

Developing a Green HRM–Employee Environmental Commitment Framework for Sustainable Organizational Performance in Pakistan's Corporate Sector

Ali Aqash¹, Javeria Safdar², Abu Bakar³, Eman Fatima⁴, Aarsal Mahmood⁵

¹ Assistant Director (Accounts & Finance), Gujranwala Teaching Hospital, Gujranwala, Pakistan.

Email: ali.aqash@yahoo.com

² Department of Commerce, University of Punjab, Gujranwala, Pakistan, Corresponding Author's

Email: javeriasafdar942@gmail.com

³ Professor, Department of Commerce, University of Punjab, Gujranwala, Pakistan,

Email: profabubakar8@gmail.com

^{4,5} University of Punjab, Department of Business Administration, Gujranwala, Pakistan,

Email: emancheema05@gmail.com, arsalmahmood1977@gmail.com

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Abstract

The problem is that while the presence of Green Human Resource Management (GHRM) in the literature has been acknowledged as a strategic instrument for organizational sustainability, most of the existing studies have focused on the impact of one specific practice of GHRM, and environmental outcomes are used for measuring outcomes, while the psychological mechanism has not been well developed, especially in developing countries like Pakistan where multiple practices of GHRM are used together. The purpose of this conceptual paper is to develop an integrated framework to explain how the three major practices in GHRM, namely Green Recruitment and Selection, Green Training and Development, and Green Rewards and Compensation, relate to Employee Environmental Commitment (EEC) and, both directly and indirectly, to Sustainable Organizational Performance (SOP). The paper draws on Social Exchange Theory, the Resource-Based View, Ability–Motivation–Opportunity (AMO) Theory, and Institutional Theory, and introduces five core constructs, a visual conceptual framework that ties them together, and develops six testable propositions that outline the direct and indirect relationships in the model. The proposed framework makes GRS, GTD, and GRC antecedents, with SOP as the outcome (conceptualized as the Triple Bottom Line) and leadership and organizational support as contextual moderators, while industry type, firm size, and ownership structure are considered as control variables. The paper ends with theoretical and empirical implications and future directions.

Keywords: Green HRM, Employee Environmental Commitment, Sustainable Organizational Performance, Conceptual Framework, Pakistan, AMO Theory

Introduction

This has caused environmental degradation and limited resources to become the main focus of corporate strategy instead of being treated as peripheral issues (Amrutha & Geetha, 2020; Ren et al., 2018). The most important changes in the evaluation of organizations are that they are no longer assessed only based on financial returns, but also on how they manage natural resources,

treat their employees, and contribute to the communities where they operate, which is often summarized by the Triple Bottom Line (TBL) of environmental, economic, and social performance (Zaid et al., 2018; Ali et al., 2024). In this transition, HR is no longer an administrative support role but a strategic tool to help integrate sustainability across the organization as a whole (Ren et al., 2018; Dimitrov, 2021). This reorientation is reflected in Green Human Resource Management (GHRM). It involves the conscious integration of HR systems such as recruitment, training, performance measurement, and rewards with environmental goals, thus embedding ecological responsibility into the recruitment, development, performance assessment, and compensation of employees (Ahmad et al., 2023; Fawehinmi et al., 2022). The basic idea is simple but potent: organizational sustainability is realized through individuals, and HR systems create who is hired, what they are designed to value, and what will be rewarded (Appelbaum, 2000; Barney, 1991). If these systems are green, environmental responsibility does not just happen inside a single or occasional CSR program, but is integrated into the day-to-day life of the organization (Paillé et al., 2014; Zibarras & Coan, 2015).

