From Green Rewards To Green Customers: A Systematic Review of The Market-Facing Outcomes of Green Human Resource Management

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Abstract.
Green human resource management (GHRM) is expected to support credible sustainability positioning, but its customer and market effects remain unclear. This systematic review examines GHRM and green rewards in relation to these outcomes. Searches of Scopus and Web of Science identified 23 empirical studies. Selection followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses 2020; synthesis used a context–intervention–mechanism–outcome framework, the Mixed Methods Appraisal Tool, direction-based vote counting and certainty grading. All reported effects were positive. Reputation outcomes showed the largest coefficients and strong certainty under the review's rules, but 12 of 13 studies did not use customer ratings. Customer outcomes and customer-directed employee behaviour received moderate certainty. Only three studies isolated reward-related effects, whose relative magnitudes were inconsistent; none tested the full employee-to-customer chain. Identified mechanisms included employee commitment, green knowledge sharing, shared green experiences and green branding. Environmental regulation strengthened associations. The review develops a multilevel framework, six design propositions and a research agenda. The findings suggest that market value depends on the visibility and credibility of green practices, while green rewards remain largely untested as a distinct lever.

Keywords: *Green human resource management; Green reward; Customer response; Corporate green reputation; Service–profit chain and Sustainability marketing.*

I. INTRODUCTION

Customers increasingly judge firms not only by what they claim about sustainability but by whether those claims are credible. Environmental communication that is decoupled from substantive practice exposes firms to perceived greenwashing and its performance penalties [1, 2], even though consumers remain susceptible to exaggerated green claims [3]. In contact-intensive services, customers infer environmental commitment partly from what they can observe, and visible green practices shape guests' pro-environmental behaviour and green citizenship intentions [4, 5]. Credible sustainability positioning in the market may therefore depend on how firms manage their people internally.

Green human resource management (GHRM), the use of recruitment, training, performance management, rewards and involvement to pursue environmental objectives, provides that internal lever [6]. Evidence linking GHRM to employee green behaviour and environmental performance is now extensive. A meta-analysis of 172 studies reports positive associations with employee and organisational outcomes [7], such associations have also been observed in time-lagged designs [8], and reviews of service industries and hospitality have mapped this employee-centred nomological network in detail [9, 10]. Far less is known about whether, how and when these internal effects cross the organisational boundary to reach customers and markets.

Theory gives reason to expect such effects. The service–profit chain predicts that HR investments reach customers through employee attitudes and service behaviour, a sequence with meta-analytic support [11]. Signalling theory adds that internal practices can shape external judgements, but only when the signal is observable and credible to its receivers [12], while attribution research shows that the way practices are interpreted conditions their effects [13]. An empirical stream has begun to test these links, associating GHRM with organisational reputation [14, 15], with consumer buying behaviour and customer satisfaction [16, 17], and with consumer trust through green branding [18]. These studies are scattered across disciplines and outlets, rely on heterogeneous constructs and raters, and have not been systematically synthesised.

Rewards warrant particular attention because, of all GHRM practices, they are the most directly tied to motivation, yet the evidence on their effectiveness is equivocal. The effect of green rewards on employee environmental performance has been described as mixed [19], green compensation may help or backfire depending on its design [20], and monetary incentives for pro-environmental behaviour can crowd out internalised motivation in some national contexts [21]. Meta-analytic evidence further suggests that green

reward and compensation matter more for extra-role than for in-role green behaviour [7], which is precisely the discretionary conduct that customers are most likely to notice. Whether green rewards play a distinct role in customer- and market-facing outcomes, or are simply absorbed into aggregate GHRM scales, remains unknown.

Existing reviews do not answer these questions. AlKetbi and Rice [22] reviewed 17 articles and flagged client satisfaction as under-researched, Sultana et al. [23] folded responsibility-driven customer satisfaction into a broad construct of responsible performance, and Kumari and Sudha [24] treated reputation as one sustainability outcome among many. None isolated customer- and market-facing outcomes, examined how green rewards are operationalised, appraised the methodological quality of the evidence, or assessed the consistency of reported effects. The omission matters because survey-based HRM research is highly exposed to common method bias when the same respondents rate both practices and outcomes [25]; without appraisal, a uniformly positive literature can be mistaken for a robust one.

This study addresses these gaps through a systematic literature review that follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 [26] and is structured by context–intervention–mechanism–outcome (CIMO) logic [27]. The review asks four questions. The first concerns the publication trends, contexts, theoretical lenses and research designs of empirical studies linking GHRM or green reward practices to customer- and market-facing outcomes (RQ1). The second asks how green rewards are conceptualised and operationalised, whether as standalone or bundled and monetary or non-monetary practices, and to what extent their distinct effect is isolated (RQ2). The third identifies which customer- and market-facing outcomes have been examined and the direction and consistency of the reported effects (RQ3). The fourth examines the mechanisms and boundary conditions through which these practices translate into such outcomes across organisational, employee and customer levels (RQ4).

The review makes three contributions. First, to our knowledge, it is the first review to isolate the customer- and market-facing outcomes of GHRM, distinguishing customer responses, market and reputation outcomes, and customer-directed employee behaviour, and thereby connects the HRM and sustainability-marketing literatures. Second, it moves beyond mapping by appraising study quality and synthesising effects without meta-analysis [28], so that the robustness of each outcome stream is graded rather than inferred from the volume of positive findings. Third, it integrates mechanisms and boundary conditions into a multilevel CIMO framework and a set of design propositions, and derives a research agenda using the theory–context–characteristics–methodology (TCCM) structure [29].

II. MATERIALS AND METHODS

2.1 Review design

This review follows PRISMA 2020 [26], with eligibility, extraction and synthesis framed by the context–intervention–mechanism–outcome (CIMO) logic [27]. An a priori protocol (2 October 2026) specified the criteria, selection, appraisal and synthesis procedures. It was not registered; deviations were logged as dated amendments and are reported where they occurred.

2.2 Eligibility criteria

Table 1 summarises the criteria; context and mechanism were not used as filters, to preserve recall. Studies measuring green human resource management (GHRM) as an aggregate construct were retained. By a rule fixed before screening, studies with an identifiable green reward, compensation or recognition item or dimension formed the Core set and the remainder the Extended set.

Table 1. Eligibility Criteria Structured by CIMO

Element	Inclusion	Exclusion
Intervention (I)	GHRM (aggregate or by dimension); green reward, compensation, pay or recognition for employees; sustainable HRM with an explicit environmental dimension	HRM or sustainable HRM without environmental content; green management without HRM practices; Environmental, social and governance (ESG)-linked executive pay; consumer loyalty programmes

Element	Inclusion	Exclusion
Outcome (O)	At least one of: (a) customer outcomes (e.g., trust, satisfaction, loyalty, green purchase or citizenship behaviour); (b) market, brand or reputation outcomes (e.g., green brand image, corporate reputation); (c) customer-directed employee behaviour or service quality	Internal outcomes only (e.g., employee green behaviour, environmental or financial performance, green innovation, job satisfaction, employer attractiveness)
I–O link	Relationship estimated or analysed, directly or via mediators	I and O measured but not linked; O mentioned only in the discussion
Context (C), mechanism (M)	Any	—
Study type	Empirical (quantitative, qualitative or mixed) peer-reviewed journal article in English, published up to the search date	Reviews, bibliometric or conceptual papers, editorials, teaching cases

2.3 Information sources and search strategy

Scopus and the Web of Science Core Collection (WoS) were searched on 2 October 2026 without a lower date limit. The Scopus string, which returned 99 records, was:

TITLE-ABS-KEY (("green human resource management" OR "green HRM" OR "GHRM" OR "green HR practice*" OR "green HR management" OR "sustainable human resource management" OR "sustainable HRM" OR (("green reward*" OR "green compensation" OR "green pay" OR "green recognition" OR "environmental reward*") AND (employee* OR staff OR worker* OR workforce OR "human resource*"))) AND (((customer* OR consumer* OR guest* OR tourist* OR client*) W/5 (behavio* OR intention* OR satisfaction OR loyalty OR citizenship OR OCB* OR perception* OR evaluation* OR response* OR engagement OR trust OR experience*)) OR "green brand*" OR "brand image" OR "brand equity" OR "corporate image" OR "corporate reputation" OR "organi?ational reputation" OR "green marketing" OR "word of mouth" OR "green service*" OR "service-oriented" OR "customer-oriented" OR "customer orientation" OR "service quality")) AND PUBYEAR < 2027 AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "re")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SRCTYPE , "j"))

The WoS string, which returned 83 records, used identical terms in the topic field (TS=), with NEAR/5 in place of W/5 and the limits PY=(1900-2026), DT=(Article OR Review) and LA=(English). The search retrieved all three benchmark studies identified beforehand; no supplementary searching was conducted.

