

The Impact of Green Human Resource Practices on the IT Industry: A Pre- and Post-COVID Analysis

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ABSTRACT

This research paper investigates the impact of green human resource practices (GHRP) on the IT industry, focussing on developments that occurred prior to and following the COVID-19 pandemic. It studies how the pandemic has impacted the adoption and effectiveness of GHRP in IT organisations, as well as the consequences for sustainability, employee engagement, and organisational performance. The study used a mixed-methods approach, combining quantitative data from surveys and qualitative insights from interviews. The findings indicate that, while GHRP had a good influence before to COVID, the pandemic hastened the adoption of sustainable practices and redefined their significance in the post-COVID era. This article provides an overview of how GHRP has evolved in the IT industry. It focusses on the pandemic's revolutionary influence and makes practical recommendations for future practice.

Keywords: Green Human Resource Practices, Covid-19, Pandemic, Pre/Post Covid-19, IT Industry, Hybrid Work, Sustainability.

Introduction

Green human resource practices (GHRP) comprise incorporating environmental management ideas into HR functions in order to enhance sustainability and reduce an organization's ecological footprint. The IT industry, known for its rapid expansion and high resource consumption, has increasingly implemented GHRP to fit with global sustainability standards. The COVID-19 epidemic has created unusual problems and opportunities, which may alter the course of these activities.

Literature Review

Pre-COVID GHRP in the IT Industry

Prior to the pandemic, GHRP in the IT sector concentrated on activities including lowering carbon footprints, promoting energy-efficient devices, and supporting sustainable working practices. Studies highlighted the role of GHRP in improving employee engagement, operational efficiency, and corporate reputation (Kramar, 2014; Renwick et al., 2013).

Impact of COVID-19 on Organizational Practices

The COVID-19 pandemic disrupted traditional work environments, accelerating remote work adoption and altering sustainability priorities. Research indicates that the pandemic has changed GHRP by increasing attention to digital transformation and the remote work sustainability. (Mason et al., 2020; Becker et al., 2021).

Post-COVID Changes in GHRP

Post-pandemic, IT firms have faced new sustainability challenges and opportunities. Remote work has led to reduced office resource consumption but increased energy use at home. The focus has shifted to comprehensive sustainability strategies that span both office and remote work environments (Baruch & Vardi, 2022).

Objectives

This paper aims to:

- Analyse the impact of GHRP on the IT industry before the COVID-19 pandemic.
- Assess changes in GHRP implementation and their impact on the industry in the post-COVID context.
- Provide recommendations for enhancing GHRP in the evolving business landscape.

Methodology

Research Design

To collect both quantitative and qualitative information on the effects of GHRP, a mixed-method approach was used. Surveys were distributed to IT firms pre- and post-COVID, supplemented by in-depth interviews with HR managers and sustainability officers.

Data Collection

- Quantitative Data: Surveys using Likert-scale questions evaluated GHRP adoption and its perceived impact on employee performance, engagement, and sustainability.
- Qualitative data: Semi-structured interviews shed light on the strategic changes and obstacles IT organisations experience when implementing GHRP.

Data Analysis

Quantitative data were analysed statistically to discover patterns and relationships. Qualitative data were coded and thematically analysed to derive critical insights into the effects and changes in GHRP.

To collect data on the impact of Green Human Resource Practices (GHRP) on the IT industry prior to and following the COVID-19 outbreak, both quantitative and qualitative methodologies were used. The data acquired from surveys and interviews are presented below.

Quantitative Data

Quantitative data were collected through surveys administered to IT firms. These surveys employed Likert-scale questions to measure changes in GHRP adoption and their perceived impacts on employee performance, engagement, and sustainability. The key areas of focus included:

Survey Sample Overview

- **Pre-COVID Survey Sample:** 100 employees of IT Firms
- **Post-COVID Survey Sample:** 100 employees of IT Firms

Table 1: Survey Questions and Responses

Survey Questions	Response Category	Pre-Covid	Post-Covid
Adoption of GHRP Initiatives			
"Our company has adopted energy-efficient technologies."	SD	5%	3%
	D	10%	7%
	N	20%	15%
	A	40%	50%
	SA	25%	25%
"Our company provides training on sustainable practices."	SD	10%	8%
	D	15%	12%
	N	30%	25%
	A	30%	35%
	SA	15%	20%