Although there is some evidence that GHRM practices are related to better environmental and organizational results, this evidence is scattered (Yong et al., 2020; Ren et al., 2018). A significant number of studies have focused on one or a few GHRM practices individually (e.g., green recruitment in hospitality, green training in manufacturing, and green rewards in pharmaceuticals), but not on the system-level impact of multiple practices working together (e.g., Pham et al., 2019, Nasir et al., 2023, and Hameed et al., 2020). Even fewer, however, delve into the psychological mechanism to understand how GHRM practices lead to sustainability outcomes instead of just establishing that they do (Ahmad et al., 2023; Khan et al., 2022). This study aims to fill both these gaps by proposing an integrated conceptual model in which all three key GHRM practices (Green Recruitment and Selection, Green Training and Development, and Green Rewards and Compensation) impact Sustainable Organizational Performance through an intervening pathway of Employee Environmental Commitment (EEC) (Ahmad et al., 2023; Malokani et al., 2024).

The theme chosen for this paper is the corporate sector in Pakistan, which is a source of contribution. Previous studies on GHRM have been carried out under certain situations in developed economies with developed regulatory frameworks and sustainability infrastructure (Ren et al., 2018; Yong et al., 2020). In Pakistan, environmental issues are severe problems, with comparatively young sustainability governance systems, weak environmental laws, and weak regulatory enforcement, and entities that consider environmental responsibility as a discretionary rather than a strategic issue (Shaukat et al., 2023; Malik et al., 2021). The theoretical significance would be to evaluate the generalizability of GHRM theory beyond its original context, while the practical significance lies in its ability to influence sustainable performance for Pakistani firms aiming for sustainable performance while meeting national environmental priorities and global sustainability standards (Akbar et al., 2024; Ali et al., 2024).

This paper is a conceptual paper, not reporting primary data, but synthesizing existing theory and empirical information into a coherent, testable model. Conceptual papers of this sort have a specific and necessary role in a developing field of research; they bring together the various findings to date, clarify the theoretical logic that connects constructs that have been studied in isolation, and produce clear, testable hypotheses that can be directly tested in empirical studies (Ren et al., 2018; Yong et al., 2020). With the rapid but still uneven growth of GHRM literature, and with individual practices and outcome variables studied singly or separately, this kind of integrative theoretical work is an important precursor to more ambitious empirical designs, such as the Structural Equation Modeling approach described later in this paper. This paper aims to address this need. It is a conceptual one, that is, it is designed to combine many theories and

concepts into a coherent, testable framework that can be tested with new primary data. Concept papers of this nature have different roles in a maturing research area: they help to integrate the evidence that is currently scattered; they explain how theory-building constructs are interrelated when studied independently; and they produce specific and testable statements that can be tested in future empirical studies (Amrutha & Geetha, 2020; Ren et al., 2018). The paper continues as follows: Section 2 reviews the theories which underlie the proposed framework; Section 3 defines the key constructs of the proposed framework; Section 4 presents the proposed conceptual framework and its visualisation; Sections 6 and 7 discuss the theoretical and practical implications; Section 8 specifies future research directions; and Section 9 concludes the paper.

Literature Review

Green Human Resource Management

GHRM can be defined as the systematic incorporation of environmental evaluation into the employee life cycle from the design of jobs to the hiring, training, performance evaluation, and reward allocation of employees (Zibarras & Coan, 2015; Yong, Yusliza, & Fawehinmi, 2020). To maximize the effectiveness of GHRM, it needs to be embedded in the HR process and not just a one-off project, argue Fawehinmi et al. (2022): job descriptions include environmental responsibilities, selection processes should include people who demonstrate green values, and training and incentive programmes should have a green dimension in order to reinforce environmentally sustainable behaviour. This lifecycle perspective is fundamental to the current paper, which focuses on three practices in turn: recruitment, training, and rewards.

The organizational value of GHRM has been supported by empirical works. Amjad et al. (2021) demonstrate that green awareness programmes, incentives for sustainable performance, or environmental incident management systems help to minimize waste and conserve resources. Green hiring, sustainable development, and eco-incentives, when combined, can enhance the relationship between employee values and environmental objectives, thereby fostering a greater commitment of employees to sustainability within the organization, according to Nasir et al. (2023). Another line of research focuses on the increasing importance of digital tools for sustainable HR processes, such as cloud systems, paperless processes, and remote working technologies (Shayegan et al., 2023; Khaskhely et al., 2022).

