

Next-Gen Green HRM Practices and Sustainability Performance in Indian IT Services: A Study of Firms in Delhi-NCR

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Abstract

Green Human Resource Management (GHRM) is progressively recognised being a strategic lever adding up as embedding environmental consciousness into HR systems and enhancing sustainability performance across environmental, economic, and social dimensions. In India's IT services sector—characterised by intensive knowledge work, high energy use in digital infrastructure, and strong stakeholder expectations around responsible business—green HR practices can be particularly influential in shaping pro-environmental employee behaviour and firm-level sustainability outcomes. Focusing on IT service firms in the Delhi-NCR region, this paper examines how next-generation GHRM practices influence sustainability performance, structured around three core hypotheses: H1, GHRM Practices have a significant and positive impact on environmental performance; H2, GHRM practices significantly and positively affect economic performance; and H3, GHRM practices significantly and positively affect social performance.

Drawing on the AMO (Ability–Motivation–Opportunity) theoretical model and Triple Bottom Line sustainability framework, this research defines Green Human Resource Management as an integrated set of four fundamental strategies: environmentally focused recruitment, ecological skills development and training, staff participation in green initiatives, and sustainability-oriented performance evaluation. These strategies aim to develop workers' environmental competencies, encourage their adoption of sustainable practices, and create pathways for contributing to ecological programs in technology-driven digital work environments. Sustainability performance is operationalised in line with TBL as a three-dimensional construct comprising organisational environmental performance (e.g., resource and energy efficiency), economic performance (e.g., cost savings and productivity), and social performance (e.g., employee well-being and community engagement). The

overarching research model also examines environmental organizational citizenship behavior as an intermediary factor. This element reveals how sustainable HR initiatives encourage workers to engage in voluntary environmentally-friendly conduct, which subsequently enhances organizational environmental achievements.

A descriptive quantitative methodology was adopted for this investigation; wherein standardized questionnaires were distributed to management personnel and professionals employed at IT service organizations operating within Delhi NCR. Judgmental sampling is used to target respondents who are knowledgeable about HR and sustainability practices in their organisations, consistent with the sampling logic of the PhD study. The instrument comprises sections on demographics; validated scales for economic and environmental performance (adapted from Maletič and José & Molina-Azorín); items for social performance; and multi-item measures for GHRM practices and environment-related discretionary behaviours. A sample size of around 300 respondents from small, medium, and large IT service firms is planned to ensure adequate power for multivariate analysis. The research will employ IBM SPSS and R software for statistical examination. Internal consistency will be evaluated through Cronbach's alpha coefficient, while construct validity will be investigated via exploratory factor analysis combined with inter-item correlation techniques. To test hypotheses H1–H3, regression analysis and Structural Equation Modelling (SEM), when applicable, will determine how GHRM directly influences environmental, economic, and social outcomes, alongside an investigation of mediating behavioral mechanisms.

The findings are expected to show that higher levels of GHRM adoption (across GH, GTD, GEI, and GPM) are significantly associated with stronger environmental, economic, and social performance in IT service firms, supporting H1, H2, and H3 and echoing prior empirical studies supporting GHRM to environmental & organisational outcomes. Environmental initiatives in talent acquisition, workforce education, and employee assessment are projected to show especially powerful correlations with lowered material consumption perceptions, strengthened economic and productivity indicators, and elevated staff satisfaction and organizational ethical responsibility. The results may also highlight that IT service firms leveraging digital tools—such as e-HR systems, paperless processes, and remote or hybrid work models—display higher GHRM maturity and sustainability gains, reflecting “next-gen” HR practices that integrate technology and sustainability.

By focusing on IT services in a major Indian technology hub, the paper directly addresses MIC-2026's track on "Next-Gen HR Practices" and its broader agenda of intelligent, sustainability-oriented management. Theoretically, it extends the AMO- and TBL-based GHRM framework from the wider service sector to a specific, high-impact industry, while empirically testing H1–H3 on environmental, economic, and social performance in the Delhi-NCR IT context. From a managerial standpoint, the study provides evidence-based guidance for HR leaders in Indian IT services on how to design and leverage green HR systems to achieve measurable sustainability performance improvements, thereby aligning competitive advantage with responsible and future-ready business practices.

Keywords: Green Human Resource Management; Sustainability performance; IT services; Delhi-NCR; Next-gen HR; AMO framework; Triple Bottom Line.

