

Sustainable Hrm Practices And Employee Green Behavior: A Meta-Analysis Of Their Relationship And Moderating Factors.

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ABSTRACT: *This meta-analysis synthesized the empirical evidence on the relationship between Sustainable Human Resource Management (SHRM) practices and Employee Green Behavior (EGB). A systematic review was conducted following PRISMA guidelines, identifying 42 independent studies (N = 12,587 employees) for inclusion. A random-effects model revealed a statistically significant, moderate-to-strong positive correlation between SHRM practices and EGB ($\rho = 0.37$). Subgroup analysis indicated that the strength of this relationship varied significantly across specific SHRM practices. Green Training & Development ($\rho = 0.45$) and Green Employee Involvement & Participation ($\rho = 0.42$) demonstrated the strongest effects, significantly outperforming Green Performance Management & Rewards ($\rho = 0.28$) and Green Recruitment & Selection ($\rho = 0.22$). Moderator analyses identified that the effect was significantly stronger when EGB was measured via other-reported (e.g., supervisor) ratings compared to self-reports, in manufacturing sectors compared to service sectors, and in cultures characterized by higher individualism and lower power distance. The findings consolidated theoretical frameworks (AMO, SET, SIT) and provided evidence-based guidance for organizations, suggesting that prioritizing competency-building and participatory practices yields the greatest returns in fostering workplace sustainability.*

Keywords: Sustainable HRM, Green HRM, Employee Green Behavior, Pro-Environmental Behavior, Meta-Analysis, Moderators, AMO Framework, Organizational Sustainability.

1. INTRODUCTION

The escalating planetary crises of climate change, biodiversity loss, and resource depletion present unprecedented challenges for humanity, compelling organizations to fundamentally rethink their role and responsibilities beyond mere profit generation. Stakeholder pressure – from investors demanding Environmental, Social, and Governance (ESG) transparency, regulators enforcing stricter environmental standards, consumers favoring sustainable brands, and employees seeking purpose-driven work – has thrust corporate environmental sustainability from a peripheral concern to a core strategic imperative (Aguinis & Glavas, 2012; Howard-Grenville et al., 2014). While technological innovation and regulatory compliance are crucial, achieving meaningful and lasting environmental performance hinges critically on the collective behaviors of individuals *within* organizations. Employees are not merely implementers of top-down sustainability directives; they are pivotal agents whose daily decisions and actions – from energy conservation and waste reduction to innovative eco-initiatives – cumulatively shape an organization's environmental footprint (Ones & Dilchert, 2012; Robertson & Barling, 2013). Consequently, understanding and fostering Employee Green Behavior (EGB) – defined as "scalable actions and behaviours that employees engage in that are linked with and contribute to or detract from environmental sustainability" (Ones & Dilchert, 2012, p. 87) – has emerged as a central focus for both scholars and practitioners aiming to bridge the gap between organizational sustainability policy and tangible environmental outcomes. EGB encompasses a spectrum, ranging from required task-related pro-environmental actions (e.g., following recycling procedures) to voluntary Organizational Citizenship Behaviors for the Environment (OCBE), such as championing green ideas or participating in environmental committees (Boiral & Paillé, 2012; Lülfs & Hahn, 2013).

Recognizing the centrality of human capital, the field of Human Resource Management (HRM) has evolved to embrace sustainability as a core dimension, giving rise to the concept of Sustainable HRM (SHRM), also frequently termed Green HRM. SHRM transcends traditional HRM by integrating environmental sustainability goals into all HR processes and philosophies, aiming to develop employee competencies, motivations, and opportunities necessary for achieving both organizational effectiveness and positive environmental impact (Ehnert et al., 2016; Kramar, 2014; Renwick et al., 2013). It represents a strategic approach where HR systems are designed and implemented not only to enhance employee wellbeing and social equity (the "social" pillar), but also to foster environmentally responsible behaviors and contribute to ecological sustainability (the "environmental" pillar) (Järlström et al., 2018). Core SHRM practices include green recruitment and selection (attracting candidates with environmental values), green training and development (building environmental knowledge and skills), green performance management (incorporating environmental goals and metrics into appraisals), green rewards and compensation (linking incentives to environmental performance), and fostering employee green involvement and participation (empowering employees to contribute ideas and actions) (Dumont et al., 2017; Renwick et al., 2016). Theoretically, the link between SHRM and EGB is robustly underpinned. The Ability-Motivation-Opportunity (AMO) framework posits that HR practices influence performance by enhancing employees' *Ability* (e.g., via green

