

Green human resource management and organizational performance: A systematic literature review

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Abstract

This systematic literature review examines the relationship between green human resource management (GHRM) practices and organizational performance outcomes. The review synthesizes empirical evidence from 82 studies published between 2019 and 2024, addressing multiple dimensions of performance including environmental, financial, social, and sustainable performance. Following PRISMA 2020 guidelines, a systematic search was conducted across Scopus, Web of Science, and Google Scholar databases. Studies were analyzed using the Ability-Motivation-Opportunity (AMO) theoretical framework to categorize GHRM practices and their performance implications. The evidence strongly supports positive relationships between GHRM practices and organizational performance. Environmental performance shows the most consistent positive effects, followed by sustainable performance and green innovation. The GHRM-financial performance relationship is predominantly indirect, mediated by environmental performance and employee green behavior. Green training and development emerges as the most frequently examined and impactful practice. Employee green behavior serves as a critical mediating mechanism across all performance dimensions. This review provides an integrated framework connecting GHRM practices to multi-dimensional organizational performance through the AMO lens. It identifies critical mediating mechanisms and moderating factors, offering actionable insights for practitioners seeking to leverage human resources for environmental sustainability while maintaining competitive performance.

Keywords:

Green Human Resource Management, GHRM, Environmental Performance, Organizational Performance, Employee Green Behavior, Amo Theory, Sustainable Hrm, Systematic Literature Review

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INTRODUCTION

The escalating environmental challenges confronting organizations worldwide have catalyzed a fundamental transformation in human resource management practices. Green Human Resource Management (GHRM) has emerged as a strategic approach that integrates environmental management objectives into traditional HRM functions, positioning human capital as a critical enabler of organizational sustainability. As organizations face mounting pressure from regulators, consumers, investors, and society at large to demonstrate environmental responsibility, understanding how GHRM practices influence organizational performance has become imperative.

GHRM encompasses the systematic alignment of HRM policies and practices with environmental sustainability goals. This includes greening traditional HR functions such as recruitment and selection, training and development, performance management, compensation and rewards, and employee involvement. The fundamental premise is that employees, when properly selected, trained, motivated, and empowered, become agents of environmental change who can drive organizational sustainability initiatives.

The academic interest in GHRM has grown exponentially, with the field evolving from conceptual discussions to robust empirical investigations. However, despite the proliferation of studies, the evidence base remains fragmented across different performance dimensions, theoretical perspectives, and contextual settings. Some studies report strong positive relationships between GHRM and various performance outcomes, while others find weak or contingent effects. This heterogeneity presents challenges for both researchers seeking to advance theory and practitioners aiming to implement effective GHRM strategies.

THEORETICAL BACKGROUND

Defining Green Human Resource Management

Green Human Resource Management refers to the systematic integration of environmental management objectives into human resource management policies, practices, and systems. GHRM encompasses “all aspects of HRM which promote environmentally sustainable practices and increase employee commitment and involvement in environmental sustainability.” The concept recognizes that achieving organizational environmental objectives requires more than technological solutions; it demands engaged employees with appropriate knowledge, skills, motivation, and opportunities to contribute to sustainability goals.

Core GHRM practices typically include green recruitment and selection (attracting and hiring environmentally conscious candidates), green training and development (building environmental knowledge and skills), green performance management (incorporating environmental criteria into performance evaluation), green compensation and rewards (incentivizing pro-environmental behavior), and green employee involvement (empowering employees to participate in environmental initiatives).

Theoretical Framework: AMO Theory

The Ability-Motivation-Opportunity (AMO) theory provides the dominant theoretical lens for understanding how GHRM practices influence employee behavior and organizational outcomes. According to AMO theory, performance is a function of employee ability (possessing relevant knowledge and skills), motivation (willingness to exert effort), and opportunity (contextual factors enabling performance). Applied to GHRM:

1. **Ability:** Green recruitment and selection ensure hiring employees with environmental values and competencies. Green training and development build environmental knowledge, skills, and problem-solving capabilities. Together, these practices enhance employees' capacity to contribute to environmental objectives.

