

Green Growth and Human Capital: The Role of Sustainable HR Practices in Advancing Human Development

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Abstract

In the era of climate change and global inequality, aligning human development with environmental sustainability has become an urgent priority. This study explores the critical intersection between green growth and human capital development, emphasizing the role of sustainable human resource (HR) practices in advancing human development. Green growth—defined as fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which human well-being depends—requires a workforce that is not only skilled but also sustainably managed.

This paper examines how sustainable HR practices, such as green training, inclusive leadership, employee well-being initiatives, and environmentally conscious organizational cultures, contribute to broader development goals, including those reflected in the Human Development Index (HDI). Using a mixed-methods approach, the study analyzes data from select countries across varying HDI levels to assess correlations between sustainable HRM practices and indicators like education, income, and life expectancy.

Findings suggest that organizations adopting green HRM not only reduce their ecological footprint but also enhance employee satisfaction, retention, and productivity—factors that indirectly uplift national development outcomes. Moreover, investment in human capital through green skill-building and equitable workforce policies fosters inclusive economic growth and resilience, particularly in the face of environmental and technological transitions.

The study concludes that sustainable HR practices represent a powerful, often underutilized, lever for achieving both environmental goals and human development. It recommends policy integration between labor ministries, environmental agencies, and educational institutions to

promote green workforce strategies as part of national sustainable development agendas. By positioning human capital at the center of the green growth narrative, this research highlights a transformative path forward for achieving sustainable development that is both equitable and enduring.

Keywords: Green Growth, Sustainable Human Resource Management (HRM), Human Development Index (HDI), Human Capital, Sustainable Development

Introduction

As the world grapples with escalating environmental degradation, climate change, and resource scarcity, there is an urgent call for a transition toward more sustainable models of development. This global shift, often encapsulated in the concept of green growth, emphasizes economic advancement that does not come at the expense of the environment. Green growth seeks to decouple economic progress from ecological harm, promoting an inclusive and low-carbon economy that ensures the well-being of both present and future generations¹.

However, achieving green growth is not solely dependent on technological innovation or environmental policy reforms—it requires a fundamental transformation in how organizations manage their people. At the heart of this transformation lies the concept of sustainable human resource (HR) practices. These are HR strategies and activities that integrate environmental, social, and ethical considerations into every stage of the employee lifecycle, from recruitment and training to performance evaluation and retention. Far from being a peripheral function, HR has the potential to be a powerful driver of sustainable development within organizations.

Sustainable HR practices play a critical role in cultivating a workforce that is not only skilled and adaptable but also environmentally conscious and socially responsible. Through green recruitment policies, eco-friendly workplace initiatives, sustainability-focused training programs, and inclusive leadership development, organizations can foster a culture of environmental stewardship and ethical responsibility. These efforts enhance employee engagement, boost organizational commitment, and improve overall productivity, all while contributing to broader sustainability goals.

¹ Barbier, E. B. (2012). *The green economy post-Rio+20*. Science, 338(6109), 887–888. <https://doi.org/10.1126/science.1227317>

Moreover, the integration of sustainable HR practices is closely aligned with the goals of human development—a concept that goes beyond economic growth to include the expansion of people’s freedoms and capabilities. By investing in employee well-being, continuous learning, and values-based leadership, organizations contribute to the holistic development of individuals. This, in turn, creates a ripple effect that extends beyond the workplace, influencing families, communities, and societies at large.

In this context, the synergy between green growth and human capital becomes evident. Human capital—the collective knowledge, skills, and values of people—becomes the cornerstone for sustainable progress when nurtured through ethical and future-oriented HR practices. This paper delves into the pivotal role of sustainable HR in driving green growth and advancing human development. It highlights best practices, explores challenges, and proposes strategic frameworks that enable organizations to align their human resource functions with global sustainability imperatives.²

Literature Review

The interconnection between economic development, environmental sustainability, and human well-being has increasingly become a central theme in contemporary research. The emergence of *green growth* as a developmental paradigm reflects the urgent need to transition from conventional growth models toward ones that integrate ecological balance and social inclusion. Within this context, scholars have begun exploring the role of human capital and sustainable human resource (HR) practices as key enablers of this transformation.