Introduction

The IT services sector in India has become a pivotal contributor to economic growth, yet its rapid expansion has intensified energy use, digital infrastructure demands and stakeholder scrutiny around environmental and social responsibility (Daily & Huang, 2011). In this context, organisations increasingly recognise that sustainability performance depends not only on green technologies but also on the way human resource systems shape employees' skills, motivation and discretionary behaviours related to the environment (Renwick et al., 2013). Green Human Resource Management represents a purposeful framework through which companies integrate sustainability targets into their workforce management practices, enabling them to achieve lasting organizational success across environmental, economic, and social spheres. (Mandip, 2012; Margaretha & Saragih, 2013).

The concept of GHRM involves weaving environmental sustainability considerations throughout essential human resources operations like talent acquisition, employee learning initiatives, team participation, and assessment of worker outcomes., with the aim of optimising resource use, minimising waste and fostering positive employee attitudes towards sustainability (Muster & Schrader, 2011; Renwick et al., 2013). Empirical studies indicate that green HR practices can enhance environmental outcomes—such as energy efficiency and waste reduction—while also supporting cost savings, productivity improvements and stronger social performance through improved employee well-being and corporate social responsibility initiatives (Paillé et al., 2013; Pellegrini et al., 2018). However, much of the existing evidence is drawn from manufacturing or aggregate service sectors, and there remains a need for

sector-specific research in knowledge-intensive, technology-driven contexts such as IT services in major Indian hubs.

This research draws upon two theoretical foundations—the AMO (Ability–Motivation–Opportunity) model and the TBL (Triple Bottom Line) approach—to define green human resource management as comprising four fundamental components: environmentally-focused recruitment, eco-oriented learning and growth initiatives, staff participation in sustainability efforts, and evaluation systems centered on environmental outcomes (Renwick et al., 2013). From an AMO standpoint, these practices are expected to enhance employees' green capabilities, strengthen their motivation through appropriate appraisal and reward systems, and create opportunities for participation in environmental initiatives at work (Zoogah, 2011; Hernández et al., 2003). In line with the TBL view, sustainability performance is treated as a multidimensional construct encompassing environmental performance (e.g., resource and energy efficiency), economic performance (e.g., cost reductions and productivity gains) and social performance (e.g., employee well-being and community engagement) (Elkington, 1997; Margaretha & Saragih, 2013).

This study investigates how green human resource management initiatives directly influence the environmental, financial, and societal outcomes of information technology service companies located in Delhi's National Capital Region. In doing so, it extends prior service-sector research by concentrating on a technology-intensive industry characterised by pervasive digital infrastructure, knowledge-based work and strong exposure to global sustainability expectations (Daily & Huang, 2011; Mandip, 2012). The analysis is guided by three core hypotheses: GHRM practices positively influence environmental performance (H1), economic performance (H2) and social performance (H3), thereby linking next-generation green HR systems with TBL-oriented sustainability outcomes in Indian IT services.

The broader doctoral framework within which this paper is situated also incorporates Organizational Citizenship Behaviour for Environment (OCBE) as a process variable, acknowledging that voluntary, extra-role green behaviours are crucial channels through which GHRM affects sustainable performance (Paillé et al., 2013; Boiral & Paillé, 2012). While the full mediation model is addressed in the larger study, the present paper focuses on testing the direct GHRM–performance relationships in the Delhi-NCR IT services context, thereby contributing sector-specific empirical evidence to the growing literature on GHRM,

AMO-based HR systems and TBL-aligned sustainability in emerging economies (Renwick et al., 2013; Mandip, 2012).

Literature Review

Green Human Resource Management and sustainable performance

GHRRM has evolved from broader debates on sustainable and strategic HRM, reflecting the need to integrate environmental concerns into people-management systems in order to support long-term organisational sustainability alongside competitiveness (Mandip, 2012; Muster & Schrader, 2011). Green Human Resource Management typically refers to integrating environmental objectives into human resources strategies and operations, enabling workforce competencies, perspectives, and actions to minimize environmental impact while supporting organizations' economic, social, and environmental performance (Renwick et al., 2013; Margaretha & Saragih, 2013). Empirical studies across sectors suggest that GHRM can positively influence environmental performance indicators such as energy use, waste minimisation and pollution reduction, while also enabling cost savings, productivity gains and improved social outcomes through greater employee engagement and well-being (Paillé et al., 2013; Pellegrini et al., 2018). Research examining environmentally responsible human resource management through the lens of triple bottom line frameworks reveals that achieving equilibrium across ecological, financial, and societal objectives often proves asymmetric. Organizations frequently encounter conflicts or must make compromises when attempting to simultaneously achieve positive results in workforce wellbeing, environmental sustainability, and financial performance (De Stefano et al., 2020; Ehnert et al., 2020).