2. **Motivation:** Green performance management establishes clear environmental expectations and provides feedback. Green compensation and rewards create incentives for pro-environmental behavior. These practices energize and direct employee effort toward environmental goals.
3. **Opportunity:** Green employee involvement and empowerment provide platforms for employees to participate in environmental decision-making and initiatives. This creates the contextual conditions enabling employees to apply their abilities and act on their motivation.

Additional Theoretical Perspectives

1. **Resource-Based View (RBV):** RBV suggests that GHRM practices can develop human capital that is valuable, rare, inimitable, and non-substitutable, thereby creating sustainable competitive advantage. Green competencies and organizational routines developed through GHRM become strategic resources enabling superior environmental and financial performance.
2. **Social Exchange Theory (SET):** SET explains that when organizations invest in GHRM practices, employees reciprocate through increased engagement in pro-environmental behaviors. This exchange relationship creates mutual benefits for organizations and employees.
3. **Stakeholder Theory:** Stakeholder theory posits that organizations must address the environmental concerns of multiple stakeholder groups. GHRM enables organizations to meet stakeholder expectations while developing internal capabilities for environmental performance.

Conceptual Framework

Figure 1 presents the conceptual framework guiding this review. The framework illustrates how GHRM practices, organized according to AMO dimensions, influence organizational performance through mediating mechanisms, with the relationship moderated by organizational, individual, and contextual factors.

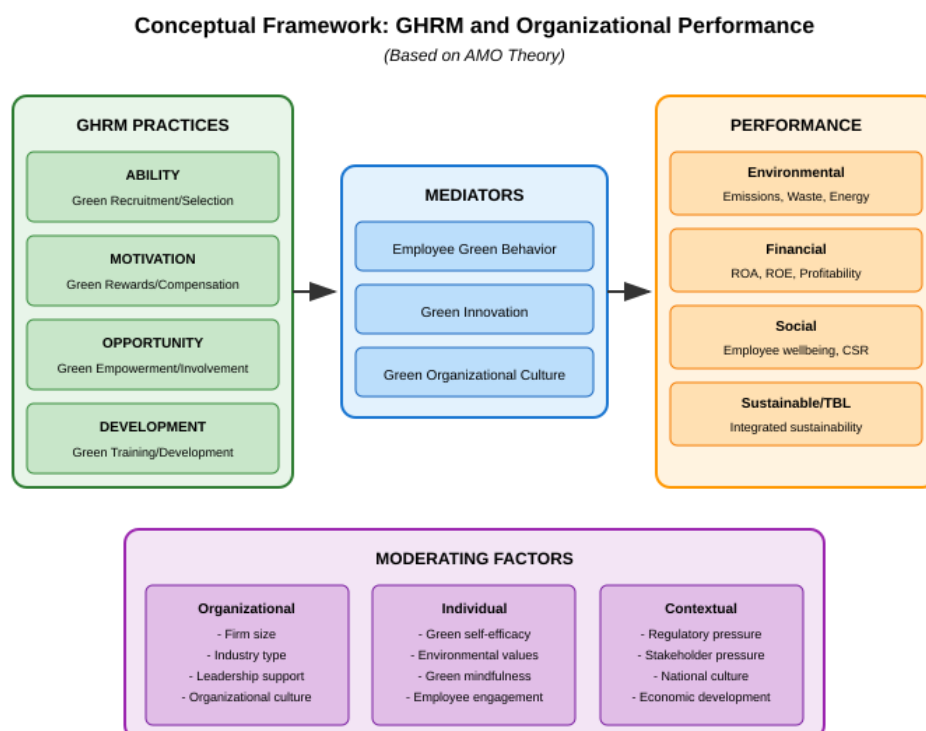


Figure 1. Conceptual Framework – GHRM and Organizational Performance (AMO Theory)

METHODOLOGY

Review Protocol

This systematic literature review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. The review protocol was established prior to the search, specifying databases, search terms, eligibility criteria, and analysis procedures.