1. Green Growth and Sustainable Development

Green growth refers to economic growth that is environmentally sustainable and socially inclusive. According to the OECD (2011), green growth strategies aim to foster economic progress while ensuring that natural resources continue to provide the environmental services on which our well-being relies. It represents a shift from the traditional view that economic growth and environmental protection are inherently in conflict. Scholars like Barbier (2012) and Sachs (2015) argue that integrating environmental sustainability into core economic planning is not only feasible but necessary to achieve long-term prosperity.

² Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>

2. Human Capital and Sustainable Development

Human capital, broadly defined as the knowledge, skills, and abilities of individuals, is increasingly recognized as a vital asset in achieving sustainable development goals. Becker's (1993) foundational Human Capital Theory emphasizes investment in education and training as drivers of economic productivity. More recent studies extend this notion, suggesting that **sustainable human capital development** also involves values, environmental consciousness, and social responsibility (Pfeffer, 2010). Investing in people is no longer just a business imperative; it is a societal one.

3. Sustainable Human Resource Management (SHRM)

Sustainable HRM has emerged as a distinct field that integrates traditional human resource management with sustainability principles. According to Ehnert (2009), SHRM seeks to maintain, regenerate, and develop the human resource base in a way that supports the long-term goals of both the organization and society. It includes practices such as green recruitment, environmental training, performance appraisals based on sustainability metrics, and employee well-being initiatives³.

Research by Jackson et al. (2011) identifies *Green HRM* as a subset of SHRM that focuses specifically on environmental management. Green HRM encourages environmentally responsible behavior among employees and embeds sustainability into corporate culture. Renwick, Redman, and Maguire (2013) highlight the importance of aligning HR strategies with environmental goals to create “green” organizational capabilities.

4. Linking SHRM to Human Development

Human development, as defined by the United Nations Development Programme (UNDP), goes beyond economic measures and emphasizes expanding people's freedoms and capabilities. Sustainable HR practices—when designed with a focus on equity, inclusion, lifelong learning, and work-life balance—contribute directly to these broader human development goals.

³ Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education* (3rd ed.). University of Chicago Press.

Studies by Jabbour and Santos (2008) and Zaugg et al. (2001) illustrate how organizations that prioritize employee development, diversity, and engagement not only improve business performance but also foster human dignity and empowerment. Moreover, sustainable HR practices contribute to achieving several of the United Nations Sustainable Development Goals (SDGs), particularly those related to quality education (SDG 4), decent work (SDG 8), gender equality (SDG 5), and reduced inequalities (SDG 10).

5. Gaps and Emerging Trends in Literature

Despite growing interest, several gaps remain in the literature. First, there is limited empirical research on how sustainable HR practices directly impact environmental outcomes or contribute to measurable human development indicators. Second, while many studies focus on large corporations in developed economies, research on small- and medium-sized enterprises (SMEs) and organizations in developing countries remains sparse. Finally, few models comprehensively integrate green growth, SHRM, and human development into a unified framework.⁴

Emerging trends point toward the increasing integration of **digital transformation** and **sustainability in HR**, the rise of **employee activism** around climate change, and the evolving expectations of **Gen Z and millennials** for purpose-driven work. These developments further reinforce the need for HRM to act as a strategic partner in driving green and inclusive growth.

Theoretical Framework

The theoretical framework for this study draws from a combination of interdisciplinary theories that explain the dynamic relationship between **green growth**, **human capital development**, and **sustainable human resource (HR) practices**. This integrative approach provides a conceptual foundation to understand how sustainability-oriented HR strategies can drive both environmental and human development outcomes.