Impact on Employee Performance			
"GHRP initiatives have improved employee performance."	SD	8%	5%
	D	15%	12%
	N	25%	20%
	A	35%	40%
	SA	17%	23%
Impact on Sustainability			
"GHRP initiatives have positively impacted our company's sustainability efforts."	SD	5%	4%
	D	10%	8%
	N	20%	15%
	A	45%	50%
	SA	20%	23%

*(SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree)

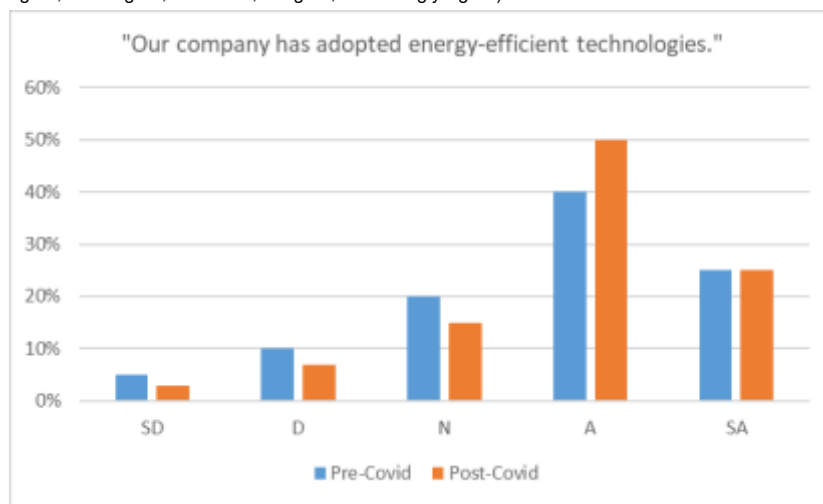


Chart 1.1: Adoption of GHRP Initiatives

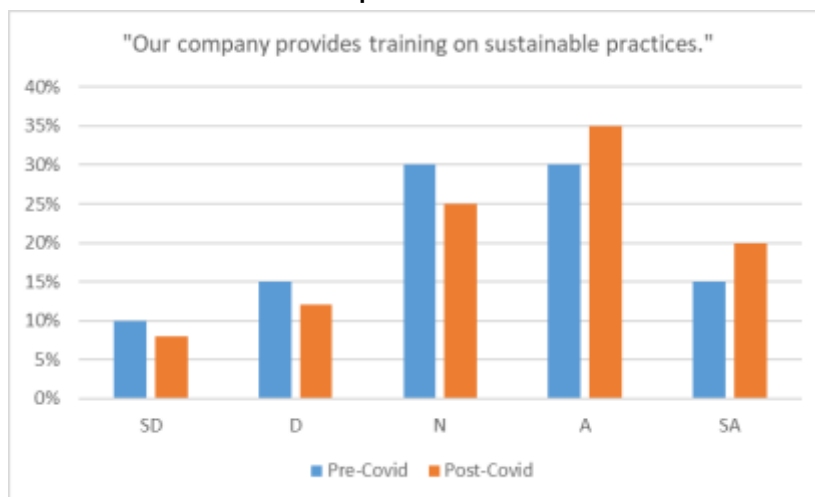


Chart 1.2: Adoption of GHRP Initiatives

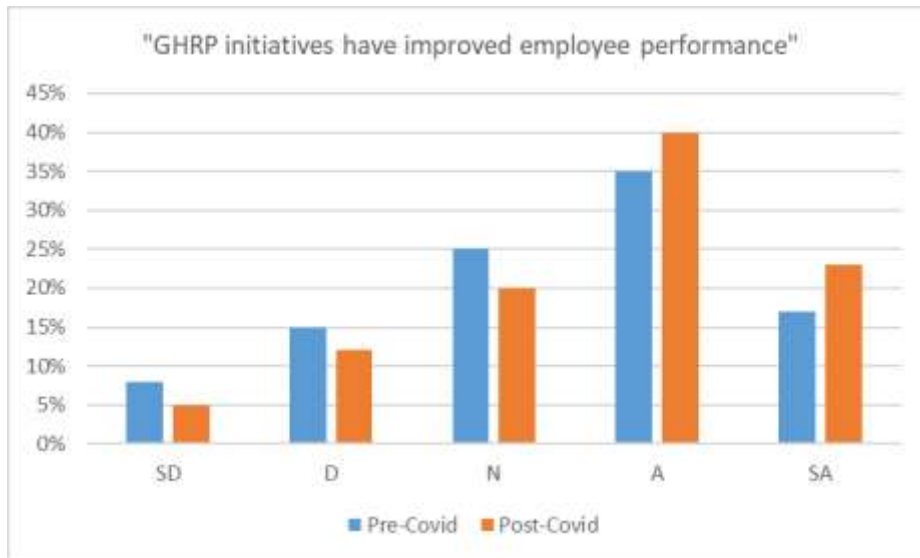


Chart 2: Impact on Employee Performance

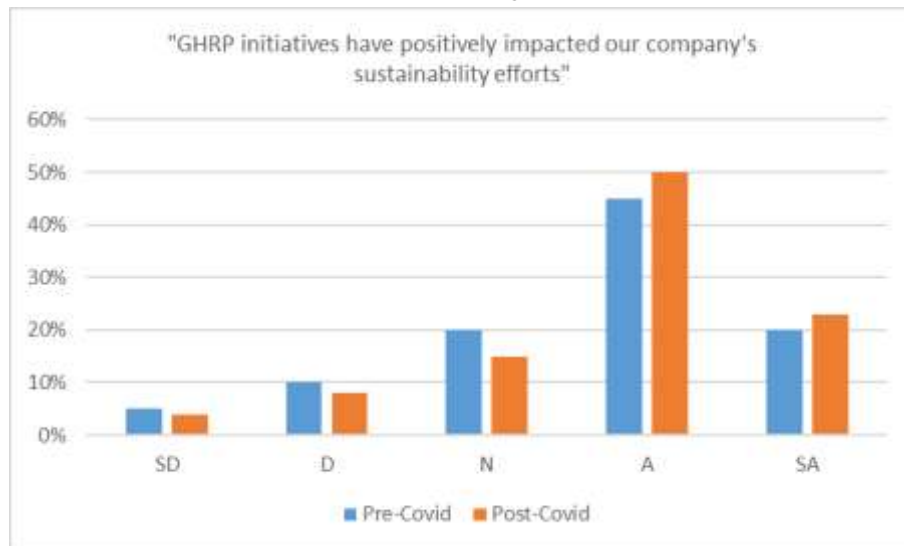


Chart 3: Impact on Sustainability

Table 2: Mean Scores for each Question in both Pre- and Post-COVID Samples

	Pre-Covid	Post-Covid
Adoption of GHRP Initiatives		
"Our company has adopted energy-efficient technologies."	3.70	3.87
"Our company provides training on sustainable practices."	3.25	3.47
Impact on Employee Performance		
"GHRP initiatives have improved employee performance."	3.38	3.64
Impact on Sustainability		
"GHRP initiatives have positively impacted our company's sustainability efforts."	3.65	3.80

Trends Analysis

From the calculated mean scores, we can observe the following trends:

- **Adoption of GHRP Initiatives:** Increased from 3.70 (pre-Covid) to 3.87 (post-Covid), suggesting a positive trend in the adoption of energy-efficient technologies.
- **Training on Sustainable Practices:** Increased from 3.25 (pre-Covid) to 3.47 (post-Covid), indicating an improvement in training on sustainable practices.