2.4 Study selection

Exact DOI matching identified 74 duplicate pairs, each verified by title similarity, first author and year; exact normalised-title and fuzzy title matching (similarity ≥ 0.60) found no further duplicates, leaving 108 unique records. Selection used two independent screeners (R1 and R2) and an arbiter (R3) who resolved every disagreement in writing. Screening and arbitration applied the predefined eligibility criteria, and every decision was logged with its supporting evidence.

Title–abstract screening applied four hierarchical questions concerning empirical status, an eligible intervention, an eligible outcome and a reported link between the two. Records rated “unclear” proceeded to full text. A pilot of 20 random records had to reach Cohen’s $\kappa \geq 0.70$ [30]. As the first pilot fell short (Table 2), three interpretive clarifications were added without changing scope (e.g., green service innovation was classed as an internal outcome) and a second pilot was run on 20 new records.

Full texts were assessed against five inclusion criteria, with one primary exclusion reason and page-level evidence recorded for each report. During arbitration, a moderation rule was added: studies in which the intervention moderated a path to an eligible outcome, with the interaction estimated, were included and

synthesised separately as boundary conditions. Six reports not retrievable through institutional access were excluded without contacting their authors, a protocol deviation. Agreement was computed on independent decisions before arbitration and interpreted following Landis and Koch [31] (Table 2). Fig. 1 summarises the selection process.

Table 2. Inter-Rater Agreement Before Arbitration

Stage and sample	Disagreements and agreement	Cohen's κ and interpretation
Title–abstract, pilot 1 20 records	4 disagreements Agreement: 0.800	0.600 Moderate
Title–abstract, pilot 2 20 records	0 disagreements Agreement: 1.000	1.000 Almost perfect
Title–abstract, all records 108 records	7 disagreements Agreement: 0.935	0.861 Almost perfect
Full text 32 reports	8 disagreements Agreement: 0.750	0.385 Fair
MMAT appraisal 115 item ratings	6 disagreements Agreement: 0.948	— —

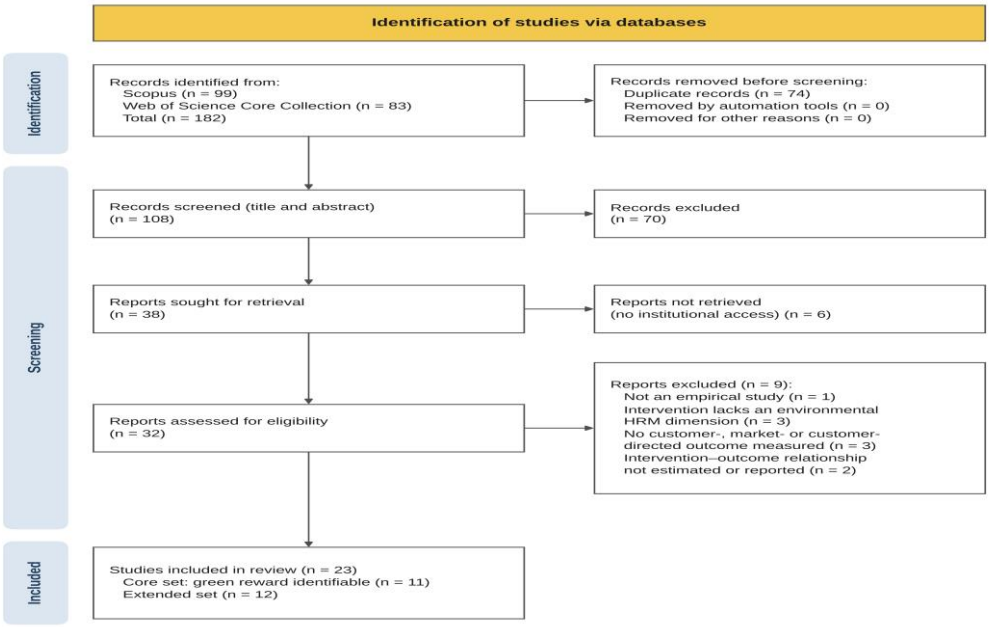


Fig. 1. PRISMA 2020 flow diagram.

2.5 Data extraction and quality appraisal

A CIMO-structured form captured bibliographic data; context (country, sector and level of analysis); design, sample and data sources (single- or multi-source, cross-sectional or time-separated); theory; the operationalisation of the intervention (aggregate bundle or distinct reward, and monetary, non-monetary or recognition-based); mediators and moderators; outcome category and rater; and results (direction, significance and standardised coefficients). R1 extracted all data and R2 verified the intervention, mechanism, outcome and effect direction. Effects were extracted at path level (43 intervention–outcome paths), with each study counted once per outcome category to avoid double counting.

Quality was appraised with the Mixed Methods Appraisal Tool 2018 (MMAT) [32], using the category matching each design: qualitative (n = 2), quantitative non-randomised (n = 20) and quantitative descriptive (n = 1). No overall score was computed and no study was excluded on quality. Common method bias risk was additionally rated as high, moderate or low according to whether the intervention and outcome came from the same source and whether procedural or statistical remedies were reported [33]. A rule set

before synthesis flagged a study for sensitivity analysis if it received "No" on two or more MMAT criteria or combined high common method bias risk with two or fewer "Yes" ratings.

2.6 Synthesis

Because constructs, raters and estimators (partial least squares structural equation modelling (PLS-SEM), covariance-based structural equation modelling (CB-SEM), hierarchical linear models and regression) were heterogeneous, the synthesis followed the Synthesis Without Meta-analysis (SWiM) guideline [28]. Studies were grouped by outcome category (a, b or c), and distinct green-reward paths and studies treating GHRM as a moderator formed separate groups. Within each group, effect direction was vote-counted and tested with a two-sided sign test, computed in Excel and verified in Python (SciPy). Standardised direct path coefficients were summarised descriptively as the median and range of study-level medians rather than as pooled estimates, and sensitivity analyses repeated both steps after excluding flagged studies.

Certainty of evidence was graded with pre-specified rules. Evidence was rated strong when a group had at least five studies, 80% consistent direction, three unflagged studies, one multi-source or time-separated design and one study with outcomes rated by a relevant external party; moderate when it had at least three studies, 75% consistency and one unflagged study; and limited otherwise. Mechanisms and boundary conditions were synthesised thematically into a multilevel CIMO framework and design propositions [27]. Publication bias was assessed narratively from the share of null or negative findings, and research directions were organised with the theory–context–characteristics–methodology (TCCM) framework [29].

III. RESULTS AND DISCUSSIONS

3.1 Study selection

The searches returned 182 records (99 from Scopus and 83 from WoS). After 74 duplicates were removed, 108 records were screened, 38 reports were sought, 32 were assessed in full and 23 studies were included (Fig. 1), of which 11 formed the Core set and 12 the Extended set. Two exclusions were near-misses. Freitas et al. [34] linked GHRM to corporate social responsibility (CSR) and CSR to customer relationship management but did not estimate the path between GHRM and customer relationship management, and Paletta et al. [35] modelled customer-oriented green actions as a firm practice rather than as a customer-directed outcome.

3.2 Characteristics of the evidence base (RQ1)

Table 3 profiles the 23 studies and Fig. 2 maps their distribution. The literature is recent: the first study appeared in 2020, six were published in 2021 and three to four appeared in each subsequent year, so that ten studies (43%) were published from 2024 onwards. The studies are spread across 22 journals, with only Frontiers in Psychology appearing twice.

Every study that reported its setting was conducted in Asia or Africa. Pakistan accounted for six studies, China and Indonesia for three each, Bangladesh, Ghana and Vietnam for two each, and Afghanistan, the Democratic Republic of the Congo, India and Oman for one each, while one study did not report its country. No study originated from Europe, North America or Oceania. Hospitality and tourism (hotels, restaurants and airports; eight studies) and manufacturing, extractive and consumer-goods firms (seven studies) dominate the sectoral profile, followed by banking (three), health and pharmaceuticals (two), higher education (two) and cross-sector small and medium-sized enterprises (SMEs) (one).