These patterns are reinforced in sector-specific studies in different organizational contexts. In hospitality, environmental awareness and personal green values have a greater impact on GHRM (Raza & Khan, 2022). In the Pakistani manufacturing sector, GHRM has been associated with increased employee empowerment and environmentally responsible practices (Shaukat et al., 2023). In the health sector, GHRM enables energy saving, sustainable procurement, and waste reduction of medical waste (Mousa & Othman, 2020), and studies conducted on British organizations reveal the incorporation of environmental responsibility into more general HR practices (Zibarras & Coan, 2015).

Green Recruitment and Selection

Green recruitment and selection practices are expected to improve the outcomes in terms of attracting and selecting candidates with pre-existing values that are environmentally responsible, bringing sustainability commitment into the organization "at the point of entry" (Amjad et al., 2021; Zibarras & Coan, 2015). Raza and Khan (2022) have shown that during recruitment in a hotel, the meaningful inclusion of environmental criteria has a positive impact on achieving environmental goals. A similar argument is presented by Fawehinmi et al. (2022), who claim that green hiring is a tool that enables companies to hire employees whose personal goals are aligned

with the company's sustainability goals in advance, thus providing a means to minimize the company's effort to create environmental commitment later.

Green Training and Development

Employees develop knowledge, skills, and awareness of sustainability through environmental training, which helps them act sustainably in their jobs (Hameed et al., 2020; Amrutha & Geetha, 2020). Iftikhar et al. (2021) conclude that employees who receive green training are more likely to be able to solve service-related issues in an eco-friendly manner, particularly when they are already committed to the environment – so training and commitment feed off each other. According to Nasir et al. (2023), such training is an effective way to reinforce the employees' commitment to green values, thereby fostering eco-positive behaviour, a trend evident in the pharmaceutical industry.

Green Rewards and Compensation

Green reward systems are incentive systems that reward and encourage employee sustainable actions that link employee actions to organizational ecological objectives (Paillé et al., 2014; Dimitrov, 2021). According to Ahmad et al. (2023), a structured reward system enhances employee engagement in environmental programs and boosts ecological outcomes. Building on this research, Malokani et al. (2024) demonstrate that green incentives may also positively influence employees' feelings of organisational pride, which in turn strengthens their feeling of environmental commitment and will lead to more green outcomes.

Employee Environmental Commitment as a Mediator

The present study aims at examining the role of Employee Environmental Commitment as a mediator. Employee Environmental Commitment (EEC) is a term that is consistently found in the literature that refers to the emotional and psychological bond that employees develop towards environmental values, which connects GHRM practices with sustainability outcomes (Khan, Shams, Khan, Akbar, & Niazi, 2022; Rijal, 2023). According to Nasir et al. (2023), environmentally committed employees are the ones who are "internal advocates for change" who facilitate an organization to adopt more sustainable behaviors naturally, instead of being imposed from the top. Similarly, Khan et al. (2022) conclude that true employees' commitment contributes significantly to translating sustainability aspirations into sustained, meaningful action for organizations. Although there has been a consensus on EEC's conceptual significance, there are few studies that have tested the role of EEC as a mediator between a combined set of the GHRM practices and SOP, other than in a few sector-specific studies.

Sustainable Organizational Performance

In general, Sustainable Organizational Performance (SOP) is seen as being linked to three elements: environmental protection, economic viability, and social well-being (Zaid, Jaaron, & Bon, 2018; Mousa & Othman, 2020). Khaskhely et al. (2022) highlight the importance of dynamic sustainable capabilities to fully realize the benefits of GHRM for the purposes of long-term sustainability, while Cao et al. (2024) demonstrate that by reinforcing employees' concerns for the environment, GHRM policy can improve organizational commitment and sustainable practice. Organizational characteristics like ownership, firm size, and industry sector are commonly included as control variables that influence the implementation of GHRM practices and their impact on SOP (Ren, Tang, & Jackson, 2018; Yong et al., 2020; Pham, Tučková, & Jabbour, 2019).