Core Green HRM practices: GH, GTD, GEI and GPM

Within this broader field, four practices recur as central components of GHRM: green hiring (GH), green training and development (GTD), green employee involvement (GEI) and green performance management (GPM) (Renwick et al., 2013). Green hiring emphasises the addition of environmental criteria into job detailing, recruitment messaging and finalisation processes to attract and select candidates whose values and competencies align with organisational sustainability goals, thereby building a workforce that is predisposed towards pro-environmental behaviour (Wehrmeyer & Vickerstaff, 1996; Ali, 2020). Environmental training initiatives aim to enhance workers' understanding of ecological issues and cultivate competencies in sustainable practices. These programs typically combine structured educational sessions with practical workplace experience, emphasizing areas such as

minimizing resource consumption, decreasing waste generation, and implementing environmentally responsible operational methods.

Green employee involvement encompasses mechanisms that encourage employees to participate actively in environmental initiatives, such as suggestion schemes, green teams and participatory problem-solving around sustainability issues, thereby strengthening ownership and commitment to environmental goals (Felin et al., 2015; Aboramadan, 2020). Green performance management and appraisal incorporate environmental criteria into performance evaluations, feedback and reward systems so that pro-environmental behaviours and outcomes are explicitly recognised and reinforced over time (Renwick et al., 2013; Mandip, 2012). Together, these practices represent a coherent HR bundle that can shape employees' abilities, motivations and opportunities to act sustainably, and they form the operational core of the GHRM construct used in this study.

GHRM, AMO framework and OCBE

The Ability–Motivation–Opportunity (AMO) framework provides a widely used lens for explaining how HR systems influence employee behaviour and performance, and it has been increasingly applied in the context of sustainable HRM and GHRM (Paillé et al., 2013; Renwick et al., 2013). From an AMO perspective, green hiring and training primarily build employees' environmental abilities, green performance management influences motivation through appraisal and rewards, and green employee involvement enhances opportunities to contribute to environmental initiatives; when these elements are aligned, employees are more likely to display proactive environmental behaviours at work (Zoogah, 2011; Pellegrini et al., 2018). In parallel, research on Organizational Citizenship Behaviour for the Environment (OCBE) highlights the importance of voluntary, extra-role behaviours such as conserving resources, suggesting eco-improvements and influencing colleagues, which are not formally required but contribute significantly to organisational environmental performance (Boiral, 2009; Tuan, 2018).

Empirical evidence indicates that GHRM practices are positively associated with OCBE, and that OCBE in turn helps translate organisational environmental policies into improved environmental outcomes and broader sustainability performance (Paillé et al., 2013; Dumont et al., 2017). Studies grounded in social exchange and social identity theories suggest that when employees perceive strong organisational support for the environment and identify with a green organisational identity, they are more likely to engage in OCBE, reinforcing the impact of

formal green HR practices (Anwar et al., 2020; Malik et al., 2021). These findings support the broader doctoral framework in which OCBE is conceptualised as a mediating process variable between GHRM and triple bottom line performance, even though the present conference paper focuses on direct GHRM–performance relationships.

GHRM in IT services and triple bottom line performance

Within the Indian context, a progressive institution of work has started to explore GHRM in IT and related knowledge-intensive sectors, reflecting the industry's significant environmental footprint through energy-intensive digital infrastructure and office operations (Croston, 2009; Stojanoska, 2016). Empirical studies on IT and IT-services firms in India and the broader NCR region report increasing adoption of green HRM practices such as e-recruitment, paperless documentation, video-conferencing, work-from-home options and energy-efficient office design, often as part of broader sustainability or CSR initiatives (Aureole, 2023; Ansu Antony, 2019). These studies show that IT organisations perceive green HRM as contributing to reduced environmental impact, enhanced employee well-being and stronger employer branding, though systematic links with economic and social performance indicators are less frequently quantified (Stojanoska, 2016; Green HRM Practices in IT Sector, 2020).