Fifteen studies used single-wave cross-sectional surveys. Five separated measurements in time, through two-wave or multi-wave surveys [36, 14, 15], a multilevel time-lagged design [37] or a two-phase survey [18]. Two studies were qualitative [38, 39], and one was an expert-based fuzzy analytic hierarchy process–decision-making trial and evaluation laboratory (FAHP–DEMATEL) assessment [40]. No study used an experimental, quasi-experimental or panel design, and PLS-SEM was the analytic technique in 17 studies. Only five studies drew the intervention and the outcome from different sources [16, 18, 37, 39, 17], and customers or passengers rated the outcome in five [16, 18, 37, 41, 17].

Social identity theory and the resource-based view were each used in seven studies, followed by ability–motivation–opportunity (AMO) theory and stakeholder theory (five each), signalling and social

exchange theory (three each) and legitimacy theory (two); three studies invoked no explicit theory. Theories addressing how external audiences perceive internal HRM were rare. Signalling theory appeared in three studies [18, 42, 43] and the theory of green purchase behaviour in one [16], whereas the remaining studies explained market-facing outcomes with employee-side theories.

Table 3. Characteristics of the Included Studies (N = 23)

Study and context	Design and sample	Outcome and classification
Suharti and Sugiarto [39] Indonesia; Cement manufacturing	Qualitative (5 informants; triangulation)	Corporate image and reputation (b; internal informants) Set: Core; flag: No
Afum et al. [44] Ghana; Agro-processing, oil and gas, mining	Cross-sectional (164 firms)	Corporate reputation (b; managers) Set: Core; flag: No
Iftikhar et al. [36] Pakistan; Hotels	Two-wave (489 frontline employees; 24 managers)	Green service recovery performance (c; rater not stated) Set: Extended; flag: No
Lee et al. [37] China; Hospitality	Multilevel time-lagged (374 employee–customer dyads; 68 supervisors)	Customer brand association (b; customers) Set: Core; flag: No
Opoku Mensah et al. [42] Ghana; Oil and gas	Cross-sectional (185 managers)	Green corporate reputation (b; managers) Set: Core; flag: No
Rubel et al. [45] Bangladesh; Banking	Cross-sectional (365 frontline employees)	In-role and extra-role green service behaviour (c; self) Set: Core; flag: Yes
Saifudin et al. [46] Indonesia; Hospitals	Cross-sectional (1,004 workers)	Health service quality (c; workers) Set: Extended; flag: Yes
Merlin and Chen [14] DR Congo; Hospitality	Multi-wave (331 employees)	Organisational reputation (b; employees) Set: Extended; flag: No
Umrani et al. [15] Pakistan; Hotels	Four-wave time-lagged (322 employees)	Organisational reputation (b; employees) Set: Core; flag: No
Xiao et al. [17] Not stated [a]; Fast-food restaurants	Cross-sectional, multi-source (210 employees and consumers)	Consumer buying behaviour (a; consumers) Set: Extended; flag: Yes
Han et al. [16] Vietnam; Hospitality (110 outlets)	Cross-sectional, multi-source (≈2,200 employees and customers)	Customer satisfaction (a; customers) Set: Extended; flag: No
Sun et al. [47] China; Hotels	Cross-sectional (459 managers)	Green trust; green satisfaction (a; managers) Set: Extended; flag: Yes
Q. Wang et al. [43] Bangladesh; Higher education (prospective job applicants)	Cross-sectional (402 students)	Organisational reputation (b; students) Set: Core; flag: Yes
Jiang et al. [40] Pakistan; Pharmaceuticals	Expert assessment, FAHP–DEMATEL (10 experts)	Customer satisfaction; market performance (a, b; experts) Set: Extended; flag: No
K. Khan et al. [48] Afghanistan; Banking	Cross-sectional (203 employees)	In-role and extra-role green service behaviour (c; self) Set: Core; flag: Yes

Study and context	Design and sample	Outcome and classification
C. Wang et al. [41] China; Airports	Cross-sectional (269 passengers)	Passenger satisfaction; loyalty (a; passengers) [b] Set: Extended; flag: Yes
Faeni et al. [49] Indonesia; Food and beverage	Cross-sectional (755 managers and employees)	Corporate reputation (b; managers and employees) Set: Core; flag: Yes
A. J. Khan et al. [18] Pakistan; Fast-moving consumer goods	Two-phase (≈425 employees; customers [c])	Consumer trust (a; customers); green branding (b; rater not stated) Set: Extended; flag: Yes
Le et al. [50] Vietnam; SMEs	Cross-sectional (458 managers and chief executive officers)	Corporate reputation (b; managers) Set: Extended; flag: Yes
Priya et al. [51] India; Automotive	Cross-sectional (456 respondents)	Green brand image (b; respondents familiar with green business functions) Set: Extended; flag: Yes
Durrah et al. [52] Oman; Banking	Cross-sectional (400 employees)	Banking service quality (c; employees) Set: Core; flag: Yes
Rahman et al. [38] Pakistan; Higher education	Qualitative (15 academics)	Green service recovery (c; academics) Set: Extended; flag: No
Tahir et al. [53] Pakistan; Manufacturing	Cross-sectional (332 managers)	Organisational green reputation (b; managers) Set: Core; flag: Yes

Note. Outcome categories: a = customer outcomes; b = market, brand or reputation outcomes; c = customer-directed employee behaviour or service quality. Flag = flagged for sensitivity analysis under the pre-specified quality rule. [a] Author affiliations and ethics approval are Pakistani. [b] GHRM was tested as a moderator of the relationship between CSR and the outcome. [c] Customer sample size not reported.

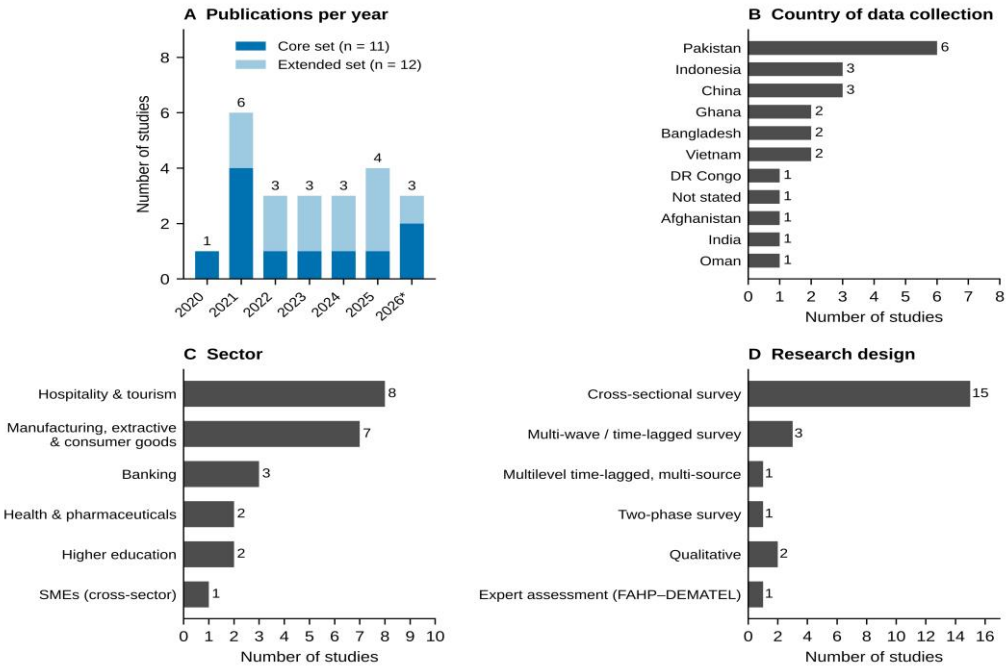


Fig. 2. Evidence map of the included studies.

3.3 Methodological quality

All studies passed the MMAT screening questions. Among the 20 quantitative non-randomised studies, none used probability sampling, so representativeness was rated "No" in 12 studies and "Can't tell" in eight, and only four adjusted for confounders [44, 36, 37, 42]. Adherence to the intended exposure could not be determined in any study, because GHRM was measured as perceived rather than implemented practice. Measurement appropriateness was met in 15 studies and unclear in five, where the outcome or the intervention was rated by an atypical source, the items were not reported or the customer data were insufficiently described. The two qualitative studies met all five qualitative criteria, and the expert-based study met four of the five descriptive criteria. Common method bias risk was high in ten of the 20 quantitative studies, moderate in seven and low in three [16, 37, 17], and 13 studies met the sensitivity flag rule (Table 3).