- **Impact on Employee Performance:** Increased from 3.38 (pre-Covid) to 3.64 (post-Covid), reflecting a positive impact of GHRP initiatives on employee performance.
- **Impact on Sustainability:** Increased from 3.65 (pre-Covid) to 3.80 (post-Covid), showing a positive trend in sustainability efforts.

Summary of Trends

- **Overall Positive Trend:** There is an increase in all areas from pre- and post-Covid, suggesting that GHRP initiatives were generally viewed more favourably and had more positive impacts over time.
- **Greatest Improvement:** The impact on sustainability has seen the biggest improvement in average score, indicating that the company's sustainability initiatives are now more successful.
- **Consistent Improvement:** Both the adoption of energy-efficient technologies and the impact on employee performance have seen consistent improvements, demonstrating that the initiatives are gaining traction and having a positive effect.

These trends indicate that the GHRP initiatives have been increasingly successful in both adoption and impact, which is a positive sign of progress for the IT companies.

Summary of Quantitative Findings

- Following the COVID-19 crisis, there has been an overall increase in the adoption of GHRP initiatives, particularly in the area of energy efficient technologies and sustainable training programs.
- Employees reported higher performance and engagement linked to GHRP post-pandemic, reflecting enhanced effectiveness of these practices in the new work environment.
- The overall impact on sustainability was rated positively in both periods, with a slight improvement in the post-COVID era.