Moderating Influences: Leadership and Organizational Support

In addition to the direct and mediated pathways highlighted in this paper, the wider GHRM literature identifies two contextual factors that may amplify or dampen the connection between GHRM practices and sustainability outcomes: green transformational leadership and organizational support for green practices. Leaders who demonstrate their commitment to the environment, act in a sustainable way, and explicitly communicate their environmental vision can help reinforce employees' participation in GHRM initiatives, as leadership conveys credibility and seriousness beyond what can be done with a formal HR policy (Iftikhar et al., 2021; Khan et al., 2022). Organizational support, which is reflected in the proper resourcing, management support, and the regular enforcement of policies, also influences whether the practices of GHRM are perceived by employees as actions or as symbols. However, even good-looking GHRM might be unsuccessful where organizational support is low, as employees rapidly learn that there is a difference between what's written in policy and what's truly a priority.

Synthesis and Positioning of the Present Study

The literature as a whole shows that individual GHRM practices are positively correlated with pro-environmental outcomes, while EEC can plausibly account for some of this correlation. Three restrictions, however, are found repeatedly in the studies reviewed. First, most of the research focuses on one GHRM practice, failing to model recruitment, training, and rewards as a system, as the AMO logic of GHRM suggests they should be considered together. Second, research is still limited to developed economies or specific sectors, which means that Pakistan's overall corporate sector has not been extensively studied in light of its unique regulatory and cultural backdrop. Third, few studies test the mediation of EEC in a multi-practice GHRM model using a conceptualization of SOP that integrates the environmental, economic, and social dimensions in a TBL framework. The conceptual model presented in this paper directly tackles these three limitations.

Theoretical Underpinnings

This proposed model is based on four complementary theoretical perspectives that explain various aspects of the relationship between various GHRM practices and sustainable performance through environmental commitment among employees. This paper is based on a set of four perspectives, each representing a different strand of the causal process from organizational investment to the psychological response of employees to their company and to the performance outcome of the firm.

Social Exchange Theory (SET)

Social Exchange Theory suggests that human relationships are regulated by “reciprocal exchange,” whereby people try to maximize the rewards in a relationship when compared with the costs (Blau, 2017), and positive treatment from the employer is likely to be reciprocated by positive attitudes and behaviors from the employee (Cropanzano & Mitchell, 2005). For GHRM, if an organisation invests in hiring people who care for the environment, provides environmental training and reward packages, employees regard these investments as evidence of the company's environmental responsibility and employee care. This perceived investment leads to employees' higher EEC, and their EEC acts as a catalyst for their active engagement in sustainability programs that eventually positively impact organizational performance (Ahmad et al., 2023; Hameed et al., 2020; Malik, Mughal, Azam, Cao, Wan, Zhu, & Thurasamy, 2021). Malik et al. (2021) also show evidence that recognising employees' green work can boost their likelihood of going beyond their formal job

requirements, which represents a direct link between EEC and SOP beyond compliance-level behaviour towards discretionary green effort – what SOP measures are ultimately aiming to capture.

Resource-Based View (RBV)

The Resource-Based View suggests that resources that are valuable, rare, difficult to imitate, and non-substitutable create sustained competitive advantage (Barney, 1991). Those employees who adhere to environmental values and acquire green competencies through GHRM practices are just such a strategic resource. The organizations that recruit people with positive orientations towards the environment and also train them to develop their skills with specific training and offer them incentives whose impact is significant can enhance their workforce with a combination of human resources that other organizations cannot easily duplicate (Hameed et al., 2020; Amrutha & Geetha, 2020). EEC is path dependent and unique to each organization, meaning that it is difficult to replicate quickly by other companies, which addresses the RBV criterion of inimitability better than each of the GHRM practices analyzed individually.