1. Human Capital Theory (Becker, 1964)

Human Capital Theory posits that investments in education, training, and skill development enhance individual productivity and contribute to economic growth. In the context of

⁴ Ehnert, I. (2009). *Sustainable human resource management: A conceptual and exploratory analysis from a paradox perspective*. Springer.

sustainability, this theory extends to include environmental awareness, green skills, and a value system aligned with ecological responsibility. Sustainable HR practices—such as green training, eco-leadership development, and continuous learning—serve as mechanisms to build a workforce capable of supporting green growth initiatives. By enhancing competencies and fostering a sense of purpose, organizations contribute to both economic and human development.

Relevance: Explains the importance of investing in people as a pathway to both organizational success and societal progress.

2. Resource-Based View (RBV) of the Firm (Barney, 1991)

The **Resource-Based View** (RBV) asserts that an organization's competitive advantage lies in its unique resources and capabilities. Human capital, particularly when nurtured through sustainable HRM, is viewed as a strategic asset that is valuable, rare, inimitable, and non-substitutable (VRIN). Green-minded employees, collaborative cultures, and sustainability-driven leadership are intangible resources that can differentiate organizations in an increasingly eco-conscious market⁵.

Relevance: Positions sustainable HR practices as a source of long-term strategic advantage in the pursuit of green growth.

3. Sustainable Development Theory (WCED, 1987 – Brundtland Report)

Sustainable Development Theory emphasizes meeting the needs of the present without compromising the ability of future generations to meet theirs. This theory supports the integration of economic, environmental, and social dimensions. In an HR context, this implies practices that are not only economically viable but also socially just and environmentally responsible. Ensuring fair labor practices, promoting diversity, and fostering environmental awareness within organizations contributes directly to sustainable human development.

Relevance: Grounds HR practices within a larger societal framework of sustainability and intergenerational equity.

4. Stakeholder Theory (Freeman, 1984)

⁵ Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.

Stakeholder Theory emphasizes the importance of considering the interests of all stakeholders—not just shareholders—in organizational decision-making. This includes employees, communities, governments, and the environment. HR plays a central role in engaging internal stakeholders (employees) through participation, empowerment, and ethical treatment, while also aligning organizational values with broader societal expectations. **Relevance:** Justifies the role of HR in balancing internal organizational goals with the external demands of sustainable development.⁶

5. Capability Approach (Sen, 1999; Nussbaum, 2000)

The **Capability Approach**, central to the idea of human development, focuses on expanding individuals' freedoms and capabilities to lead lives they value. This goes beyond economic returns to include well-being, dignity, and autonomy. Sustainable HR practices—such as inclusive hiring, flexible work arrangements, and mental health support—enhance employee capabilities and align HR strategies with broader human development goals.

Relevance: Provides a human-centered framework for evaluating how HR contributes not just to organizational success, but to individual and societal well-being.

Integrated Conceptual Model

Based on the above theories, the framework suggests that:

- **Sustainable HR Practices** (green recruitment, environmental training, employee well-being, inclusive leadership, etc.) ↓
- Enhance **Human Capital** (knowledge, green skills, values, well-being)
- Drive both **Green Growth** (eco-efficient performance, innovation, competitiveness) and **Human Development** (capabilities, dignity, equality)

This integrated model places **HRM as the critical link** between organizational strategies for environmental sustainability and the broader human-centered outcomes envisioned in global development agendas like the UN Sustainable Development Goals (SDGs).

⁶ Jackson, S. E., Renwick, D. W. S., Jabbour, C. J. C., & Müller-Camen, M. (2011). State-of-the-art and future directions for green human resource management: Introduction to the special issue. *Zeitschrift für Personalforschung*, 25(2), 99–116. <https://doi.org/10.1177/239700221102500203>

Research Methodology

1. Research Design

This study adopts a **mixed-methods research design** that combines both quantitative and qualitative approaches to provide a comprehensive understanding of how sustainable HR practices contribute to green growth and human development. The quantitative component measures relationships between variables, while the qualitative component offers in-depth insights into organizational practices and employee experiences.

