to enhance societal and community well-being. By advocating for the adoption of green human resource management practices, this study highlights the potential for public sector organizations to make a positive contribution to their communities and the environment. As organizations implemented sustainable practices, they not only reduced their ecological footprints but also fostered greater community engagement and social responsibility. This proactive approach enabled public organizations to build trust and credibility with local populations, ultimately enhancing their reputation and fostering a sense of shared purpose among the local community. Furthermore, as communities benefited from improved environmental outcomes—such as reduced pollution and better resource management—the overall quality of life for residents improved, thereby reinforcing the broader relevance of this study to societal well-being.

1.6.7 Filling Research Gaps

This study played a crucial role in filling research gaps within the realm of green practices in public sector organizations, particularly in the context of the UAE. Prior to this study, there was limited empirical evidence regarding the specific influences of green human resource management and leadership on sustainable performance in public organizations. By focusing on these variables, this study identified relevant moderating factors that had previously been overlooked, such as green employee behavior and motivation. This contribution not only enriched the literature on sustainability practices in public sector organizations but also set a precedent for future research to explore similar dynamics in other emerging economies. The insights gained from this study underscore the need for ongoing inquiry into the effectiveness of green initiatives and their impacts, encouraging scholars to investigate the complexities of sustainability further.

1.6.8 Supporting Future Research

In addition to addressing current gaps, this study laid a strong foundation for supporting future research aimed at exploring the relationship between human resource management and sustainability. The empirical evidence generated provided a starting point for longitudinal studies that could assess the long-term effects of green human resource practices on organizational performance in the public sector. Furthermore, the insights regarding the roles of green employee behavior and motivation opened avenues for research that investigates the psychological and behavioral dimensions of sustainability. By fostering a deeper understanding of how these variables interact, future researchers can contribute to the development of more effective interventions and strategies that promote sustainable practices across various organizations. The comprehensive nature of this study and its findings served as a springboard for emerging scholars interested in contributing to the growing body of research on sustainability and organizational behavior.

1.7 Scope of this study

The scope of this study can be discussed in several aspects, as follows.

1.7.1 Geographical Scope

The geographical scope of this study was confined to the United Arab Emirates (UAE), a region characterized by rapid economic development and significant public sector involvement across various industries. By focusing on the UAE, this study highlighted the unique environmental and sustainability challenges faced by public organizations within an economy primarily driven by oil and gas production, infrastructure development, and urbanization. The exceptional growth and diversification of the UAE's economy enabled a detailed examination of how public organizations can integrate green practices into their operations. This study aimed to identify specific local factors influencing the adoption of green human resource management practices and green leadership style, which were particularly relevant to the UAE's context. This geographical focus ensured that the findings were pertinent to policymakers and practitioners within the UAE, supporting efforts to enhance sustainable performance amid increasing regulatory pressures and global environmental standards.

1.7.2 Subject/Population Scope

The subject or population scope of this study encompassed 228 public sector organizations operating within the UAE. These entities represented a diverse array of services, including those in oil and gas, education, healthcare, and infrastructure, thereby providing a comprehensive view of public sector operations. The selection of this population was critical, as it reflected the government's significant role in the economy and its responsibility for achieving sustainability goals. By analyzing a wide range of organizations, this study aimed to gather insights into everyday practices, challenges, and successes in implementing green human resource management and leadership strategies. This diverse population enabled a robust examination of how various public sector organizations approached sustainable performance, underscoring the importance of collaboration and knowledge sharing among different sectors to enhance environmental outcomes.

1.7.3 Time Frame of this study

This study was conducted within a cross-sectional time frame, which involved collecting data at a single point in time. This approach enabled the exploration of the relationships between green human resource management practices, green leadership style, and sustainable performance in public sector organizations in the UAE at that particular moment. By employing a cross-sectional design, this study captured a snapshot of the current practices and perceptions of the 228 public organizations regarding sustainability issues. This temporal scope facilitated the identification of trends and correlations among the variables examined without the need for long-term longitudinal data. The findings offered valuable insights into the immediate impact of green initiatives on organizational performance and highlighted areas for future research to track changes over time. The cross-sectional nature of this study also helped address urgent sustainability challenges faced by the UAE, aligning with its strategic agenda for environmental and economic sustainability.