Ability–Motivation–Opportunity (AMO) Theory

According to AMO Theory, the performance of employees is jointly dependent on ability, motivation, and opportunity (Appelbaum, 2000). These three practices adopted in this paper – green training and development, green rewards and compensation, and green recruitment and selection – have been directly linked to these components: green training and development: employees' environmental ability; green rewards and compensation: motivation to act in an environmentally responsible way; green recruitment and selection: opportunity to act in an environmentally responsible way (Yong et al., 2020). It is found that AMO-aligned HR strategies significantly influence Organizational Citizenship Behavior toward the Environment (OCBE) (Anwar et al., 2020), that AMO-structured GHRM initiatives can strengthen the intrinsic motivation and EEC which leads to better sustainability performance (Malik et al., 2021). The focal theoretical step proposed in this paper is the transfer of the AMO Theory, originally created for the general workforce performance context, to the realm of green management, building a connection between every GHRM practice and each of the AMO elements.

Institutional Theory

Institutional Theory suggests that, besides the efficiency goals that shape organizational practices, external factors like regulations, norms, and expectations also influence the way organizations operate. The increased regulatory scrutiny and stakeholder pressure with regard to environmental compliance is driving companies in the Pakistani corporate sector to increasingly formalize their GHRM policy. Green HR practices are not merely for the sake of functioning a company effectively, but are also for gaining legitimacy with external stakeholders (Amrutha & Geetha, 2020). These practices gain visibility and become embedded, fostering the internalization of environmental values and reinforcing EEC (Ahmad et al., 2023), while also reinforcing the public image and developing an internal culture oriented towards sustainability (Hameed et al., 2020). These four theories combine to offer complementary explanatory logic: SET offers a psychological mechanism of how GHRM investment leads to EEC; RBV indicates that GHRM can lead to a source of competitive advantage when organizations are environmentally committed; AMO provides an internal mechanism to explain the value each GHRM practice provides; and Institutional Theory offers an external mechanism to explain the motivation behind an organization's adoption of GHRM practices.

Concept Development

This section establishes the fundamental constructs that underlie the proposed conceptual framework. Each definition of the constructs is based on the literature examined in Section 2 and is specific enough to allow the development of propositions in Section 5.

Construct	Definition
Green Recruitment & Selection (GRS)	The HR practice of attracting, screening, and hiring candidates who hold pre-existing environmentally responsible values and behaviors.
Green Training & Development (GTD)	Structured HR programs that build employees' environmental knowledge, skills, and awareness relevant to their job roles.
Green Rewards & Compensation (GRC)	Incentive and recognition structures designed to reinforce and sustain employees' environmentally responsible behavior.
Employee Environmental Commitment (EEC)	Employees' emotional and psychological attachment to environmental values, reflected in voluntary pro-environmental effort at work.
Sustainable Organizational Performance (SOP)	Organizational performance assessed across three interconnected dimensions — environmental, economic, and social (Triple Bottom Line).

Table 1: Core Construct Definitions for the Proposed Conceptual Framework

The framework is expanded by two further contextual constructs — Green Transformational Leadership and Organizational Support for Green Practices — that are included as moderating constructs, but not as mediating or outcome constructs. Green Transformational Leadership can be defined as leadership behavior that is clearly demonstrated through actions that promote environmental goals and demonstrate sustainable behavior, while Organizational Support for Green Practices can be defined as the resources and management support needed to make the green practices of GHRM visible and make them part of the employees' experiences as genuine commitments. The two are also considered to be boundary conditions for the pathway from GRS/GTD/GRC to EEC.

Proposed Conceptual Framework

The proposed framework, as illustrated in Figure 1, sees three GHRM constructs (GRS, GTD, and GRC) as antecedents that relate to SOP via two different paths: directly to SOP and indirectly through EEC. Green Transformational Leadership and Organizational Support are proposed as **moderators** that enhance the relationship between the antecedents and EEC, while industry type, firm size, and ownership are set as control variables to capture organizational heterogeneity.