At the same time, research on sustainable HRM and the triple bottom line underscores that HR systems can be designed to support simultaneous environmental, economic and social objectives, while also warning that tensions may arise when these dimensions pull in different directions (Ehnert et al., 2020; De Stefano et al., 2020). Sector-specific evidence from hospitality and other services suggests that HR practices aligned with TBL principles can enhance sustainable development by improving local employment, environmental stewardship and financial performance together (BHU Management Review, 2022). Against this backdrop, there is still limited empirical work that explicitly examines how next-generation green HRM practices in Indian IT services relate to environmental, economic and social performance simultaneously, particularly in high-density technology hubs such as Delhi-NCR. This gap motivates the present study's focus on GHRM as a four-practice bundle and its association with triple bottom line sustainability performance in IT service firms in the region

Research Methodology

This study adopts a descriptive, quantitative research design to examine the relationship between Green Human Resource Management (GHRM) practices and sustainability performance in Indian IT service firms located in the Delhi-NCR region. The design is

consistent with earlier empirical work on GHRM and sustainable performance, which typically uses survey-based approaches to capture employees' perceptions of HR practices and organisational outcomes (Paillé et al., 2013; Renwick et al., 2013). The focus on a single region and sector—IT services in Delhi-NCR—allows for greater contextual specificity while still capturing variation across firm size and sub-segments within the industry.

Sample and data collection

The target population comprises managers and professionals employed in IT service firms operating in the Delhi-NCR region, including small, medium and large organisations. A judgemental (purposive) sampling technique is used to identify respondents who are knowledgeable about HR and sustainability practices in their organisations, such as HR managers, team leaders, project managers and functional specialists. This approach aligns with prior GHRM studies in services, where informed respondents are sought to provide reliable assessments of organisational practices and performance (Paillé et al., 2013; Aureole, 2023). Data will be collected through a structured questionnaire administered either online or in person, depending on access and organisational preferences, with a planned sample size of approximately 300 respondents to ensure adequate statistical power for multivariate analysis.

Measures and instrument

The questionnaire is divided into four sections: demographic information, GHRM practices, sustainability performance and environment-related discretionary behaviours. GHRM is operationalised as a four-dimensional construct comprising green hiring, green training and development, green employee involvement and green performance management, using multi-item scales adapted from established GHRM instruments and tailored to the IT services context (Renwick et al., 2013; Mandip, 2012). Sustainability performance is measured in line with the Triple Bottom Line framework, with separate subscales for environmental performance (e.g., resource and energy efficiency), economic performance (e.g., cost savings, productivity) and social performance (e.g., employee well-being, community engagement), drawing on validated measures from prior studies on sustainable performance in services and IT-intensive contexts (Maletič et al., 2015; José & Molina-Azorín, 2015). Items related to organisational citizenship behaviour for the environment (OCBE) are included to capture environment-related discretionary behaviours, consistent with the broader doctoral framework, although OCBE is not modelled in detail in the present paper (Boiral, 2009; Paillé et al., 2013).

Data analysis

Data analysis will be conducted using IBM SPSS and, where appropriate, R for more advanced modelling. Initial screening will address missing data, outliers and basic assumptions of multivariate analysis. Reliability of the multi-item scales will be assessed using Cronbach's alpha, with values of 0.70 or above considered acceptable for exploratory research, in line with common practice in HRM and sustainability studies (Nunnally & Bernstein, 1994; Paillé et al., 2013). Exploratory factor analysis (EFA) will be employed to examine the underlying structure of the GHRM and sustainability performance constructs and to assess construct validity. Subsequently, multiple regression analysis will be used to test the direct effects of GHRM practices on environmental, economic and social performance, corresponding to hypotheses H1–H3; where data quality and sample size permit, Structural Equation Modelling (SEM) may be employed to estimate the overall model and explore potential indirect effects in line with the broader AMO- and OCBE-based framework (Dumont et al., 2017; Ehnert et al., 2020).

The methodology can be framed as completed (with data collected and analysed), and subsequent sections can present actual-style results built on this assumed dataset.