training), *Motivation* (e.g., via green rewards or performance management), and *Opportunity* (e.g., via participation mechanisms) to engage in desired behaviours (Appelbaum et al., 2000; Jiang et al., 2012). Social Exchange Theory (SET) suggests that SHRM practices signal organizational investment in environmental and social values, fostering a reciprocal obligation in employees to reciprocate through discretionary efforts like OCBE (Blau, 1964; Paillé et al., 2014). Social Identity Theory (SIT) further explains how SHRM can strengthen employees' identification with the organization's environmental mission, motivating them to act in ways that affirm this "green" identity (Carmeli et al., 2007; Norton et al., 2015).

Over the past decade, empirical research exploring the SHRM-EGB relationship has proliferated across diverse organizational and national contexts. Numerous primary studies provide evidence supporting a positive association, suggesting SHRM practices can effectively stimulate pro-environmental behaviours (e.g., Dumont et al., 2017; Paillé et al., 2014; Roscoe et al., 2019). However, a critical examination reveals significant complexities and inconsistencies that hinder clear theoretical advancement and practical application. First, reported effect sizes vary considerably, ranging from weak to strong correlations, raising questions about the true magnitude and consistency of the relationship (Norton et al., 2015). Second, the effectiveness of *specific* SHRM practices appears uneven. While green training and participation often show robust links to EGB, findings regarding green rewards and performance management are more mixed and sometimes non-significant, suggesting potential nuances in implementation or contextual dependencies (Dumont et al., 2017; Ren et al., 2018). Third, the field is characterized by significant methodological heterogeneity. Studies differ widely in how they operationalize both SHRM (e.g., individual practices vs. bundles, perceptual vs. objective measures) and EGB (e.g., self-reported vs. supervisor-rated, focus on task vs. OCB-E), potentially confounding results (Bissing-Olson et al., 2013). Fourth, the influence of critical contextual moderators – such as industry sector (manufacturing intensity), national culture (individualism vs. collectivism, power distance), or country economic development level – remains inadequately understood and inconsistently tested across individual studies, which often lack the statistical power to detect such effects (Hofman et al., 2017; Jackson et al., 2014). While valuable qualitative and narrative reviews have synthesized concepts and identified trends (e.g., Renwick et al., 2013; Roscoe et al., 2019), they are inherently limited in their ability to quantitatively aggregate findings, resolve inconsistencies through statistical means, isolate the influence of specific practices, or empirically test the impact of moderators across the entire body of evidence. This fragmented landscape underscores the critical need for a rigorous quantitative synthesis. A meta-analysis is uniquely positioned to address these limitations by systematically aggregating empirical results to: (1) provide a precise, unbiased estimate of the *overall population correlation* (ρ) between SHRM practices and EGB; (2) statistically compare the relative strength of relationships for *different categories of SHRM practices* (e.g., training vs. rewards vs. participation); (3) empirically identify and quantify the influence of key *methodological, contextual, and measurement moderators* (e.g., industry, culture, measurement source) on the SHRM-EGB relationship; and (4) assess the presence and potential impact of publication bias. By doing so, this meta-analysis aims to consolidate existing knowledge, resolve ambiguities, provide a firmer empirical foundation for theory (AMO, SET, SIT), and offer more nuanced, evidence-based guidance for HR practitioners seeking to leverage their function for environmental sustainability.

2. RESEARCH METHODS

This meta-analysis adhered rigorously to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Page et al., 2021) to ensure transparency and reproducibility. A systematic literature search was conducted across six major databases (Web of Science, Scopus, PsycINFO, Business Source Premier, ProQuest Dissertations, and Google Scholar) using predefined Boolean strings combining terms for *Sustainable HRM* (e.g., "green HRM," "environmental HRM") and *Employee Green Behavior* (e.g., "OCBE," "pro-environmental behavior"). Supplementary searches included backward/forward citation tracking, hand-searches of key journals, and screening of conference proceedings to mitigate publication bias (Haddaway et al., 2015).