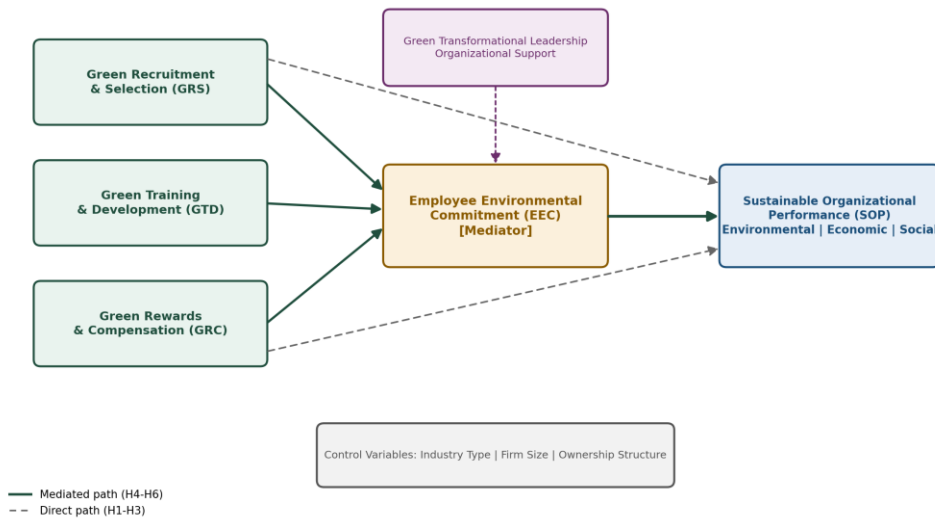


Figure 1: Proposed Conceptual Framework — GHRM Practices, Employee Environmental Commitment, and Sustainable Organizational Performance

The logic of the framework is directly related to the constructs defined in Section 3 and the theories reviewed in Section 2. Based on resource-oriented reasoning, GRS, GTD, and GRC are suggested to directly influence SOP, as having green competencies and being well-incentivized are expected to have a positive impact on organizational outcomes without a psychological intervening state. All three practices are proposed to build EEC, following the reciprocity logic of Social Exchange Theory, and EEC is proposed to drive SOP, with the perspective that emotionally committed employees contribute to discretionary environmental effort, a contribution that cannot be fully captured by formal HR policy.

Propositions

Based on the framework presented in Section 4, the following six propositions are advanced for future empirical testing.

Direct Effects of GHRM Practices on Sustainable Organizational Performance

P1: Green Recruitment and Selection positively influences Sustainable Organizational Performance.

P2: Green Training and Development positively influences Sustainable Organizational Performance.

P3: Green Rewards and Compensation positively influences Sustainable Organizational Performance.

In line with this, P1 is based on the premise that having some people who already have environmentally responsible values would minimize the organizational effort needed to develop an environmentally responsible culture (Raza & Khan, 2022; Fawehinmi et al., 2022). P2 is based on the idea that employees need to be trained on environmental issues to minimize the generation of waste and to use resources efficiently (Ifikhar, Zaman, Rehmani, Ghias, & Islam, 2021; Nasir et al., 2023). The basis of P3 is that when reward systems are set up to reward environmentally responsible behavior, employees will be encouraged to maintain that behavior over time and will achieve measurable organizational outcomes (Ahmad et al., 2023; Malokani et al., 2024).

The Mediating Role of Employee Environmental Commitment

P4: Employee Environmental Commitment mediates the relationship between Green Recruitment and Selection and Sustainable Organizational Performance.

P5: Employee Environmental Commitment mediates the relationship between Green Training and Development and Sustainable Organizational Performance.

P6: Employee Environmental Commitment mediates the relationship between Green Rewards and Compensation and Sustainable Organizational Performance.

According to Social Exchange Theory, whenever employees feel a sense of investment by the organization in green recruitment, training, and rewards, it is expected that they will exhibit a higher level of EEC, which will in turn lead to pro-environmental behaviors that will result in sustainable performance outcomes (Khan et al., 2022; Nasir et al., 2023). The mediating logic is suggested to apply to all three GHRM practices; however, the psychological pathway varies: recruitment selects on the values that already exist; training builds EEC competence and confidence; and rewards reinforce and validate green behavior after its performance.