3.4 Conceptualisation and operationalisation of green rewards (RQ2)

Green rewards appeared in five distinct forms (Table 4). Only one study measured green rewards as a standalone construct [49], and two embedded rewards in a motivation-enhancing dimension together with appraisal, recognition or incentives [52, 53]. In the remaining eight Core studies, rewards were a dimension or a single item within an aggregate GHRM scale, or a function described qualitatively, so their distinct contribution could not be separated. Consequently, only three of the 23 studies (13%) statistically isolated a reward-specific effect. No study distinguished monetary from non-monetary rewards: the available items combined "rewards and compensation" with recognition, and no study contrasted, for example, bonuses with public recognition.

Table 4. Operationalisation of Green Rewards in the Core Set (n = 11)

Form of reward measurement	Studies	Distinct effect
Standalone construct (four items: recognition, rewards, incentives, environmental achievement in appraisal) (n = 1)	Faeni et al. [49]	Yes
Motivation-enhancing dimension combining rewards with recognition, compensation, appraisal or incentives (n = 2)	Durrah et al. [52]; Tahir et al. [53]	Yes (dimension level)
Dimension of a second-order GHRM construct ("green pay and reward system") (n = 1)	Q. Wang et al. [43]	No (not reported separately)
Single item within an aggregate GHRM scale (n = 6)	Afum et al. [44]; K. Khan et al. [48]; Lee et al. [37]; Opoku Mensah et al. [42]; Rubel et al. [45]; Umrani et al. [15]	No
Reward function described qualitatively (n = 1)	Suharti and Sugiarto [39]	No

Among the three studies that isolated rewards, the relative magnitude of the reward effect was inconsistent. In Durrah et al. [52], a green motivation strategy comprising rewards, recognition and compensation had the smallest effect on banking service quality of the three strategies examined ($\beta = 0.135$, compared with 0.493 for training and 0.280 for empowerment). In Tahir et al. [53], by contrast, green motivation-enhancing practices had the largest effect on organisational green reputation of three GHRM dimensions ($\beta = 0.455$, compared with 0.405 and 0.313). Faeni et al. [49] found green rewards to be significantly related to corporate reputation ($t = 14.104$, $p < .001$; β not reported) but not to employees' job satisfaction.

3.5 Outcomes and consistency of effects (RQ3)

Reputation and brand outcomes (category b) were examined in 13 studies, nine of which addressed corporate, organisational or green reputation, while one each addressed customer brand association, green branding, green brand image and market performance. Customer outcomes (category a) were examined in six studies, covering consumer buying behaviour, customer or passenger satisfaction, green trust, consumer trust and passenger loyalty. Customer-directed employee outcomes (category c), namely green service behaviour, green service recovery and service quality, were also examined in six studies, and two studies addressed more than one category [40, 18].

Every study reported a positive relationship between green HRM practices and its customer- or market-facing outcomes, and no null or negative intervention–outcome result was reported in any category (Table 5). Null findings occurred only on non-eligible paths within the same studies, namely between green rewards and job satisfaction [49] and between GHRM and financial performance [44]. Sign tests were significant for the three outcome categories but not for the smaller reward-specific and moderator groups. Excluding flagged studies left the direction unchanged in all groups but reduced the unflagged evidence to two studies each for categories a and c (sign test $p = .50$) and to none for the reward-specific group, so that only category b retained a significant sign test (7 of 7, $p = .016$).

Table 5. Vote Counting, Descriptive Effect Magnitudes and Certainty of Evidence by Outcome Group

Panel A. Direction and certainty of evidence

Outcome group	Direction and test	Certainty
(a) Customer outcomes	n = 6; positive / null or negative: 6 / 0; p = .031	Moderate
(b) Market, brand and reputation	n = 13; positive / null or negative: 13 / 0; p < .001	Strong (internally rated); limited (customer-rated)
(c) Customer-directed employee behaviour and service quality	n = 6; positive / null or negative: 6 / 0; p = .031	Moderate
Distinct green reward, outcomes b or c	n = 3; positive / null or negative: 3 / 0; p = .25	Limited
GHRM as moderator, outcomes a or b	n = 2; positive / null or negative: 2 / 0; p = .50	Limited

Table 5. ContinuedPanel B. Sensitivity analysis and descriptive effect magnitudes

Outcome group	Unflagged n, positive, p	Median direct β [range] (n)
(a) Customer outcomes	2, 2, .50	0.276 [0.240–0.314] (3)
(b) Market, brand and reputation	7, 7, .016	0.550 [0.217–0.692] (9)
(c) Customer-directed employee behaviour and service quality	2, 2, .50	0.280 [0.158–0.363] (5)
Distinct green reward, outcomes b or c	0, —, —	—
GHRM as moderator, outcomes a or b	1, 1, 1.00	—

Note. The unit of analysis is the study, counted once per group. Qualitative and expert-based studies were counted by the direction of their reported findings. Medians summarise study-level medians of standardised direct coefficients; they are descriptive rather than pooled estimates because estimators differed (PLS-SEM, CB-SEM and hierarchical linear models). Iftikhar et al. [36] reported significance thresholds of "$p \leq .5$" and "$p \leq .1$" for direct paths; the authors' significance claims were retained.

Standardised direct coefficients were available for 17 studies (Fig. 3). Study-level medians were about twice as large for reputation and brand outcomes (median 0.550; unflagged median 0.565, n = 4) as for customer outcomes (0.276) and customer-directed employee outcomes (0.280; unflagged median 0.290, n =

1). This contrast coincides with a difference in raters. In 12 of the 13 category b studies, the outcome was not rated by customers but by managers or employees (seven studies), internal informants in the qualitative study (one), non-customer respondents such as students, experts or general respondents (three) or an unstated rater (one). Only Lee et al. [37] captured customers' brand associations. By contrast, four of the six category a studies collected outcome data from customers or passengers, whereas Sun et al. [47] measured green trust and satisfaction through managers and Jiang et al. [40] relied on expert judgement.

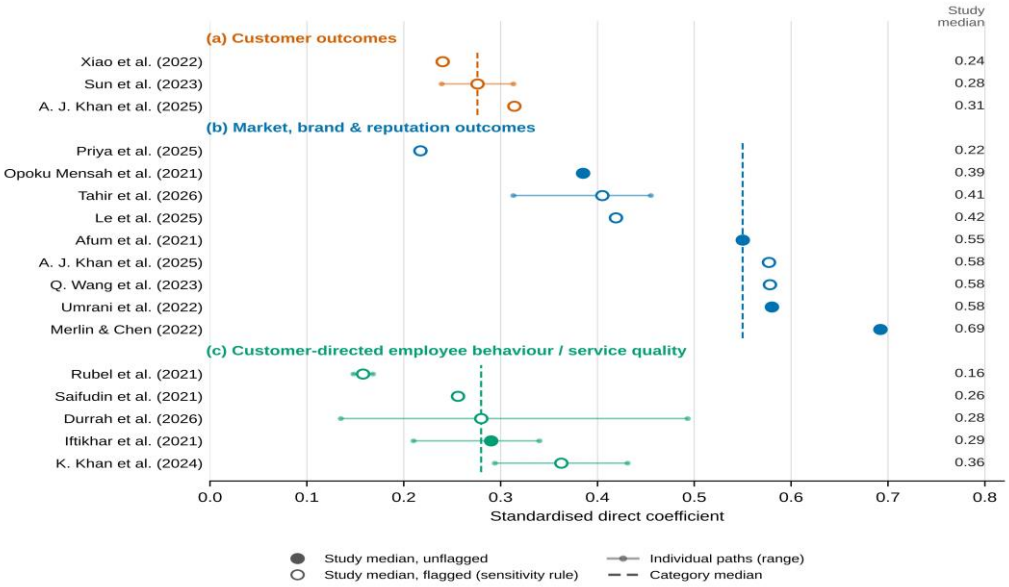


Fig. 3. Study-level standardised direct coefficients by outcome category.

Applying the pre-specified rules, certainty was strong for category b, but only for internally perceived reputation, because customer-rated evidence came from a single study. Certainty was moderate for categories a and c, each limited by two unflagged studies, and limited for distinct reward effects and for GHRM as a moderator.

3.6 Mechanisms and boundary conditions (RQ4)

Seven mediating mechanisms operated at three levels (Table 6). At the employee level, environmental commitment transmitted the effects of GHRM to green service behaviour and service recovery [36, 48], green knowledge sharing transmitted them to green service behaviour [45], and employees' eco-friendly behaviour and performance linked GHRM to consumer buying behaviour [17]. At the employee–customer interface, a green experience shared by employees and customers mediated the effect of green training on customer satisfaction [16]. At the organisational level, green branding mediated the relationship between GHRM and consumer trust [18], green corporate citizenship mediated the relationship between GHRM and green reputation [42], and environmental performance formed a chain from GHRM to organisational reputation, although the indirect effect was not estimated [15]. Reported indirect effects ranged from 0.06 to 0.365. Two studies extended the chain beyond the reviewed outcomes: customer green trust and green satisfaction carried small indirect effects of GHRM on corporate sustainable performance (0.043 and 0.029; [47]), whereas green customer satisfaction did not predict green brand equity (0.101, n.s.; [51]).