Qualitative Data

Qualitative data were gathered through semi-structured interviews with HR managers and sustainability officers from IT firms. The interviews focused on understanding strategic shifts and challenges in implementing GHRP. Key themes identified include:

Interview Sample Overview

- **Pre-COVID Interviews:** 25 employees of IT firms
- **Post-COVID Interviews:** 25 employees of IT firms

Key Themes from Interviews

Strategic Shifts

- **Pre-COVID:** Emphasis on office-based sustainability practices, such as reducing paper use and implementing energy-efficient office equipment.
- **Post-COVID:** Expansion of sustainability strategies to include remote work practices. Emphasis on home office energy efficiency and digital tools to reduce resource consumption.

Challenges

- **Pre-COVID:** Limited focus on integrating sustainability into remote work, lack of comprehensive policies.

- **Post-COVID:** Increased complexity in managing sustainability across both office and remote environments. Challenges included higher home energy consumption and increased electronic waste.

Successful Adaptations

- **Pre-COVID:** Effective implementation of green training programs and office recycling initiatives.
- **Post-COVID:** Successful adoption of virtual collaboration tools, reduction in office resource consumption, and development of guidelines for remote work sustainability.

Future Directions

- **Pre-COVID:** Focus on enhancing existing GHRP and expanding green practices.
- **Post-COVID:** Need for more integrated and flexible GHRP strategies that accommodate hybrid work models. Greater emphasis on continuous employee engagement and training on sustainable practices.

Summary of Qualitative Findings

- The pandemic prompted IT firms to adapt their GHRP to include considerations for remote work, reflecting a significant shift in sustainability focus.
- Firms faced new challenges related to remote work sustainability but found innovative ways to address these issues.
- There is a growing recognition of the need for hybrid sustainability strategies that address both office and remote work environments.

Integration of Findings

The combination of quantitative and qualitative data provides a comprehensive understanding of how GHRP have evolved in the IT industry. The quantitative data reveal measurable improvements in GHRP adoption and their impacts on performance, engagement, and sustainability. The qualitative insights offer deeper context, highlighting strategic shifts and emerging challenges in the post-COVID environment. This integrated approach highlights the importance of adaptive and holistic GHRP strategies in the evolving IT industry landscape.

Results

Pre-COVID Findings

- **Adoption and Implementation:** GHRP were increasingly adopted, with practices such as green training programs and eco-friendly office initiatives showing significant benefits in employee satisfaction and operational efficiency.
- **Employee Engagement:** Companies with robust GHRP reported higher levels of employee engagement and reduced turnover rates.
- **Post-COVID Findings**
- **Increased Focus on Remote Work Sustainability:** There has been a significant shift towards integrating sustainability into remote working practices, including energy-efficient home office facilities and optimizing virtual meetings.
- **Enhanced GHRP Strategies:** IT firms developed more comprehensive sustainability strategies that incorporated both office-based and remote work practices. This included digital tools for reducing paper use and promoting virtual collaboration.
- **Challenges and Adaptations:** Companies faced challenges in maintaining sustainability standards remotely and had to adapt their GHRP to address increased home energy consumption and electronic waste.

Comparative Analysis

Pre-COVID GHRP were largely office-centric, focusing on resource efficiency within physical workplaces. The pandemic necessitated a broader approach, incorporating remote work considerations and digital sustainability.

Strategic Implications

- **Integrated Sustainability Models:** IT firms are moving towards integrated sustainability models that address both office and remote work environments.
- **Employee Training and Engagement:** Continuous training on sustainable practices is essential to maintain engagement and compliance in a hybrid work setting.
- **Policy Development:** Developing policies that encompass both remote and office-based work can help organizations achieve comprehensive sustainability goals.

Conclusion

The impact of GHRP on the IT industry has changed significantly in the pre- and post-COVID period. While pre-COVID practices focused on traditional office sustainability, the pandemic accelerated the need for comprehensive strategies that incorporate remote work considerations. The shift highlights the importance of adaptive and integrated GHRP to address new sustainability challenges.

The evolution of Green Human Resource Practices (GHRP) in the IT industry from pre- to post-COVID reflects a significant shift in how organizations approach sustainability. This transition emphasizes the importance of flexible and integrated techniques in addressing new issues in a quickly changing work environment.