Studies were included if they: (1) quantitatively measured the relationship between specific SHRM practices (e.g., green training, eco-recruitment) and EGB; (2) sampled employees; (3) provided data to calculate effect sizes (e.g., correlations, regression coefficients); and (4) were published in English as peer-reviewed articles or theses. Two independent reviewers screened titles/abstracts and full texts, resolving discrepancies via consensus or third-reviewer consultation (Moher et al., 2009).

Data extraction employed a pilot-tested coding protocol. Key variables included:

- SHRM practices, categorized into *Green Training & Development*, *Green Performance Management & Rewards*, *Green Employee Involvement & Participation*, *Green Recruitment & Selection*, or *Composite SHRM Systems* (Dumont et al., 2017; Renwick et al., 2016).
- EGB measurement (construct, source, level).
- Effect sizes (Pearson's r converted to Fisher's z).

- Moderators: industry type, national culture (Hofstede indices), economic development, measurement sources, study design, and study quality (6-item scale). Inter-rater reliability was assessed using Cohen's κ and ICCs (Borenstein et al., 2009).

Analyses used random-effects models (DerSimonian & Laird, 1986) in CMA 4.0 and R's metafor package (Viechtbauer, 2010). The mean effect size (ρ) was weighted by inverse variance. Heterogeneity was quantified via Q -statistics and I^2 (Higgins & Thompson, 2002). Subgroup differences (SHRM categories) and moderators were tested using Q -between and meta-regression. Publication bias was assessed via funnel plots, Egger's test (Egger et al., 1997), and trim-and-fill. Sensitivity analyses included influence diagnostics and robustness checks (e.g., excluding grey literature).

3. RESULTS

3.1. Study Selection Process

The systematic review commenced with an initial pool of 1,285 identified records. Following duplicate removal and title/abstract screening, 187 studies advanced to full-text assessment. Rigorous application of eligibility criteria culminated in the final inclusion of 42 independent studies, yielding 45 effect sizes. The predominant reasons for exclusion during full-text review encompassed the absence of quantitative measures for SHRM or EGB, insufficient data for effect size calculation, or studies not focused on employee populations. This structured filtration process, detailed in the PRISMA diagram, underscored the focus on robust quantitative evidence linking specific SHRM practices to measurable employee green behaviors. As summarized in Table 1, exclusions were primarily attributed to non-quantitative SHRM/EGB measures (38 studies, 35.2% of exclusions), insufficient effect size data (41 studies, 38.0%), and non-employee samples (29 studies, 26.8%).

Table 1: Full-Text Exclusion Reasons

Exclusion Criteria	Count	% of Excluded
Non-quantitative SHRM/EGB measures	38	35.2%
Insufficient effect size data	41	38.0%
Non-employee samples	29	26.8%

This structured filtration process underscores the focus on empirical, quantitative evidence linking SHRM to measurable employee green behaviors while highlighting common methodological gaps in the literature.

3.2. Descriptive Characteristics of Studies

The final corpus of 42 studies represented significant geographical and industrial diversity, though notable imbalances emerged. Geographically, Asian studies predominated (52.4%), followed by Europe (28.6%) and North America (11.9%). Manufacturing constituted the most represented industry sector (38.1%), with services (31.0%), energy/utilities, and mixed sectors also included. A clear surge in research activity was observed, with 78.6% of studies published post-2018. Regarding SHRM practices, Green Training & Development (GT&D) and Green Employee Involvement & Participation (GEI&P) were the most frequently examined (studied in 52.4% and 47.6% of studies, respectively), while Green Recruitment & Selection (GR&S) was the least studied (14.3%). Crucially, EGB measurement relied predominantly on self-report methods (73.8% of studies), raising potential concerns about common method bias, with only 21.4% utilizing supervisor ratings.

Table 2: Study Demographics

Characteristic	Distribution	Dominant Pattern
Geography (*k*=42)	Asia (52.4%), Europe (28.6%), N. America (11.9%)	Asian dominance

Characteristic	Distribution	Dominant Pattern
Industry (*k*=42)	Manufacturing (38.1%), Services (31.0%)	Production-sector focus
SHRM Focus	GT&D (52.4%), GEI&P (47.6%), GPM&R (35.7%)	Skill/participation emphasis
EGB Measurement	Self-report (73.8%), Supervisor-rated (21.4%)	Subjective bias risk
Publication Era	78.6% post-2018	Emerging research field

Source: Secondary data (2025)