Five moderators were tested along the pathway from practices through mechanisms to outcomes. Environmental regulation strengthened all three relationships between GHRM dimensions and green reputation (β = 0.156, 0.132 and 0.211; [53]), and transformational leadership strengthened the relationship between green HR practices and environmental commitment [36]. CSR strengthened the relationship between green branding and consumer trust [18], and employee diffidence moderated the relationships between GHRM and employee behaviour and performance [17]. Organisational culture, however, did not moderate the effects of green recruitment, training or rewards on corporate reputation [49]. Conversely, two studies positioned GHRM itself as the boundary condition, finding that it amplified the effect of service

innovation on customer brand association ($\gamma = 0.29$, $p < .01$; [37]) and the effects of CSR on passenger satisfaction ($\beta = 0.519$) and loyalty ($\beta = 0.386$; [41]).

Table 6. Mechanisms and Boundary Conditions Linking Green HRM to Customer- and Market-Facing Outcomes

Level and variable	Relationship examined	Result and study
Employee: mediator Environmental commitment	Green HR practices to green service recovery via commitment	Indirect 0.07, 95% CI [0.06, 0.15] Category: c Iftikhar et al. [36]
Employee: mediator Green commitment	GHRM to green service behaviour via commitment	Indirect 0.273 / 0.365 Category: c K. Khan et al. [48]
Employee: mediator Green knowledge sharing	GHRM to green service behaviour via knowledge sharing	Indirect 0.147 / 0.139 Category: c Rubel et al. [45]
Employee: mediator Eco-friendly behaviour; employee performance	GHRM to consumer buying behaviour via employee behaviour	Indirect 0.15 / 0.06 Category: a Xiao et al. [17]
Interface: mediator Shared green experience	Green training to customer satisfaction via shared experience	Indirect 0.248 Category: a Han et al. [16]
Organisation: mediator Green branding	GHRM to consumer trust via green branding	Indirect 0.169 Category: a A. J. Khan et al. [18]
Organisation: mediator Green corporate citizenship	GHRM to green reputation via citizenship	Indirect 0.262 Category: b Opoku Mensah et al. [42]
Organisation: mediator Environmental performance	GHRM to environmental performance (0.582); performance to reputation (0.238)	Indirect effect not estimated Category: b Umrani et al. [15]
Institutional: moderator Environmental regulation	GHRM dimensions and green reputation	Interactions 0.156, 0.132, 0.211 Category: b Tahir et al. [53]
Leadership: moderator Transformational leadership	Green HR practices and environmental commitment	Strengthening (simple slopes 0.79 high vs 0.16 low) Category: c Iftikhar et al. [36]
Organisation: moderator CSR	Green branding and consumer trust	Strengthening Category: a A. J. Khan et al. [18]
Employee: moderator Employee diffidence	GHRM and employee behaviour and performance	Moderation reported Category: a Xiao et al. [17]
Organisation: moderator Organisational culture	Green recruitment, training and rewards and reputation	Not significant Category: b Faeni et al. [49]
GHRM as moderator GHRM	Service innovation and customer brand association	$\gamma = 0.29$ Category: b Lee et al. [37]

Level and variable	Relationship examined	Result and study
GHRM as moderator GHRM	CSR and passenger satisfaction / loyalty	0.519 / 0.386 Category: a C. Wang et al. [41]

Fig. 4 integrates these findings into a conceptual framework.

Employee-level mechanisms lead mainly to customer-directed employee outcomes, interface and organisation-level mechanisms lead to customer and reputation outcomes, and most reputation evidence rests on direct relationships between practices and outcomes. Notably, no study tested within a single model the full chain from green HRM through customer-directed employee behaviour to customer responses: studies that measured green service behaviour or service quality did not measure customer responses, and studies of customer responses did not measure employee service behaviour.

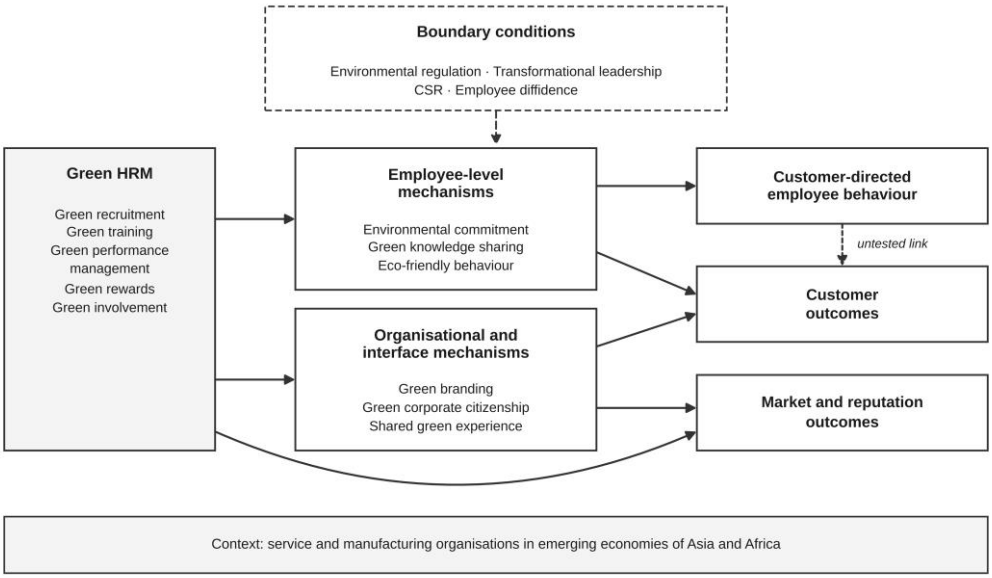


Fig. 4. Integrative conceptual framework.

3.7 What this review adds

Prior reviews of green human resource management (GHRM) have treated customers and markets as peripheral outcomes. Some subsumed them under organisational or responsible performance [22, 23], others listed reputation as one sustainability outcome among many [24], and reviews of service industries mapped the nomological network of GHRM but stopped at the organisational boundary [9, 10]. By isolating customer- and market-facing outcomes and structuring the evidence with CIMO logic, this review reaches a more cautious conclusion. The literature consistently reports positive associations, but few studies observed customers directly, only three isolated a reward effect and none tested the employee-to-customer chain that most of its theorising presupposes (Fig. 4).

3.8 Reputation evidence and the source of ratings

Reputation outcomes produced the strongest certainty grade and the largest coefficients, but they are also the findings most vulnerable to method artefacts. Reputation is, by definition, a collective judgement held by external stakeholders, but 12 of the 13 studies relied on insiders, non-customers or an unstated rater. When the same insiders rate both GHRM and reputation, shared affect, consistency motives and social desirability can inflate covariation, precisely the conditions that Podsakoff et al. [25] describe as widespread and difficult to remedy after data collection. Temporal separation, psychological separation and distinct sources attenuate such inflation [54], but only one reputation study combined distinct sources with a time lag [37], and because that study modelled GHRM as a moderator, no study has yet estimated a direct effect of GHRM on reputation as customers perceive it.

The roughly twofold gap between reputation and customer effect sizes (Fig. 3) should therefore not be read as evidence that GHRM shapes reputation more than it shapes customers. A simpler reading is that

internally rated outcomes covary more strongly with internally rated practices. Signalling theory makes the same point from the receiver's side, since a practice can build reputation only if it is observable to, and interpretable by, external audiences [12]. Most HRM practices are invisible to customers, and the reviewed studies seldom specified how they would become visible. The uniformly positive vote count raises a further concern, since null results appeared only on paths that authors did not frame as focal, a pattern consistent with the selective reporting documented in management research more broadly [55]. The reputation evidence is therefore robust for internally perceived reputation but unproven for market reputation.

3.9 The missing link between employees and customers

The most consequential gap is structural. The service–profit chain predicts that HR investments reach customers through employee attitudes and service behaviour, and meta-analytic evidence supports the chain's core links [11]. The reviewed literature splits the chain in two. Studies of green service behaviour stop at the employee [36, 48, 45], and studies of customer outcomes either skip the employee or measure customers' responses to firm-level signals such as green branding [18].