Search Strategy

A systematic search was conducted across Scopus, Web of Science, and Google Scholar in October 2024. The search was limited to peer-reviewed journal articles published in English between January 2019 and December 2024.

Search terms included: (“Green Human Resource Management” OR “Green HRM” OR “GHRM” OR “green HR practices” OR “sustainable HRM” OR “environmental HRM”) AND (“organizational performance” OR “firm performance” OR “environmental performance” OR “financial performance” OR “sustainable performance” OR “green innovation” OR “employee green behavior”).

Eligibility Criteria

1. Inclusion criteria:

- Empirical studies examining GHRM practices and organizational performance outcomes
- Studies with quantifiable measures of GHRM practices and performance
- Peer-reviewed journal articles published 2019-2024
- Articles in English language

2. Exclusion criteria:

- Purely conceptual or theoretical papers without empirical data
- Studies without explicit organizational performance measures
- Conference papers, dissertations, and book chapters
- Studies with insufficient methodological quality

Study Selection Process

The initial database search identified 2,142 records. After removing 389 duplicates, 1,753 records were screened based on titles and abstracts. Following initial screening, 264 articles were assessed for eligibility through full-text review. The final sample comprised 82 empirical studies. Figure 2 presents the PRISMA flow diagram.

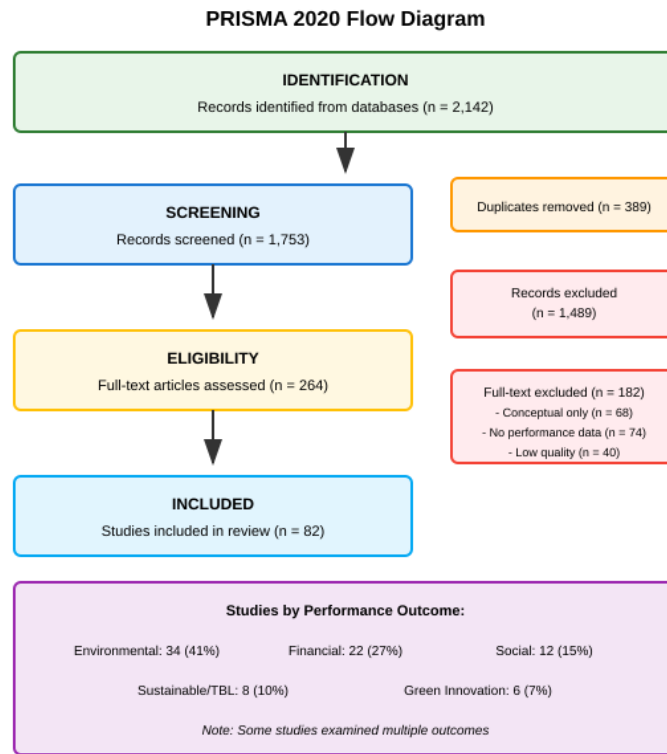


Figure 2. PRISMA Flow Diagram

FINDINGS

Descriptive Overview

The 82 included studies demonstrate exponential growth in GHRM-performance research, with publications increasing from 6 in 2019 to a peak of 23 in 2023. Figure 3 illustrates the publication trends.