4.3. Overall Effect Size

The random-effects model confirmed a robust aggregate relationship: $\rho = 0.37$ ($*p < .001$, 95% CI [0.32, 0.42]). Heterogeneity: $I^2 = 79.8\%$ ($Q = 218.63$, $*p < .001$)

The random-effects meta-analysis revealed a statistically significant, moderate-to-strong positive correlation ($\rho = 0.37$) between SHRM practices and Employee Green Behavior (EGB). This indicates that, overall, the implementation of SHRM practices is substantially associated with increased pro-environmental actions by employees. However, the analysis also detected very high heterogeneity ($I^2 = 79.8\%$), meaning the effect sizes varied significantly more than would be expected by chance alone. While all included studies showed a positive relationship, the strength of this relationship ranged considerably ($\rho = 0.18$ to 0.61), strongly suggesting the influence of moderating factors.

4.4. Subgroup Analysis by SHRM Practice Category

Effectiveness varied significantly across HR functions ($Q\text{-between} = 21.07$, $*p < .001$):

Table 3: Efficacy by SHRM Practice

SHRM Practice	k	ρ	95% CI	Efficacy Rank
Green Training & Dev. (GT&D)	22	0.45**	[0.38, 0.51]	1
Green Involvement & Part. (GEI&P)	20	0.42**	[0.35, 0.48]	2
Composite SHRM Systems	12	0.35*	[0.27, 0.43]	3
Green Perf. Mgmt & Rew. (GPM&R)	15	0.28*	[0.21, 0.35]	4
Green Recruitment & Select. (GR&S)	6	0.22*	[0.12, 0.32]	5
** $p < .01$ for GT&D/GEI&P vs. GPM&R; $p < .001$ vs. GR&S*				

The effectiveness of SHRM practices in promoting EGB varied significantly depending on the specific HR function ($Q\text{-between} = 21.07$, $*p < .001$). Green Training & Development (GT&D; $k = 22$, $\rho = 0.45$, 95% CI [0.38, 0.51]) and Green Employee

Involvement & Participation (GEI&P; $k=20$, $\rho = 0.42$, 95% CI [0.35, 0.48]) demonstrated the strongest positive relationships with EGB. These significantly outperformed Green Performance Management & Rewards (GPM&R; $k=15$, $\rho = 0.28$, 95% CI [0.21, 0.35]) and Green Recruitment & Selection (GR&S; $k=6$, $\rho = 0.22$, 95% CI [0.12, 0.32]). Composite SHRM Systems ($k=12$, $\rho = 0.35$, 95% CI [0.27, 0.43]) ranked third in efficacy. This pattern indicated that practices focused on building green knowledge/skills and empowering employee participation were more potent drivers of EGB than practices centered on assessment, monetary rewards, or initial hiring for green attributes.

4.5. Moderator Analyses

4.5.1. Categorical Moderators

Systematic variations emerged across methodological and contextual factors. Effect sizes were 33% stronger when EGB was measured via other-reported ratings ($\rho=0.44$) compared to self-reports ($\rho=0.33$; $\Delta\rho = +0.11$, $p=.002$), suggesting self-reports substantially underestimated true relationships likely due to social desirability bias. Effects were 32% stronger in high-manufacturing contexts ($\rho=0.41$) versus low-manufacturing/service sectors ($\rho=0.31$; $\Delta\rho = +0.10$, $p=.008$), implying SHRM interventions yielded greater returns where environmental impacts were more tangible and visible. Effects reported in peer-reviewed journals were 50% stronger ($\rho=0.39$) than those in grey literature ($\rho=0.26$; $\Delta\rho = +0.13$, $p=.015$), potentially indicating publication bias or quality differences.

Table 4: Categorical Moderator Effects

Moderator	Category	ρ	$\Delta\rho$	p-value
EGB Measurement Source	Other-reported	0.44	+0.11	.002
	Self-reported	0.33		
Industry Type	High-manufacturing	0.41	+0.10	.008
	Low-manufacturing	0.31		
Publication Type	Journal articles	0.39	+0.13	.015
	Grey literature	0.26		

4.5.2. Continuous Moderators

Cultural dimensions significantly influenced the effect strength. Individualism exhibited a positive moderating effect ($b=+0.002$, $p=.042$), strengthening the SHRM-EGB relationship in cultures valuing autonomy. Conversely, high Power Distance weakened the relationship ($b=-0.003$, $p=.028$), indicating SHRM practices faced challenges in hierarchical structures. Higher study methodological quality correlated with stronger effect sizes ($b=+0.032$, $p=.009$), validating the robustness of the overall findings.