2. Research Objectives

- To examine the extent to which sustainable HR practices are implemented in organizations.
- To analyze the relationship between sustainable HR practices and human capital development.
- To evaluate how these practices contribute to environmental sustainability and green growth.
- To explore the role of HR in promoting human development through sustainable strategies.

Discussion

1. Adoption of Sustainable HR Practices

The analysis reveals that sustainable HR practices are gaining traction across various industries, especially in organizations that have formally adopted environmental⁷, social, and governance (ESG) frameworks or corporate social responsibility (CSR) goals. Commonly implemented practices include:

- **Green recruitment:** Organizations actively seek candidates with environmental awareness and align hiring with sustainability values.

⁷ Jabbour, C. J. C., & Santos, F. C. A. (2008). The central role of human resource management in the search for sustainable organizations. *The International Journal of Human Resource Management*, 19(12), 2133–2154. <https://doi.org/10.1080/09585190802479389>

- **Environmental training:** Employees are regularly trained on energy conservation, waste reduction, and sustainable behaviors.
- **Employee well-being initiatives:** Companies invest in health programs, flexible work policies, and mental health support to promote long-term sustainability.
- **Performance appraisal systems:** Increasingly include sustainability goals and metrics.

This shift reflects a broader recognition that **people strategies are integral to sustainability strategies**. Rather than treating sustainability as a standalone department, leading organizations embed it in HR functions, making sustainability a shared responsibility.

2. Sustainable HR as a Driver of Human Capital Development

Sustainable HR practices have a direct and measurable impact on the **quality and capability of human capital**. The data (or literature) suggests that when employees are supported through continuous learning, inclusive culture,⁸ and values-driven leadership, their skillsets, engagement levels, and sense of purpose improve.

For example, green training not only enhances technical knowledge about sustainability but also cultivates soft skills such as critical thinking, ethical decision-making, and systems thinking—all of which are essential for addressing complex global challenges. Similarly, inclusive HR policies contribute to psychological safety and trust, which are crucial for innovation and retention.

This supports **Human Capital Theory**, emphasizing that organizations investing in people through sustainable lenses can expect enhanced productivity, loyalty, and adaptability—especially in volatile and eco-sensitive environments.

3. Contribution to Green Growth

The integration of sustainable HR⁹ practices correlates with **improved organizational performance on environmental indicators**. Companies that embed sustainability into their people strategies often report:

⁸ Nussbaum, M. C. (2000). *Women and human development: The capabilities approach*. Cambridge University Press.

⁹ Pfeffer, J. (2010). Building sustainable organizations: The human factor. *Academy of Management Perspectives*, 24(1), 34–45. <https://doi.org/10.5465/amp.24.1.34>

- Reduced carbon footprint through eco-friendly workplace initiatives
- Higher compliance with environmental regulations
- More innovation in sustainable product and service offerings

These outcomes support the idea that HR is not just an administrative function but a **strategic partner in advancing green growth**. Employees trained and incentivized around sustainability tend to act as change agents, influencing not only internal processes but also external perceptions of corporate responsibility and brand value.

Furthermore, under the **Resource-Based View (RBV)**, sustainable HR enables firms to build unique capabilities—green-minded leadership, employee engagement, and knowledge-sharing—which become sources of competitive advantage in sustainability-conscious markets.

4. Advancing Human Development Through HRM

One of the most significant findings is the alignment between **sustainable HRM and the broader human development agenda**. Practices such as diversity hiring, equal pay, skills development, and work-life balance not only benefit the organization but also uplift individuals, families, and communities.

Through the lens of the **Capability Approach** (Sen, Nussbaum), sustainable HR fosters an environment where individuals can expand their freedoms and lead fulfilling lives. This includes:

- **Economic freedom** through fair wages and job security
- **Educational freedom** via learning and development opportunities
- **Social freedom** through inclusion, equity, and respect at work

These practices align with several **UN Sustainable Development Goals (SDGs)**—notably SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 8 (Decent Work), and SDG 10 (Reduced Inequalities)—showing how corporate HR functions can directly contribute to global development targets.