Pre-COVID Green Human Resource Practices

Sustainability in conventional office environments was the main emphasis of GHRP in the IT sector prior to the COVID-19 pandemic. Important elements included:

Energy Efficiency in Office Spaces

- **Sustainable Infrastructure:** The goal was to increase office buildings' energy efficiency. This included using HVAC (heating, ventilation, and air conditioning) and lighting systems that utilize less energy.
- **Green Certifications:** To show their dedication to sustainability, many IT businesses sought green building certifications for their office buildings, such as LEED (Leadership in Energy and Environmental Design).

Resource Management:

- **Waste Reduction:** Techniques to reduce waste produced in the workplace, such as recycling initiatives and effective office supply usage.
- **Sustainable IT Equipment:** Prioritizes the purchase of energy-efficient IT hardware and the appropriate recycling or disposal of obsolete equipment.

Employee Engagement and Practices:

- **Eco-Friendly Policies:** Eco-friendly initiatives include paperless offices and fostering sustainable transportation options like carpooling or biking.
- **Green Training:** Educating staff members on sustainable environmental practices and promoting involvement in green projects.

Post-COVID Evolution in Green Human Resource Practices

The COVID-19 pandemic fundamentally altered work environments and practices, leading to a significant evolution in GHRP. Key changes include:

Adjusting to Hybrid and Remote Work

- **Infrastructure for Remote Work:** The trend toward remote work brought attention to the necessity of environmentally friendly home office arrangements. Businesses started offering resources to help employees lower their carbon footprint from home and assisting them in setting up energy-efficient home offices.
- **Hybrid Work Models:** As more businesses embrace hybrid work models, attention has been drawn to making sure that office and remote settings incorporate sustainable practices.

A Greater Emphasis on Digital Sustainability

- **Cloud Computing:** The growing dependence on digital tools and cloud-based services made it necessary to pay attention to data center sustainability. This includes initiatives to lower the carbon impact of digital operations and increase the energy efficiency of cloud infrastructure.
- Assessing and reducing the environmental effects of working remotely, such as the energy usage of home office equipment in comparison to conventional office facilities, is known as the **"Remote Work Carbon Footprint."**

Changing Employee Engagement and Well-Being

- **Mental Health and Support:** The pandemic has highlighted how critical it is to promote the mental health and wellness of employees. GHRP has grown to offer flexible work schedules, mental health assistance, and online wellness programs.
- **Ergonomic and Sustainable Home Office Setup:** Companies started promoting sustainable activities at home and providing assistance for ergonomic home office configurations.

Flexible and Integrated GHRP Strategies

- **Adaptability:** The pandemic forced a change to GHRP tactics that were more flexible in order to address evolving issues and shifting work contexts. As part of this, sustainability objectives and procedures were updated to accommodate remote and hybrid work.
- **Holistic Approach:** A more comprehensive strategy that combined the sustainability of traditional offices with factors related to remote work surfaced. In order to guarantee a uniform and thorough commitment to green activities, organizations began integrating sustainability principles throughout all work contexts.

Data-Driven Sustainability

- **Analytics and Reporting:** Companies are using data analytics more and more to monitor and report on sustainability parameters like carbon emissions and energy use. Continuous improvement in GHRP and better decision-making were made possible by this data-driven strategy.

Recommendations

The evolution of green HR practices in the IT industry from pre- to post-COVID reflects a broader shift toward integrating sustainability into all aspects of work. The pandemic has highlighted the importance of comprehensive measures that address both typical office sustainability and the distinct problems of remote and hybrid work contexts. By implementing adaptive and integrated GHRP policies, IT organisations may better handle evolving sustainability concerns and promote a more holistic approach to green practices. This progression not only enhances environmental preservation, but it also promotes employee well-being and operational effectiveness in a dynamic workplace.

- Implement hybrid sustainability techniques for office and remote work environments.
- Improve Employee Training: Provide continuing training sessions to keep employees involved and knowledgeable about sustainable practices.
- Continuously review and change GHRP initiatives to address emerging challenges and opportunities.

Future Research

Further research should look into industry-specific GHRP changes and their long-term effects on organizational performance and employee well-being. Furthermore, longitudinal studies could provide more information about the development of GHRP in the post-pandemic period. Exploring sector-specific GHRP adjustments and performing longitudinal research are crucial for understanding the changing nature of green practices in the post-pandemic period. Researchers can provide valuable insights into how different industries are adapting their GHRP approaches and assessing the long-term impact on organizational performance and employee well-being, allowing organizations to optimize their sustainability efforts and improve their overall effectiveness. This research will not only improve our understanding of GHRP, but will also help to design more resilient and sustainable business practices.

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