Table 5: Meta-Regression Results

Moderator	B	p-value	Directional Impact
Individualism	+0.002	.042	Strengthens in individualist cultures

Moderator	B	p-value	Directional Impact
Power Distance	-0.003	.028	Weaknesses in hierarchical cultures
Study Quality	+0.032	.009	Higher quality → Stronger effects

5. DISCUSSION

5.1. Summary of Key Findings

This meta-analysis synthesized evidence from 42 independent studies, encompassing 12,587 employees, to quantify the relationship between Sustainable HRM (SHRM) practices and Employee Green Behavior (EGB). The results revealed a moderate-to-strong positive correlation ($\rho = 0.37$, $*p < .001$), confirming SHRM as a robust driver of pro-environmental actions. Significant variation emerged across different SHRM practices (Q-between = 21.07, $*p < .001$), with Green Training & Development ($\rho = 0.45$) and Green Involvement & Participation ($\rho = 0.42$) demonstrating the strongest effects. These two practices significantly outperformed Green Performance Management & Rewards ($\rho = 0.28$) and Green Recruitment & Selection ($\rho = 0.22$). Several key moderators significantly influenced the strength of the SHRM-EGB relationship. The source of EGB measurement was crucial, as other-reported ratings ($\rho = 0.44$) yielded effects 33% stronger than self-reports ($\rho = 0.33$). Industry context also mattered, with effects 32% stronger in the manufacturing sector ($\rho = 0.41$) compared to service sectors ($\rho = 0.31$). Cultural dimensions exerted influence, as individualism strengthened the effects ($*b = +0.002$), while high power distance weakened them ($*b = -0.003$). Methodological factors were also significant; peer-reviewed journals reported effects 50% stronger ($\rho = 0.39$) than grey literature ($\rho = 0.26$), and higher study quality correlated positively with stronger outcomes ($*b = +0.032$). Importantly, publication bias was found to be minimal (Egger's test: $*p > .05$), and trim-and-fill analysis confirmed the stability of the overall results.

5.2. Interpretation and Theoretical Implications

The overall effect size ($\rho = 0.37$) signified that SHRM practices substantially enhanced employees' capacity and willingness to act sustainably. This pattern aligned strongly with Ability-Motivation-Opportunity (AMO) theory: practices focusing on Training (Ability) and Participation (Opportunity) demonstrated the greatest effectiveness, as they directly built environmental competencies and empowered employee agency. Conversely, practices centered on Rewards (Motivation) exhibited weaker effects, potentially due to extrinsic incentives crowding out intrinsic motivation or misalignment with deep-seated environmental values. Social Exchange Theory explained the potency of participation-driven practices, suggesting they fostered a sense of reciprocity; when organizations invested in employee voice through initiatives like green committees, employees reciprocated through increased discretionary efforts such as Organizational Citizenship Behavior towards the Environment (OCBE). Social Identity Theory further clarified the cultural moderators, indicating that in individualistic cultures, employees were more likely to personally internalize an organization's green mission, whereas in cultures characterized by high power distance, hierarchical structures often stifled grassroots environmental initiatives. These findings resolved prior inconsistencies in the literature by demonstrating that methodological choices (e.g., reliance on self-reported EGB) and contextual factors (e.g., manufacturing intensity) significantly influenced earlier mixed results. By quantifying practice-specific effects and key moderators, this study advanced the AMO, Social Exchange Theory (SET), and Social Identity Theory (SIT) frameworks, establishing SHRM as a contextualized, multilevel phenomenon rather than a universal, one-size-fits-all solution.

5.3. Practical Implications for HR Managers and Organizations

The findings offered actionable guidance for HR practitioners, advocating for evidence-based prioritization within SHRM bundles. To maximize return on investment, resources needed allocation towards Green Training & Development (e.g., implementing comprehensive carbon literacy programs) and Green Involvement & Participation (e.g., establishing green innovation hubs or suggestion schemes), as these yielded EGB returns approximately 60% stronger than investments in Green Recruitment & Selection or Green Performance Management & Rewards. Contextual tailoring was deemed essential; within manufacturing settings, organizations were advised to leverage the often more visible environmental impacts of operations to amplify the effectiveness of SHRM initiatives. In hierarchical cultures, complementing structural SHRM practices with strong leadership advocacy was recommended to mitigate barriers posed by high power distance. Mitigating measurement bias required a shift towards using supervisor or peer-rated EGB metrics to circumvent the social desirability distortion inherent in self-report data. Finally, holistic integration was key; combining high-impact practices (such as training coupled with participation) into coherent, mutually reinforcing systems was crucial for building strong employee green identities through consistent organizational signals embedded within the HR architecture.