The only interface mechanism identified, a green experience shared by employees and customers [16], suggests that visibility is the missing bridge. Hospitality research outside the GHRM tradition supports this reading. Front-of-house green practices shape guests' pro-environmental behaviour differently from back-of-house practices, depending on hotel category [5], and guests reward perceived green practices with citizenship intentions through pride and moral elevation [4]. GHRM research has not yet asked which HRM practices produce employee behaviour that customers can actually see.

Visibility can also backfire: when internal green practices are communicated but weakly implemented, decoupling raises the risk of perceived greenwashing and its performance penalties [1], even though greenwashed claims can still inflate perceived green credentials among environmentally concerned consumers [3]. Because the reviewed studies measured perceived practice and not implemented practice, none could distinguish substantive from symbolic adoption, a distinction that the greenwashing literature places at the centre of stakeholder trust [2].

3.10 Green rewards and the limits of the evidence

The question in the title of this review received the thinnest answer. Only three studies isolated a reward effect, and their results disagreed on its relative importance [52, 49, 53]. The disagreement has a measurement explanation, because "green motivation" constructs bundled pay, recognition and appraisal, so that a strong or weak coefficient cannot be attributed to rewards as such. Employee-level evidence points in the same direction. A meta-analysis found green reward and compensation to be relatively more important for extra-role than for in-role green behaviour [7], and the effect of green rewards on individual environmental performance has been described as mixed and contingent on perceived organisational support [19].

Theory and experiments on incentives further suggest that the design of rewards, and not their mere presence, determines whether they help. Green compensation can align or misalign motivation depending on its framing, size, publicity and group basis [20], and monetary rewards for pro-environmental behaviour can crowd out internalised motivation in some national contexts but not in others [21]. The finding by Faeni et al. [49] that green rewards related to reputation but not to job satisfaction is at least compatible with a transactional response instead of an internalised one, although a single cross-sectional study cannot discriminate between these explanations. The field has borrowed the language of strategic reward without its core distinctions between monetary and non-monetary, individual and collective, and contingent and recognition-based rewards. Until these distinctions are measured, "green reward" remains a label attached to a scale item, not a tested driver of market outcomes.

3.11 Boundary conditions and context

The boundary conditions identified are few but theoretically informative. Environmental regulation strengthened the relationship between GHRM and reputation [53], suggesting that institutional pressure lends credibility to internal practices, and transformational leadership amplified the formation of employee commitment [36], but organisational culture did not moderate [49]. The two studies that positioned GHRM as a moderator invert the dominant logic, showing that GHRM amplified the market returns of CSR and

service innovation [37, 41]. This complementarity view may explain why direct effects of GHRM on customers are modest: GHRM may matter less as a stand-alone driver than as an enabler that makes customer-facing sustainability initiatives believable.

Contextual concentration limits generalisation. All studies reporting a setting were conducted in Asian or African emerging economies. Customer scepticism, regulatory regimes for green claims and the salience of service encounters differ systematically across institutional contexts, as cross-national evidence on reward crowding-out illustrates [21]. Employee-level associations of GHRM have been observed with time-lagged data among UK hotel employees [8], but no comparable evidence exists for customer- or market-facing outcomes, so generalisation beyond the sampled contexts is unwarranted.

3.12 Design propositions and implications

Following design-science synthesis [27], Table 7 translates the evidence into propositions whose wording is calibrated to the certainty of the underlying evidence.

Table 7. Evidence-Based Design Propositions

No.	Statement	Evidence
P1	In service and manufacturing firms in emerging economies, GHRM bundles are associated with stronger internally perceived corporate and green reputation, partly through green corporate citizenship and environmental performance.	13 studies Strong (internal raters only)
P2	GHRM bundles enhance frontline green service behaviour and service quality through employees' environmental commitment and green knowledge sharing.	6 studies Moderate
P3	GHRM is associated with customer trust, satisfaction, loyalty and purchasing when green practices become visible to customers through employee behaviour, shared green experiences or green branding.	6 studies Moderate
P4	Explicit green rewards (recognition and incentives) relate positively to reputation and service quality, but their unique contribution relative to other GHRM practices is undetermined.	3 studies Limited
P5	External institutional pressure and transformational leadership strengthen the transmission of GHRM into mechanisms and outcomes.	2 studies Limited
P6	GHRM acts as a complementary resource that amplifies customer responses to CSR and service innovation.	2 studies Limited

For theory, customer-side perspectives, in particular signalling and attribution, need to enter GHRM research explicitly and not by analogy. HR attribution research shows that the way employees interpret why practices exist conditions their effects [13]. An analogous process on the customer side, in which customers infer why employees behave in environmentally responsible ways, remains unmodelled. For managers, the evidence supports investing in GHRM to build frontline green service capability, but it does not support expecting customer or market returns from practices that customers cannot observe or that are communicated more strongly than they are implemented. Recognition-based, publicly visible and group-based green rewards should accordingly be treated as options to be piloted and evaluated, not as proven means of improving customer outcomes [20].

3.13 Limitations and future research agenda

Several limitations of the review process should be acknowledged. The search covered Scopus and the Web of Science Core Collection only, without citation chasing or grey literature, and the protocol was not registered. Six eligible reports could not be retrieved, and at least two of them, a study linking sustainable HR practices, including green rewards, to corporate reputation via job satisfaction [56] and a study reporting effects of GHRM on customer-directed citizenship behaviour [57], would have informed the central

questions; the conclusions for RQ2 may therefore understate the reward evidence. Full-text screening agreement was only fair ($\kappa = 0.385$), indicating that eligibility decisions required careful arbitration. Restricting the review to English-language journals may have excluded relevant studies from the very regions that dominate the corpus, and heterogeneous estimators precluded meta-analysis, so effect magnitudes are descriptive. The evidence base carries its own constraints, including the absence of probability sampling, the predominance of single-source cross-sectional designs, the measurement of perceived instead of verified practices and the absence of experimental evidence.

Table 8 organises the future research agenda with the TCCM framework [29]. Methodologically, the priority is designs that break the shared-source problem, such as employee–customer dyads with time-separated or multilevel data, objective or third-party reputation indicators, and experimental vignette studies that manipulate reward design and practice visibility [58].

Table 8. Future Research Agenda Organised by the TCCM Framework

Dimension	Evidence-based gap	Research directions
Theory	Employee-side theories (social identity, AMO) dominate; customer-side theory is largely limited to signalling (three studies)	Integrate signalling and attribution theories on the customer side; test a green service–profit chain; use motivation theory to separate monetary from non-monetary rewards (crowding-out)
Context	All reported settings are Asian or African emerging economies; online retail and digital service channels are not represented	Cross-national designs contrasting green-claims regulation; digital and omnichannel service encounters; SMEs versus large firms
Characteristics	Rewards isolated in three studies; reputation rated internally; employee-to-customer chain untested; no null results	Measure green rewards as a multidimensional construct; capture reputation and responses from customers; test serial employee-to-customer models; report null findings
Methodology	No probability samples; 15 single-wave cross-sectional surveys; high common method bias risk in 10 studies; no experiments	Dyadic and multi-source designs; time-lagged and longitudinal data; field and vignette experiments on reward design; pre-registration

IV. CONCLUSIONS

This review asked whether green human resource management reaches customers and markets, and what role green rewards play in that transmission. Across 23 empirical studies, every reported customer- and market-facing effect was positive, but the evidence is narrower than that consistency suggests. Reputation was almost always rated by insiders, customers were seldom observed and only three studies isolated a reward effect.

The conclusion is therefore conditional. GHRM is reliably associated with internally perceived reputation and moderately associated with frontline green service behaviour and customer responses, but its market value depends on whether green practices become visible and credible to customers. Green rewards, the presumed motivational engine of GHRM, remain largely untested as a distinct practice.

Further cross-sectional replication is unlikely to add much, and progress now depends on designs that follow the full chain from rewards to employees to customers, combining employee–customer dyads, customer-rated and objective outcomes, and experiments that vary reward design and practice visibility. Such evidence would allow organisations to align how they reward people inside with what they promise customers outside.