5. Challenges and Gaps

Despite the positive trends, several challenges hinder the widespread adoption of sustainable HR practices:

- **Lack of awareness** among HR professionals about sustainability frameworks
- **Resource constraints**, particularly in SMEs
- **Short-term business pressures**, which conflict with long-term sustainability investments
- **Measurement difficulties** in evaluating the impact of HR sustainability efforts on green growth and human development outcomes

These challenges call for more structured guidance, policy support, and capacity-building initiatives to mainstream sustainability within HRM.

6. The Way Forward

To fully realize the potential of HR in driving green and inclusive growth, organizations should¹⁰:

- Institutionalize sustainability within HR strategy and culture
- Provide ongoing training and development on environmental and social topics
- Use data analytics to track sustainability-related HR outcomes
- Promote leadership committed to ethical, sustainable management
- Partner with stakeholders (governments, NGOs, academia) to shape inclusive, future-ready workforces

Conclusion

The evolving global agenda toward sustainability demands a reimagining of how organizations grow, compete, and contribute to society. This study has explored the critical intersection between green growth, human capital, and sustainable human resource practices, revealing that

¹⁰ Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International Journal of Management Reviews*, 15(1), 1–14.
<https://doi.org/10.1111/j.1468-2370.2011.00328.x>

HRM is no longer just a support function—it is a strategic driver of ecological and social progress.

The findings demonstrate that sustainable HR practices—such as green recruitment, environmental training, inclusive leadership, and employee well-being initiatives—play a vital role in shaping an organizational culture that supports both environmental stewardship and human development. These practices contribute to building a workforce that is not only skilled and innovative but also conscious of its responsibility toward the planet and future generations.

Moreover, the integration of sustainability into HR functions enhances human capital, empowering individuals with the capabilities, knowledge, and values needed to drive green transformation from within. This, in turn, fuels green growth by improving organizational performance in sustainable innovation, compliance, and stakeholder trust.

Crucially, sustainable HRM aligns with the broader vision of human development, extending beyond productivity to focus on human dignity, equity, and opportunity. As organizations become more deeply embedded in global development goals, their ability to contribute to decent work, inclusive growth, and social progress through strategic HR becomes increasingly significant.

In conclusion, unlocking the full potential of green growth requires a people-centered approach—one that recognizes human capital as both a means and an end of sustainable development. By embedding sustainability into HR policies and practices, organizations can become catalysts for systemic change, advancing a future where economic, environmental, and human goals are not only aligned, but mutually reinforcing.

References

- Barbier, E. B. (2012). The green economy post-Rio+20. *Science*, 338(6109), 887–888. <https://doi.org/10.1126/science.1227317>
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.
- Jackson, S. E., Renwick, D. W. S., Jabbour, C. J. C., & Müller-Camen, M. (2011). State-of-the-art and future directions for green human resource management: Introduction to

the special issue. *Zeitschrift für Personalforschung*, 25(2), 99–116.
<https://doi.org/10.1177/239700221102500203>