5.4. Limitations

Four key limitations warranted acknowledgment. Firstly, the correlational nature of the evidence presented a constraint, as 89% of the included studies utilized cross-sectional designs, thereby precluding definitive causal claims about the SHRM → EGB relationship. Secondly, conceptual boundaries existed; the exclusion of qualitative insights and non-English language studies potentially omitted important contextual nuances and diverse perspectives. Thirdly, moderator analysis faced constraints due to granularity issues, with subgroups like Green Recruitment ($k^* = 6$ studies) having limited data, which constrained more nuanced analysis of specific practice variations. Fourthly, the operational focus remained narrow, concentrating solely on environmental EGB outcomes and consequently overlooking potential social sustainability outcomes linked to SHRM, such as employee wellbeing or equity. While rigorous reliability checks during coding (Cohen's $\kappa > 0.80$) mitigated concerns regarding subjectivity, these identified gaps highlighted significant contextual blind spots within the existing body of research synthesized.

5.5. Future Research Directions

To address the identified limitations and advance the field, researchers were advised to pursue several key avenues. Firstly, adopting longitudinal or experimental research designs was essential to establish causal directionality and track the sustainability of EGB changes over time. Secondly, investigating underlying psychological mechanisms, such as psychological green climate or green commitment, using meta-analytic structural equation modeling (MASEM) was recommended to deepen the understanding of how SHRM influences EGB. Thirdly, exploring understudied moderators was crucial; this included delving into organizational factors (e.g., the impact of specific leadership styles or organizational size), examining cultural nuances beyond traditional frameworks like Hofstede (e.g., concepts like environmental fatalism), and analyzing technology's evolving role (e.g., AI-driven personalization of SHRM practices). Fourthly, expanding the geographical scope of research was imperative, specifically targeting developing economies in regions like Africa and Latin America, which represented less than 5% of the current sample. Fifthly, integrating social sustainability dimensions was necessary; future work should examine SHRM's dual impact on both environmental outcomes and social outcomes (e.g., equity, wellbeing, community engagement) to provide a more holistic view. Finally, leveraging HR analytics to audit how Human Resource Information Systems (HRIS) platforms enable or hinder the scaling of SHRM implementation across complex multinational contexts represented a promising practical research direction.

6. OVERALL CONCLUSIONS

This meta-analysis provides the first comprehensive quantitative synthesis of the relationship between Sustainable HRM (SHRM) practices and Employee Green Behavior (EGB), resolving critical ambiguities in the literature through rigorous aggregation of 42 studies spanning 12,587 employees globally. Its primary contribution lies in establishing a robust, contextually nuanced understanding of how SHRM drives environmental sustainability: The moderate-to-strong overall correlation ($\rho = 0.37$) confirms HR systems as powerful levers for fostering green behaviors, while subgroup analyses reveal that developmental practices (training and participation) are 60–105% more effective than structural controls (rewards and recruitment). By empirically validating the AMO framework's centrality—where Ability (training) and Opportunity (participation) substantially outperform Motivation (rewards)—and quantifying how cultural, methodological, and industry moderators shape outcomes, this study elevates SHRM from fragmented initiatives to a strategic, evidence-based discipline.

For researchers, these findings resolve long-standing theoretical inconsistencies by demonstrating that contextual heterogeneity (e.g., measurement bias, cultural values) underpinned prior mixed results, while offering a refined AMO/SET/SIT framework for future multilevel studies. For practitioners, the results deliver actionable imperatives: Prioritize green competence-building and employee voice over monetary incentives, tailor systems to cultural and industrial contexts (e.g., decentralizing initiatives in hierarchical societies), and adopt objective EGB metrics to capture true impact. Ultimately, this meta-analysis positions HR not merely as a support function but as a strategic architect of organizational sustainability, transforming policies into tangible planetary stewardship through human capital.

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