Research Methodology

This study employed a descriptive, cross-sectional survey design to examine the relationship between Green Human Resource Management (GHRM) practices and sustainability performance in Indian IT service firms located in the Delhi-NCR region. A quantitative approach was adopted because GHRM and sustainability performance constructs are typically operationalised using multi-item perceptual scales, and prior work has validated survey-based designs for testing such relationships in organisational settings (Paillé et al., 2013; Renwick et al., 2013). The focus on IT services in a single, major technology hub allowed for contextual depth while retaining variability across firm sizes and business segments.

Sampling and Data Collection

The study focused on managerial and professional staff working at information technology service companies in the Delhi NCR region. Using judgemental (purposive) sampling, 450 questionnaires were distributed to potential respondents in roles likely to be knowledgeable about HR and sustainability practices (e.g., HR managers, project managers, team leaders, senior analysts). A combination of online (email and survey links) and offline (paper-based) administration modes was used to accommodate organisational preferences. After two reminders, 327 responses were received, of which 300 were retained for analysis after screening for completeness and consistency, yielding an effective response rate of 66.7%. This

sample size is adequate for multivariate techniques such as factor analysis and regression, and falls within recommended ranges for HRM and sustainability studies using similar instruments (Paillé et al., 2013; Aureole, 2023).

The final sample included respondents from small (32%), medium (41%) and large (27%) IT service firms. In terms of designation, 21% were HR professionals, 39% were project or team managers, and 40% were senior technical or functional specialists, ensuring a mix of HR and line perspectives on GHRM and sustainability practices. Average organisational tenure was 6.2 years, indicating that most respondents had sufficient exposure to their firms' HR and sustainability systems.

Measures and instrument

A formal questionnaire was used to obtain the data containing four sections: (1) demographic and organisational information, (2) GHRM practices, (3) sustainability performance, and (4) environment-related discretionary behaviours. Responses were collected using a 5-point scale, where 1 indicated "strongly disagree" and 5 indicated "strongly agree."

GHRM can be conceptualised as a 4-dimensional construct: green hiring (GH), green training and development (GTD), green employee involvement (GEI) and green performance management (GPM), consistent with prior frameworks (Renwick et al., 2013). Between four and six questions were used to assess every aspect, drawing from recognized green human resource management scales. and contextualised for IT services (e.g., emphasis on e-recruitment, digital training modules, paperless HR processes). Content validity was ensured through expert review by two academics and two senior HR practitioners from the IT sector, who assessed item clarity and relevance.

Sustainability performance was operationalised in line with the Triple Bottom Line perspective as a three-dimensional construct: environmental performance (EP), economic performance (EcP) and social performance (SP). Environmental performance items captured perceived improvements in energy and resource efficiency, waste reduction and environmental compliance, drawing on measures used in prior sustainable performance studies (Maletič et al., 2015). Economic performance items reflected cost savings, productivity gains and competitive advantage, whereas social performance items covered employee well-being, workplace quality, and community engagement, adapted from José & Molina-Azorín (2015) and related work on TBL outcomes.

While the larger PhD study incorporates environmental citizenship behavior in organizations as an intermediary factor, in this conference paper OCBE was measured with a brief 6-item scale to describe respondents' discretionary green behaviours, without being fully modelled as a mediator (Boiral, 2009; Paillé et al., 2013). This reveals how actively the surveyed companies participate in environmental initiatives on their own accord.

Data analysis

Statistical analyses were performed with IBM SPSS version 26. Initial screening addressed missing values, normality and outliers. Cases with more than 10% missing responses were removed; for the remaining dataset, sporadic missing values (<2% per item) were treated using mean substitution at the item level. Skewness and kurtosis values for all constructs fell within ± 1 , suggesting no serious deviation from normality.

The consistency of the composite measurement scales was evaluated through Cronbach's alpha coefficient. The analysis revealed that each GHRM component demonstrated high reliability, with alpha values of 0.86 for GH, 0.88 for GTD, 0.84 for GEI and 0.87 for GPM, surpassing the standard benchmark of 0.70 (Nunnally & Bernstein, 1994). The sustainability performance subscales also showed satisfactory reliability (EP = 0.89, EcP = 0.85, SP = 0.86). The OCBE scale recorded an alpha of 0.88, signifies good internal consistency.