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REFERENCES

[1] J. Bothello, I. Ioannou, V.-A. Porumb, Y. Zengin-Karaibrahimoglu, CSR decoupling within business groups and the risk of perceived greenwashing, ***Strategic Management Journal***, 44(13), 2023, pp. 3217–3251. https://doi.org/10.1002/smj.3532

[2] C. Forliano, E. Battisti, P. de Bernardi, T. Kliestik, Mapping the greenwashing research landscape: A theoretical and field analysis, Review of Managerial Science, 19(11), 2025, pp. 3407–3456. https://doi.org/10.1007/s11846-025-00856-3

[3] R. Dutta-Powell, J. J. Rhee, S. Wodak, Two interventions for mitigating the harms of greenwashing on consumer perceptions, Business Strategy and the Environment, 33(2), 2024, pp. 882–903. https://doi.org/10.1002/bse.3520

[4] D. V. Tran, D. M. Nguyen, T. Nguyen, Fostering green customer citizenship behavioral intentions through green hotel practices: The roles of pride, moral elevation, and hotel star ratings, ***Journal of Sustainable Tourism***, 33(1), 2025, pp. 122–142. https://doi.org/10.1080/09669582.2024.2316296

[5] H. Zhong, F. Hao, Y. Zou, J. Liao, W. Ng, Green practices, golden stars: How hotel ratings shape guests' pro-environmental behavior, ***Journal of Sustainable Tourism***, 34(4), 2026, pp. 873–897. https://doi.org/10.1080/09669582.2025.2523926

[6] S. Ren, G. Tang, S. E. Jackson, Green human resource management research in emergence: A review and future directions, ***Asia Pacific Journal of Management***, 35(3), 2018, pp. 769–803. https://doi.org/10.1007/s10490-017-9532-1

[7] Y. Guo, S. Wang, Q. Yang, Green human resource management: Synthesising outcomes and identifying effective practices, ***Asia Pacific Journal of Human Resources***, 63(4), 2025, article e70033. https://doi.org/10.1111/1744-7941.70033

[8] A. Tandon, A. Dhir, P. Madan, S. Srivastava, J. L. Nicolau, Green and non-green outcomes of green human resource management (GHRM) in the tourism context, Tourism Management, 98, 2023, article 104765. https://doi.org/10.1016/j.tourman.2023.104765

[9] A.-R. Suleman, M. Nejati, A. Shafaei, J. Redmond, Green human resource management practices in the hospitality and tourism industry: An integrative multilevel systematic review, ***Journal of Hospitality and Tourism Management***, 62, 2025, pp. 46–56. https://doi.org/10.1016/j.jhtm.2024.12.009

[10] C. Tanova, S. W. Bayighomog, Green human resource management in service industries: The construct, antecedents, consequences, and outlook, ***The Service Industries Journal***, 42(5–6), 2022, pp. 412–452. https://doi.org/10.1080/02642069.2022.2045279

[11] J. Hogreve, A. Iseke, K. Derfuss, T. Eller, The service–profit chain: A meta-analytic test of a comprehensive theoretical framework, ***Journal of Marketing***, 81(3), 2017, pp. 41–61. https://doi.org/10.1509/jm.15.0395

[12] B. L. Connelly, S. T. Certo, C. R. Reutzel, M. R. DesJardine, Y. S. Zhou, Signaling theory: State of the theory and its future, ***Journal of Management***, 51(1), 2025, pp. 24–61. https://doi.org/10.1177/01492063241268459

[13] R. Hewett, A. Shantz, J. Mundy, K. Alfes, Attribution theories in human resource management research: A review and research agenda, ***The International Journal of Human Resource Management***, 29(1), 2018, pp. 87–126. https://doi.org/10.1080/09585192.2017.1380062

[14] M. L. Merlin, Y. Chen, Impact of green human resource management on organizational reputation and attractiveness: The mediated-moderated model, Frontiers in Environmental Science, 10, 2022, article 962531. https://doi.org/10.3389/fenvs.2022.962531

[15] W. A. Umrani, N. A. Channa, U. Ahmed, J. Syed, M. H. Pahi, T. Ramayah, The laws of attraction: Role of green human resources, culture and environmental performance in the hospitality sector, ***International Journal of Hospitality Management***, 103, 2022, article 103222. https://doi.org/10.1016/j.ijhm.2022.103222

[16] J. W. Han, S. K. Kok, R. McClelland, The impact of green training on employee turnover intention and customer satisfaction: An integrated perspective, **Corporate Social Responsibility and Environmental Management**, 30(6), 2023, pp. 3006–3019. https://doi.org/10.1002/csr.2534

[17] Y. Xiao, R. Younus, W. Saeed, J. Ul Haq, X. Li, Is there a link between green human resource management and consumer buying behavior? The moderating role of employee diffidence, **Frontiers in Psychology**, 13, 2022, article 800936. https://doi.org/10.3389/fpsyg.2022.800936

[18] A. J. Khan, A. Nasir, S. Khan, F. Munir, G. Li, Seeds of sustainability in organizations: Green HRM and employee engagement as a cultivators of green branding and consumer trust, Acta Psychologica, 260, 2025, article 105648. https://doi.org/10.1016/j.actpsy.2025.105648

[19] P. Paillé, P. Valéau, A. Carballo-Penela, Green rewards for optimizing employee environmental performance: Examining the role of perceived organizational support for the environment and internal environmental

orientation, ***Journal of Environmental Planning and Management***, 66(14), 2023, pp. 2810–2831. https://doi.org/10.1080/09640568.2022.2092723

[20] Y. Yin, Y. Wang, Y. Lu, How to design green compensation to promote managers' pro-environmental behavior? A goal-framing perspective, ***Journal of Business Ethics***, 197(2), 2025, pp. 341–353. https://doi.org/10.1007/s10551-024-05762-4

[21] X. Yang, J. Thøgersen, When people are green and greedy: A new perspective of recycling rewards and crowding-out in Germany, the USA and China, ***Journal of Business Research***, 144, 2022, pp. 217–235. https://doi.org/10.1016/j.jbusres.2022.01.086

[22] A. AlKetbi, J. Rice, The impact of green human resource management practices on employees, clients, and organizational performance: A literature review, Administrative Sciences, 14(4), 2024, article 78. https://doi.org/10.3390/admsci14040078

[23] F. Sultana, O. H. Jumman, N. Paul, U. Golder, Green human resource management and organisational responsible performance: A systematic review and bibliometric analysis, Cleaner and Responsible Consumption, 21, 2026, article 100396. https://doi.org/10.1016/j.clrc.2026.100396

[24] S. Kumari, S. Sudha, Green human resource management and environmental sustainability: A hybrid review, ***Journal of Organizational Effectiveness: People and Performance***, 2026. Advance online publication. https://doi.org/10.1108/JOEPP-08-2025-0664

[25] P. M. Podsakoff, N. P. Podsakoff, L. J. Williams, C. Huang, J. Yang, Common method bias: It's bad, it's complex, it's widespread, and it's not easy to fix, Annual Review of Organizational Psychology and Organizational Behavior, 11(1), 2024, pp. 17–61. https://doi.org/10.1146/annurev-orgpsych-110721-040030

[26] M. J. Page, J. E. McKenzie, P. M. Bossuyt, I. Boutron, T. C. Hoffmann, C. D. Mulrow, L. Shamseer, J. M. Tetzlaff, E. A. Akl, S. E. Brennan, R. Chou, J. Glanville, J. M. Grimshaw, A. Hróbjartsson, M. M. Lalu, T. Li, E. W. Loder, E. Mayo-Wilson, S. McDonald, L. A. McGuinness, L. A. Stewart, J. Thomas, A. C. Tricco, V. A. Welch, P. Whiting, D. Moher, The PRISMA 2020 statement: An updated guideline for reporting systematic reviews, BMJ, 372, 2021, article n71. https://doi.org/10.1136/bmj.n71

[27] D. Denyer, D. Tranfield, J. E. van Aken, Developing design propositions through research synthesis, Organization Studies, 29(3), 2008, pp. 393–413. https://doi.org/10.1177/0170840607088020

[28] M. Campbell, J. E. McKenzie, A. Sowden, S. V. Katikireddi, S. E. Brennan, S. Ellis, J. Hartmann-Boyce, R. Ryan, S. Shepperd, J. Thomas, V. Welch, H. Thomson, Synthesis without meta-analysis (SWiM) in systematic reviews: Reporting guideline, BMJ, 368, 2020, article l6890. https://doi.org/10.1136/bmj.l6890

[29] J. Paul, A. Rosado-Serrano, Gradual internationalization vs born-global/international new venture models: A review and research agenda, International Marketing Review, 36(6), 2019, pp. 830–858. https://doi.org/10.1108/IMR-10-2018-0280

[30] J. Cohen, A coefficient of agreement for nominal scales, Educational and Psychological Measurement, 20(1), 1960, pp. 37–46. https://doi.org/10.1177/001316446002000104

[31] J. R. Landis, G. G. Koch, The measurement of observer agreement for categorical data, Biometrics, 33(1), 1977, pp. 159–174. https://doi.org/10.2307/2529310