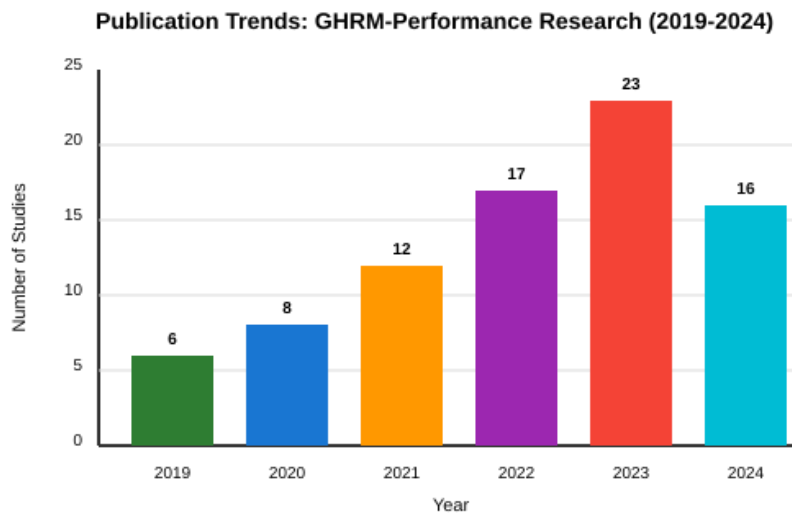


Figure 3. Publication Trends (2019-2024)

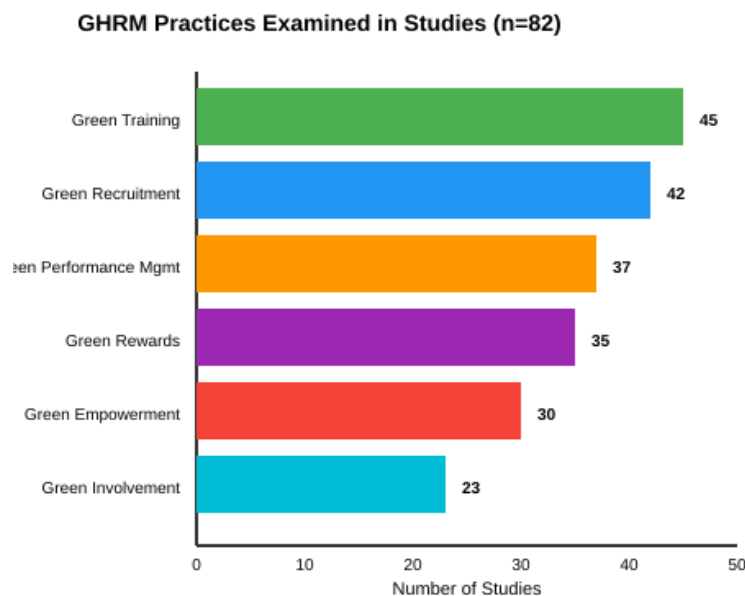
Geographically, studies originated predominantly from Asia (58%), particularly China, Pakistan, and India, followed by the Middle East (18%), Europe (15%), and other regions (9%). The manufacturing sector was the most studied context (45%), followed by services (28%), mixed industries (18%), and other sectors (9%).

Table 1. Distribution of Studies by Region and Industry

Region	Manufacturing	Services	Mixed	Other	Total
Asia (China, Pakistan, India)	24	12	8	4	48 (58%)
Middle East	8	4	2	1	15 (18%)
Europe	4	5	3	0	12 (15%)
Other (Africa, Americas)	1	2	2	2	7 (9%)
Total	37 (45%)	23 (28%)	15 (18%)	7 (9%)	82 (100%)

GHRM Practices Examined

Green training and development was the most frequently examined GHRM practice (45 studies), followed by green recruitment and selection (42 studies), green performance management (37 studies), green rewards and compensation (35 studies), green empowerment (30 studies), and green employee involvement (23 studies). Figure 4 displays the distribution of GHRM practices across studies.

**Figure 4.** GHRM Practices Examined in Studies

GHRM and Performance Outcomes

1. Environmental Performance

Environmental performance was the most frequently examined outcome (34 studies, 41%). The evidence overwhelmingly supports a positive relationship between GHRM practices and environmental performance, with 91% of studies reporting significant positive effects. Key environmental outcomes include reduced emissions, decreased waste generation, improved resource efficiency, and enhanced environmental management system effectiveness.

Green training and development shows the strongest association with environmental performance by building employees' environmental knowledge and problem-solving capabilities. Green performance management and rewards create accountability and incentives that channel employee effort toward environmental goals.