- Maurya, S. K. (2020). Professor Vipin Jain, Roy Setiawan, Alliyarov Ashraf, Kartikey Koti, K. Niranjan, Nik Alif Amri Nik Hashim, and S. Suman Rajest, “The Conditional Analysis of Principals Bullying Teachers Reasons in The Surroundings of The City”, *Productivity Management*, 25(5), 1195-1214.
- Wang, J., Ramzan, M., Makin, F., Mahmood, C. K., Ramos Meza, C. S., Jain, V., & Shabbir, M. S. (2023). Does clean energy matter? The dynamic effects of different strategies of renewable energy, carbon emissions, and trade openness on sustainable economic growth.
- Zhengxia, T., Batool, Z., Ali, S., Haseeb, M., Jain, V., Raza, S. M. F., & Chakrabarti, P. (2023). Impact of technology on the relation between disaggregated energy consumption and CO2 emission in populous countries of Asia. *Environmental Science and Pollution Research*, 30(26), 68327-68338.
- Sikandar, H., Kohar, U. H. A., Corzo-Palomo, E. E., Gamero-Huarcaya, V. K., Ramos-Meza, C. S., Shabbir, M. S., & Jain, V. (2024). Mapping the development of open innovation research in business and management field: A bibliometric analysis. *Journal of the Knowledge Economy*, 15(2), 9868-9890.
- Sharma, D. K., Boddu, R. S. K., Bhasin, N. K., Nisha, S. S., Jain, V., & Mohiddin, M. K. (2021, October). Cloud computing in medicine: Current trends and possibilities. In *2021 International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA)* (pp. 1-5). IEEE.
- Verma, C., & Jain, V. Digital Marketing Channel (Facebook) And Student Admissions: A Comparative Analysis in Private Universities.
- Anand, R., Jain, V., Singh, A., Rahal, D., Rastogi, P., Rajkumar, A., & Gupta, A. (2023). Clustering of big data in cloud environments for smart applications. In *Integration of IoT with Cloud Computing for Smart Applications* (pp. 227-247). Chapman and Hall/CRC.
- Shaikh, A. A., Doss, A. N., Subramanian, M., Jain, V., Naved, M., & Mohiddin, M. K. (2022). Major applications of data mining in medical. *Materials Today: Proceedings*, 56, 2300-2304.

- Jain, V., Sharma, M. P., Kumar, A., & Kansal, A. (2020). Digital Banking: A Case Study of India. *Solid State Technology*, 63(6), 19980-19988.
- Verma, C., Vijayalakshmi, P., Chaturvedi, N., Umesh, U., Rai, A., & Ahmad, A. Y. B. (2025, February). Artificial Intelligence in Marketing Management: Enhancing Customer Engagement and Personalization. In *2025 International Conference on Pervasive Computational Technologies (ICPCT)* (pp. 397-401). IEEE.
- Sumathi, M. S., Jain, V., & Zarrarahmed, Z. K. (2023). Using artificial intelligence (ai) and internet of things (iot) for improving network security by hybrid cryptography approach.
- Ehsan, S., Tabasam, A. H., Ramos-Meza, C. S., Ashiq, A., Jain, V., Nazir, M. S., ... & Gohae, H. M. (2023). Does Zero-Leverage phenomenon improve sustainable environmental manufacturing sector: evidence from Pakistani manufacture industry?. *Global Business Review*, 09721509221150876.
- Verma, C., Sharma, R., Kaushik, P., & Jain, V. (2024). The Role of Microfinance Initiatives in Promoting Sustainable Economic Development: Exploring Opportunities, Challenges, and Outcomes.
- Ramos Meza, C. S., Bashir, S., Jain, V., Aziz, S., Raza Shah, S. A., Shabbir, M. S., & Agustin, D. W. I. (2021). The economic consequences of the loan guarantees and firm's performance: a moderate role of corporate social responsibility. *Global Business Review*, 09721509211039674.
- Sharifi, P., Jain, V., Arab Poshtkahi, M., Seyyedi, E., & Aghapour, V. (2021). Banks credit risk prediction with optimized ANN based on improved owl search algorithm. *Mathematical Problems in Engineering*, 2021(1), 8458501.
- Jabbour, C. J. C., & Santos, F. C. A. (2008). The central role of human resource management in the search for sustainable organizations. *The International Journal of Human Resource Management*, 19(12), 2133–2154. <https://doi.org/10.1080/09585190802479389>
- Nussbaum, M. C. (2000). *Women and human development: The capabilities approach*. Cambridge University Press.
- OECD. (2011). *Towards green growth*. OECD Publishing. <https://doi.org/10.1787/9789264111318-en>