1.7.4 Methodological Scope

The methodological scope of this study was rooted in a quantitative research design, which aimed to generate numerical data and statistical analysis about the relationships among the variables under investigation. By employing quantitative methods, this study focused on measuring the impact of green human resource management practices and green leadership style on sustainable performance, as well as the moderating effects of green employee behavior and green motivation. This approach provided a structured framework for data collection, enabling the use of surveys and questionnaires to gather measurable data from respondents across the 228 public sector organizations. The quantitative methodology facilitated the identification of patterns and correlations, enabling the application of statistical techniques to assess the strength and significance of these relationships. Overall, this methodological scope ensured that this study's findings were grounded in empirical evidence, which could inform decision-making among policymakers and practitioners in the public sector.

1.7.5 Data Collection Scope

The data collection scope for this study involved the utilization of structured surveys distributed to employees across 228 public sector organizations in the UAE. This method enabled the collection of quantitative data regarding perceptions of green human resource management practices, green leadership styles, and sustainable performance. The surveys were designed to capture participants' responses on various constructs related to sustainability, including their experiences, attitudes, and behaviors regarding green initiatives within their organizations.

The use of a systematic sampling technique ensured a representative distribution of respondents from different levels and departments within the organization. Additionally, data collection adhered to ethical standards, with confidentiality assured to participants to encourage honest responses. The emphasis on a structured approach to data collection provided a solid foundation for analyzing the role of green practices in enhancing sustainable performance, allowing for cross-comparison among the various public organizations involved in this study.

1.7.6 Analytical Scope

The analytical scope of this study encompassed a comprehensive evaluation of various statistical methodologies to assess the data collected from the surveys. This included an examination of the data response rate to ensure adequate participation for reliable analysis. Key analyses performed were linearity checks and tests for homoscedasticity, which verified the assumptions necessary for reliable statistical modeling. Demographic analyses and descriptive statistics were employed to understand the sample characteristics and effectively summarize the data.

To address potential biases, this study assessed non-response bias (NRB) and standard method bias, ensuring the integrity of the findings. Exploratory Factor Analysis (EFA) was conducted, employing the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test to evaluate data suitability for factor analysis. Furthermore, the assessment of the measurement model included evaluations of reliability, internal consistency, and validity (both convergent and discriminant), followed by an assessment of the structural model that analyzed collinearity, predictive capabilities, and hypothesis testing. This rigorous analytical framework provided deep insights into the relationships among the studied variables.

1.7.7 Variables and Constructs Covered

This study focused on several key variables and constructs that are integral to understanding the relationship between green human resource management practices and sustainable performance in public sector organizations. These include green recruitment and selection, which emphasizes the importance of hiring individuals committed to sustainability; green training and development, aimed at enhancing employees' skills and knowledge related to environmental practices; and green rewards and pay, which incentivize sustainable behaviors.

Additionally, green leadership style plays a crucial role in fostering a culture of sustainability within the organization. This study also examined two moderating constructs: green employee behavior, which reflects how employees' actions and practices contribute to sustainability efforts, and green motivation, which considers the factor that drives employees to engage in environmentally responsible behaviors. Together, these variables and constructs provided a comprehensive framework for analyzing the impact of green practices on sustainable performance in the UAE's public sector.

1.7.8 Research Limitations and Boundaries

This study acknowledged several research limitations and boundaries that could impact the interpretation of its findings. One primary limitation was the reliance on self-reported data from participants, which may introduce biases such as social desirability or misinterpretation of survey questions. Additionally, the cross-sectional design restricted the ability to establish causal relationships between variables, as the data were collected at a single point in time. This study's focus on public sector organizations in the UAE also limited its generalizability to other contexts or sectors that may have different sustainability challenges and practices.