2. Financial Performance

Financial performance was examined in 22 studies (27%). The evidence suggests a predominantly positive but more complex relationship compared to environmental

performance. Approximately 68% of studies found positive effects, 18% reported mixed results, and 14% found no significant relationship.

Importantly, the relationship between GHRM and financial performance appears largely indirect. Studies consistently demonstrate that GHRM affects financial outcomes through mediating variables such as environmental performance, green innovation, and operational efficiency. This suggests that GHRM creates value by building capabilities that subsequently drive financial performance.

3. Social and Sustainable Performance

Social performance (12 studies, 15%) and sustainable/triple-bottom-line performance (8 studies, 10%) were less frequently examined but showed consistently positive relationships with GHRM. Social outcomes include enhanced employee well-being, improved workplace safety, strengthened community relations, and increased corporate social responsibility. Sustainable performance studies assessed integrated environmental, social, and economic outcomes using triple-bottom-line frameworks.

4. Green Innovation

Green innovation was examined as an outcome variable in 6 studies (7%). All studies found significant positive relationships between GHRM practices and green innovation, including eco-friendly product development, green process innovation, and green management innovation. GHRM appears to create organizational conditions conducive to innovation by developing environmental competencies and motivating creative problem-solving.

Table 2. Summary of GHRM-Performance Relationships

Performance Dimension	Studies (n)	Positive	Mixed	No Effect	Key Finding
Environmental	34	91%	6%	3%	Strong direct positive effect
Financial	22	68%	18%	14%	Predominantly indirect effect
Social	12	83%	9%	8%	Consistent positive effect
Sustainable/TBL	8	88%	12%	0%	Strong integrated effect
Green Innovation	6	100%	0%	0%	Universal positive effect

Mediating Mechanisms

The review identifies several critical mediating mechanisms through which GHRM influences organizational performance:

1. **Employee Green Behavior:** The most frequently examined mediator (28 studies). Employee green behavior includes both task-related (required by job role) and voluntary (discretionary) pro-environmental behaviors. GHRM practices develop employee capabilities and motivation that translate into environmentally responsible behaviors, which aggregate to organizational environmental performance.
2. **Green Innovation:** Examined as a mediator in 15 studies. GHRM creates conditions for green innovation by developing environmental competencies, motivating creative problem-solving, and providing opportunities for employee involvement in environmental initiatives.
3. **Green Organizational Culture:** Examined in 12 studies. GHRM practices shape organizational values, norms, and shared assumptions regarding environmental responsibility, creating a cultural foundation for sustainable performance.
4. **Environmental Performance:** Serves as a mediator between GHRM and financial performance in 10 studies. Environmental improvements (reduced costs, enhanced efficiency) translate into financial benefits.

Moderating Factors

Table 3. Key Moderating Factors

Moderator Category	Specific Factors	Effect on GHRM-Performance	Evidence
Organizational	Firm size	Larger firms show stronger effects	Strong
Organizational	Industry (polluting)	Polluting industries show stronger effects	Strong
Organizational	Green transformational leadership	Amplifies GHRM effectiveness	Moderate
Individual	Green self-efficacy	Strengthens the behavior-performance link	Moderate
Individual	Environmental values	Enhances GHRM adoption effects	Moderate
Contextual	Regulatory pressure	Stronger effects under high pressure	Strong
Contextual	Stakeholder pressure	Strengthens the GHRM-performance link	Moderate
Contextual	National culture	Collectivism strengthens effects	Weak-Moderate

DISCUSSION

Synthesis of Findings

This systematic review provides compelling evidence that GHRM practices positively influence multiple dimensions of organizational performance. The evidence is strongest for environmental performance, where GHRM creates direct pathways to improved environmental outcomes through employee capability building and motivation. The relationship with financial performance is more nuanced, operating primarily through indirect mechanisms including environmental performance improvements, green innovation, and operational efficiency gains.