Theoretical Contributions

This is a theoretical framework that has four main contributions. First, it creates an integrated GHRM model that integrates both GRS and GTD with GRC to jointly account for SOP — a combined system-level model of GHRM practices that is not studied in Pakistan or other developing economies where most studies focus on single practices. Second, it brings AMO theory into the realm of green management by explicitly connecting every GHRM practice to one of the three AMO elements, providing a structured argument for why these three practices should be modeled together instead of separately.

Third, the framework extends Social Exchange Theory by showing that organizational investment in GHRM is rewarded with increased EEC — a specific type of exchange of environmental behaviors — providing the reciprocity logic of SET with a specific focus. Fourth, the framework makes a formal specification of EEC as a mediator in a multi-practice GHRM model, thus advancing the literature by moving beyond the mere direct-effect models and beyond the single-practice mediation tests toward a complete explanatory system.

Practical Implications

For HR managers, the framework provides an implementation pathway: sustainability-oriented recruitment sets the ground, training is built upon this ground, and reward systems sustain the behavior. This provides a rationale for combining the recruitment, training, and reward systems as a package of interventions, and not as separate projects. In practice, this might mean incorporating environmental-values assessment into structured interviews, finding ways of including sustainability elements in induction training and regular training, and aligning a proportion of performance-based bonuses with actual environmental contribution.

The relationships that the framework suggests between green HR investments and organizational performance give corporate leaders some justification for making green HR investments a direct measure of organizational performance instead of an option that can be cut when necessary. If proven through empirical research, the framework could be used to benchmark and serve as a good indicator of future sustainability performance, instead of relying on lagging environmental or financial indicators. For policymakers, the framework provides a frame for the development of sectoral GHRM guidelines in line with national priorities like Green Pakistan, with a focus on integrated multi-practices instead of isolated 'symbolic' environmental activities.

Future Research Directions

The propositions formulated in Section 5 should be tested statistically using survey data from employees of different manufacturing and service sectors in Pakistan and analyzed using the Structural Equation Modeling approach that will estimate the direct paths (P1–P3) as well as the mediated paths (P4–P6) simultaneously. Moderated-mediation analysis of the relationship between GHRM and EEC should be tested in the future with the addition of Green Transformational Leadership and Organizational Support as two boundary conditions in the moderated-mediation model.

Longitudinal designs would give us a better idea of how EEC and SOP change as GHRM practices become more mature within an organization and overcome the common shortcomings of cross-sectional designs found in the wider GHRM literature. Other work should also be conducted to build and test the TBL-based SOP indicators that are appropriate to Pakistan's context, as many scales have been developed in developed economy contexts. Finally, comparative studies, which extend this framework to other developing economies, like Bangladesh, Sri Lanka, or Nepal, will help determine if the proposed relationships are unique to Pakistan's institutional environment or if there is a more general relationship to be drawn across developing economies.

Conclusion

In Pakistan, HRM practices in the corporate sector are largely underexplored, especially the concept of Green HRM practices, including recruitment, training, and rewards, mediating between Sustainable Organizational Performance and Employee Environmental Commitment. It is grounded in the theories of Social Exchange Theory, Resource-Based View, AMO Theory, and Institutional Theory, and defines five core constructs and six propositions that can be tested in order to explain why it is expected that GHRM practices are likely to have positive effects on sustainability outcomes and how this happens on a psychological level. The key contribution of the framework is that it integrates the three strands of research in a coherent way – GHRM practices, EEC, and SOP – so as to provide a single coherent framework that mirrors the multi-dimensional and system-level approach to sustainability that is a reality in organizations. The framework provides scholars with a set of propositions to be empirically tested and a methodological roadmap. For practitioners and policymakers, it offers a structured rationale for treating green HR investment as a strategic driver of environmental, economic, and social performance rather than a discretionary activity.

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