[32] Q. N. Hong, S. Fàbregues, G. Bartlett, F. Boardman, M. Cargo, P. Dagenais, M.-P. Gagnon, F. Griffiths, B. Nicolau, A. O'Cathain, M.-C. Rousseau, I. Vedel, P. Pluye, The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers, Education for Information, 34(4), 2018, pp. 285–291. https://doi.org/10.3233/EFI-180221

[33] P. M. Podsakoff, S. B. MacKenzie, J.-Y. Lee, N. P. Podsakoff, Common method biases in behavioral research: A critical review of the literature and recommended remedies, ***Journal of Applied Psychology***, 88(5), 2003, pp. 879–903. https://doi.org/10.1037/0021-9010.88.5.879

[34] W. R. de S. Freitas, J. H. C. Oliveira, A. A. Teixeira, N. O. Stefanelli, Green human resource management, corporate social responsibility and customer relationship management: Relationship analysis in the Brazilian context, ***International Journal of Productivity and Performance Management***, 70(7), 2021, pp. 1705–1727. https://doi.org/10.1108/IJPPM-12-2019-0597

[35] A. Paletta, D. Scarpi, G. Alimehmeti, E. Foschi, From motivation to implementation: A firm-level model of customer-oriented green actions, ***Journal of Cleaner Production***, 538, 2026, article 147273. https://doi.org/10.1016/j.jclepro.2025.147273

[36] U. Iftikhar, K. Zaman, M. Rehmani, W. Ghias, T. Islam, Impact of green human resource management on service recovery: Mediating role of environmental commitment and moderation of transformational leadership, Frontiers in Psychology, 12, 2021, article 710050. https://doi.org/10.3389/fpsyg.2021.710050

[37] M.-H. Lee, C. Wang, T.-J. Wu, M.-Y. Yen, Multilevel linking service innovation, service sweethearting, and brand association: The moderating role of sustainable human resource management, SAGE Open, 11(1), 2021, article 2158244020985526. https://doi.org/10.1177/2158244020985526

[38] S. U. Rahman, M. Sarmad, I. Ullah, P. Paille, D. M. H. Kee, Digital green HRM influence on green service recovery in higher education institutions, Discover Sustainability, 7(1), 2026, article 1023. https://doi.org/10.1007/s43621-026-03383-7

[39] L. Suharti, A. Sugiarto, A qualitative study of green HRM practices and their benefits in the organization: An Indonesian company experience, Business: Theory and Practice, 21(1), 2020, pp. 200–211. https://doi.org/10.3846/btp.2020.11386

[40] Y. Jiang, S. Jamil, S. I. Zaman, S. A. Fatima, Elevating organizational effectiveness: Synthesizing human resource management with sustainable performance alignment, ***Journal of Organizational Effectiveness: People and Performance***, 11(2), 2024, pp. 392–447. https://doi.org/10.1108/JOEPP-03-2023-0111

[41] C. Wang, T. Zhang, R. Tian, R. Wang, F. Alam, M. B. Hossain, C. B. Illés, Corporate social responsibility's impact on passenger loyalty and satisfaction in the Chinese airport industry: The moderating role of green HRM, **Heliyon**, 10(1), 2024, article e23360. https://doi.org/10.1016/j.heliyon.2023.e23360

[42] A. Opoku Mensah, E. Afum, E. A. Sam, Does GHRM spur business performance via green corporate citizenship, green corporate reputation and environmental performance?, ***Management of Environmental Quality: An International Journal***, 32(4), 2021, pp. 681–699. https://doi.org/10.1108/MEQ-01-2021-0004

[43] Q. Wang, M. A. I. Gazi, F. A. Sobhani, A. A. Masud, M. A. Islam, T. Akter, Green human resource management and job pursuit intention: Mediating role of corporate social responsibility and organizational reputation, Environmental Research Communications, 5(7), 2023, article 075001. https://doi.org/10.1088/2515-7620/acda81

[44] E. Afum, Y. Agyabeng-Mensah, A. Opoku Mensah, E. Mensah-Williams, C. Baah, E. Dacosta, Internal environmental management and green human resource management: Significant catalysts for improved corporate reputation and performance, ***Benchmarking: An International Journal***, 28(10), 2021, pp. 3074–3101. https://doi.org/10.1108/BIJ-09-2020-0504

[45] M. R. B. Rubel, D. M. H. Kee, N. N. Rimi, The influence of green HRM practices on green service behaviors: The mediating effect of green knowledge sharing, Employee Relations, 43(5), 2021, pp. 996–1015. https://doi.org/10.1108/ER-04-2020-0163

[46] A. Saifudin, M. H. Aima, A. H. Sutawidjaya, Sugiyono, Hospital digitalization in the era of Industry 4.0 based on GHRM and service quality, ***International Journal of Data and Network Science***, 5(2), 2021, pp. 107–114. https://doi.org/10.5267/j.ijdns.2021.2.004

[47] J. Sun, M. Sarfraz, L. Ivascu, I. Ozturk, Unveiling green synergies: Sustainable performance through human resource management, CSR, and corporate image under a mediated moderation framework, Environmental Science and Pollution Research, 30(45), 2023, pp. 101392–101409. https://doi.org/10.1007/s11356-023-29468-8

[48] K. Khan, Q. Khan, S. Jalaly, M. S. Shams, T. A. Shah, Green human resource management and green service behaviour in organisations: Examining underlying mechanism, ***South Asian Journal of Human Resources Management***, 11(1), 2024, pp. 113–129. https://doi.org/10.1177/23220937221119908

[49] D. P. Faeni, R. F. Oktaviani, H. A. Riyadh, R. P. Faeni, B. A. H. Beshr, Green human resource management and sustainable practices on corporate reputation and employee well-being: A model for Indonesia's F&B industry, Environmental Challenges, 18, 2025, article 101082. https://doi.org/10.1016/j.envc.2025.101082

[50] T. T. Le, L. V. N. Thao, C. G. L. Le, T. B. Hai, Green human resource management and corporate social responsibility as drivers of organizational performance: Mediating effects of employee engagement and corporate reputation in Vietnam, ***Journal of Global Responsibility***, 16(3), 2025, pp. 569–593. https://doi.org/10.1108/JGR-02-2024-0023

[51] M. S. Priya, H. P. Bulsara, S. S. Priya, S. Kabiraj, S. K. Dixit, Customer based approach in understanding the interaction between green business activities and green brand equity, **Journal of Innovation Management**, 13(1), 2025, pp. 23–53. https://doi.org/10.24840/2183-0606_013.001_0002

[52] O. Durrah, F. S. Al-Subaey, M. F. Islam, S. Hannawi, M. Irfan, J. Poór, Leveraging green organizational excellence strategies to improve the quality of banking services, ***Human Resources Management and Services***, 8(3), 2026, article 5799. https://doi.org/10.18282/hrms5799

[53] A. H. Tahir, K. Abbass, S. Nauman, H. B. A. Hashmi, H. Song, Green HRM, organizational reputation, and environmental regulation: A pathway toward SDGs 12 and 13, Sustainable Development, 34(4), 2026, pp. 5200–5221. https://doi.org/10.1002/sd.70484

[54] A. L. Rubenstein, L. S. Simon, J. D. Kammeyer-Mueller, E. S. Corwin, H. M. Morrison, S. W. Whiting, On the efficacy of psychological separation to address common method variance: Experimental evidence and a guiding

research design framework, ***Journal of Applied Psychology***, 110(10), 2025, pp. 1297–1317. https://doi.org/10.1037/apl0001283

[55] J. S. Harrison, G. C. Banks, J. M. Pollack, E. H. O'Boyle, J. Short, Publication bias in strategic management research, ***Journal of Management***, 43(2), 2017, pp. 400–425. https://doi.org/10.1177/0149206314535438

[56] J. M. Lopes, S. Gomes, P. Ferreira, B. Sousa, Linking sustainable human resources practices to corporate reputation: The role of job satisfaction and organizational culture, Business Strategy and the Environment, 2026. Advance online publication. https://doi.org/10.1002/bse.71096

[57] Y. Ma, Y. Teng, B. Yan, Bring more than green? The impact of green human resource management on hospitality employees' organizational citizenship behaviors, Corporate Social Responsibility and Environmental Management, 31(3), 2024, pp. 2537–2556. https://doi.org/10.1002/csr.2702

[58] H. Aguinis, K. J. Bradley, Best practice recommendations for designing and implementing experimental vignette methodology studies, Organizational Research Methods, 17(4), 2014, pp. 351–371. https://doi.org/10.1177/1094428114547952.