The AMO theoretical framework proves highly effective for understanding how GHRM influences performance. Practices that enhance employees' abilities (green recruitment, training) ensure that employees possess the necessary environmental competencies. Practices building motivation (green performance management, rewards) direct effort toward environmental goals. Practices creating opportunity (green empowerment, involvement) enable employees to apply their abilities and act on their motivation. The combination of all three dimensions produces the strongest performance effects.

Employee green behavior emerges as the critical transmission mechanism linking GHRM to organizational performance. GHRM practices shape individual employee behaviors, which aggregate to organizational-level outcomes. This highlights the importance of individual-level change in achieving organizational environmental objectives.

Theoretical Implications

The review extends AMO theory by demonstrating its applicability to environmental management contexts. The findings suggest that AMO provides a robust framework for understanding how HRM practices influence employee environmental behaviors and, through them, organizational environmental performance. Future theoretical development should further elaborate on the environmental adaptations of AMO dimensions.

The resource-based view is supported by evidence that GHRM develops valuable environmental capabilities that drive competitive advantage. Green competencies, routines, and organizational culture developed through GHRM are difficult to imitate and create sustainable performance advantages

Practical Implications

1. For HR Practitioners: Implement comprehensive GHRM systems that address all AMO dimensions. Green training should be prioritized given its consistent positive effects. Align green performance management with organizational environmental objectives and ensure rewards reinforce desired behaviors. Create meaningful opportunities for employee involvement in environmental initiatives.
2. For Senior Leaders: Recognize that achieving environmental objectives requires strategic HRM investment. Support GHRM implementation through green transformational leadership that models environmental commitment. Understand that GHRM affects financial performance primarily through environmental improvements and innovation rather than directly.
3. For Policymakers: Encourage organizational adoption of GHRM practices through incentives and guidelines. Recognize that regulatory pressure can strengthen GHRM effectiveness, suggesting that environmental regulations and GHRM are complementary rather than substitutes.

Research Agenda

Table 4. Future Research Directions

Research Priority	Area	Key Questions
High	Longitudinal studies	How do GHRM effects evolve over time?
High	Financial performance mechanisms	What specific pathways link GHRM to financial outcomes?
High	Practice synergies	How do GHRM practices interact to affect performance?
Medium	SME context	How do GHRM effects differ in smaller organizations?
Medium	Cross-cultural research	How does national culture shape GHRM effectiveness?
Medium	Digital GHRM	How does technology enable or transform GHRM practices?
Low	Negative effects	Under what conditions might GHRM have adverse effects?

CONCLUSION

This systematic literature review synthesized evidence from 82 empirical studies examining the relationship between green human resource management practices and organizational performance. The findings strongly support the proposition that GHRM positively influences multiple performance dimensions, with environmental performance showing the most consistent positive effects.

Key conclusions include: First, GHRM practices organized around the Ability-Motivation-Opportunity framework effectively enhance organizational environmental performance. Green training and development, which builds employee environmental capabilities, emerges as the

most impactful practice. Second, the GHRM-financial performance relationship is predominantly indirect, mediated by environmental performance, green innovation, and employee behaviors. Organizations should expect financial returns to materialize through environmental improvements rather than directly. Third, employee green behavior serves as the critical transmission mechanism linking GHRM practices to organizational outcomes. Individual behavior change is essential for organizational environmental performance. Fourth, contextual factors, including firm size, industry, leadership support, and regulatory pressure, moderate the effectiveness of GHRM.

Limitations

This review has several limitations. First, the geographic concentration of studies in Asia may limit generalizability to other contexts. Second, reliance on cross-sectional studies in the literature constrains causal inferences. Third, heterogeneity in GHRM and performance measures across studies complicates direct comparisons. Fourth, potential publication bias may inflate the number of positive findings.

Concluding Remarks

As organizations face mounting pressure to address environmental challenges while maintaining competitive performance, GHRM offers a strategic approach that leverages human capital for sustainability. This review demonstrates that investing in GHRM practices creates value across multiple performance dimensions. For organizations committed to environmental sustainability, GHRM represents not merely an ethical imperative but a strategic opportunity to build capabilities that drive both environmental and business performance.

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