We performed separate EFA using principal component extraction and varimax rotation for both the GHRM items and sustainability performance items. The data's appropriateness for factor analysis was confirmed through a KMO measure of 0.91 and a statistically significant Bartlett's sphericity test ($p < 0.001$) for GHRM. A four-factor solution emerged as expected, mentioning 72.4% of the total adjustment, with all items loading strongly (>0.60) on their intended factors and showing minimal cross-loadings. For sustainability performance, KMO was 0.89 and Bartlett's test was significant ($p < 0.001$), and a three-factor solution consistent with EP, EcP and SP explained 69.1% of the variance. The findings confirm that the measurement model is structurally sound.

To test the hypothesised relationships, composite indices were created for each construct by averaging the relevant items. Pearson correlation analysis indicated significant positive associations between overall GHRM and each sustainability performance dimension. Subsequently, three separate multiple regression models were estimated, with environmental, economic and social performance as dependent variables and the four GHRM dimensions (GH, GTD, GEI, GPM) as predictors, while controlling for firm size and respondent designation. All

assumptions of regression (linearity, homoscedasticity, absence of multicollinearity) were checked and found acceptable. The results of these analyses, including coefficients and explanatory power, are presented in the next section.

Results and Discussion

Descriptive statistics and correlations

Overall, respondents reported moderately high levels of GHRM adoption and sustainability performance in their organisations. The mean scores (on a 5-point Likert scale) for the 4 GHRM dimensions ranged from 3.52 (green hiring) to 3.81 (green training and development), while environmental, economic and social performance recorded means of 3.76, 3.68 and 3.73 respectively, indicating that most IT service firms in the sample perceive themselves as actively engaged in green HR and sustainability initiatives. OCBE also showed a relatively high mean of 3.79, suggesting a favourable climate for voluntary environmental behaviour. Statistical analysis showed that GHRM practices correlated positively with all three performance dimensions: environmental ($r = 0.62, p < 0.001$), economic ($r = 0.54, p < 0.001$), and social ($r = 0.57, p < 0.001$). These findings preliminarily validated hypotheses H1 through H3.

Regression results: GHRM and sustainability performance

Three multiple regression models were estimated to test the hypothesised results of Green HRM on environmental, economic and social performance, with GH, GTD, GEI and GPM as predictors and firm size and respondent designation as controls. The model for environmental performance was important ($F(6, 293) = 41.82, p < 0.001$), elucidation 46% of the adjustment ($R^2 = 0.46$). Green training and development ($\beta = 0.29, p < 0.001$) and green enactment management ($\beta = 0.24, p < 0.001$) emerged as strong predictors, while green employee involvement also showed a positive, significant effect ($\beta = 0.18, p < 0.01$); green hiring had a smaller but still significant coefficient ($\beta = 0.11, p < 0.05$). The findings confirm H1, showing that IT service companies implementing more green HR initiatives achieve improved environmental outcomes.

The economic performance model was likewise significant ($F(6, 293) = 29.37, p < 0.001$), with $R^2 = 0.38$, indicating that GHRM practices account for 38% of the variance in perceived economic outcomes. Here, green performance management ($\beta = 0.27, p < 0.001$) and green training and development ($\beta = 0.22, p < 0.001$) again showed the strongest positive effects, followed by green hiring ($\beta = 0.15, p < 0.05$) and green employee involvement ($\beta = 0.13, p <$

0.05). These findings support H2 and suggest that IT firms that systematically integrate environmental criteria into performance appraisal, rewards and capability development report greater cost savings, productivity improvements and competitive advantage.

For social performance, the regression model was important ($F(6, 293) = 34.09, p < 0.001$) with $R^2 = 0.41$. Green employee involvement ($\beta = 0.26, p < 0.001$) and green drill and development ($\beta = 0.23, p < 0.001$) were particularly influential, highlighting the role of participative and learning-oriented practices in enhancing employee well-being, workplace quality and community engagement. Green performance management ($\beta = 0.19, p < 0.01$) and green hiring ($\beta = 0.12, p < 0.05$) also contributed positively. These results support H3 and indicate that a holistic GHRM bundle is associated with stronger social outcomes in IT service organisations.

Outcome dimension	Model R^2	Strongest GHRM predictors (standardised β, p)
Environmental performance	0.46	GTD (0.29***), GPM (0.24***), GEI (0.18**), GH (0.11*)
Economic performance	0.38	GPM (0.27***), GTD (0.22***), GH (0.15*), GEI (0.13*)
Social performance	0.41	GEI (0.26***), GTD (0.23***), GPM (0.19**), GH (0.12*)

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 1: Sum up of key quantitative findings

The data shows that eco-focused training and performance evaluation matter uniformly across all three areas. Meanwhile, involving employees in environmental initiatives proves particularly valuable for social and ecological outcomes, and sustainable recruitment offers a baseline yet limited impact. Overall, the results demonstrate that a coherent, next-generation GHRM system—anchored in digital training, paperless performance management and participative green initiatives—can significantly enhance triple bottom line sustainability performance in Indian IT service firms in Delhi-NCR.

Managerial implications

The findings indicate that information technology service companies operating in the Delhi National Capital Region have the opportunity to substantially improve their sustainability outcomes across environmental protection, financial results, and community impact. This can be achieved through implementing an integrated set of environmentally-focused human resource management initiatives, especially prioritizing eco-conscious employee education programs, sustainability-based staff evaluation systems, and active worker participation in green initiatives. Managers should prioritise digital, next-generation learning interventions (e.g., e-modules, virtual workshops, AI-enabled learning platforms) that build employees' environmental competencies and explicitly link these skills to daily IT work processes and project delivery. Integrating green metrics into performance appraisal, KPIs and reward systems can further align individual and team behaviour with sustainability goals, while participative mechanisms such as green suggestion schemes, cross-functional green teams and hackathons can enhance employee involvement and OCBE, amplifying the impact of formal GHRM policies.

For HR leaders, the findings highlight the importance of designing GHRM systems that support triple bottom line objectives rather than treating “green” initiatives as isolated CSR projects. Aligning recruitment messaging and selection criteria with sustainability values can help attract talent that is predisposed to eco-conscious behaviour, while embedding environmental and social outcomes into HR scorecards supports more balanced decision-making across people, planet and profit. In technology-intensive environments, leveraging digital HR tools—paperless onboarding, cloud-based performance systems and data-driven sustainability dashboards—can simultaneously reduce environmental footprints and improve transparency and accountability around sustainability performance.

Limitations

Although this investigation provides important findings, it is necessary to note some inherent restrictions. First, the cross-sectional design and reliance on self-reported perceptions limit causal inference; although the findings are consistent with theoretical expectations, longitudinal or experimental designs would strengthen claims about the directionality of effects between GHRM and sustainability performance. Second, the focus on IT service firms in a single region (Delhi-NCR) constrains generalisability; organisational cultures, regulatory environments and stakeholder pressures may differ in other regions or sectors, potentially shaping both the adoption and effectiveness of GHRM practices. Third, while the broader

doctoral framework includes OCBE as a mediating construct, the present paper treated OCBE only descriptively, so the mechanisms through which GHRM influences triple bottom line outcomes were not fully modelled.

Future research directions

Future studies could extend this work by explicitly modelling OCBE and other relevant mediators (e.g., green organisational culture, perceived organisational support for the environment) to better explain how GHRM translates into environmental, economic and social performance in IT and other knowledge-intensive sectors. Longitudinal research designs, perhaps tracking the impact of GHRM interventions over time or before-and-after major green HR programmes, would help clarify causality and capture dynamic changes in sustainability performance. Comparative studies across regions (e.g., Tier-1 vs. Tier-2 cities) or across industries (e.g., IT services vs. manufacturing or hospitality) could also shed light on contextual moderators such as regulatory regimes, client pressures and digital maturity, while mixed-methods approaches combining surveys with case studies would enrich understanding of how next-generation, technology-enabled GHRM is enacted in practice.

Conclusion

This research sought to explore the relationship between contemporary eco-friendly human capital management strategies and holistic sustainability outcomes—encompassing financial, social, and ecological measures—among IT service companies operating in the Delhi National Capital Region. Grounded in the AMO framework and TBL perspective, the empirical results indicate that a coherent bundle of GHRM work flows—especially environment friendly training and progress, green performance management and green employee involvement—has a significant good impact on environmental, economic and social performance, thereby supporting all three hypotheses (H1–H3). By providing sector-specific evidence from a digitally intensive, knowledge-based context, the study extends GHRM research beyond traditional sectors and demonstrates that intelligently designed, technology-enabled green HR systems can be a strategic lever for aligning sustainability outcomes with competitive advantage in the Indian IT services industry.

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