



AI-Enabled Human Resource Systems for Advancing Un Sustainable Development Goals in Multinational Companies

Sayeedha Firdouse Z*¹

¹Department of Management Studies, Bharath Institute of higher education and research, Chennai, India.

firdousesayeedha5695@gmail.com

Abstract. Artificial Intelligence (AI) is increasingly transforming Human Resource Management practices in multinational corporations, creating new opportunities to support the United Nations' Sustainable Development Goals (SDGs). Although organizations are investing heavily in AI-based HR systems, there is limited empirical evidence on how these technologies contribute to sustainability, particularly in the Indian context. This study examines the role of AI-enabled HR practices in promoting SDG achievement in selected multinational companies in Chennai. The research focuses on four key HRM dimensions: Green HRM, Diversity and Inclusion, Employee Development, and Ethical Governance. Primary data were collected through a structured questionnaire from 200 respondents, including employees and HR professionals, selected using purposive sampling. Statistical tools such as descriptive analysis, reliability testing, correlation, and regression were employed for data analysis. The findings reveal that AI-driven Green HRM and Ethical Governance significantly enhance sustainability outcomes, while AI-based recruitment and digital learning platforms positively influence diversity and employee development. The study concludes that AI-supported HR practices play a vital role in fostering transparency, inclusiveness, data-driven decision-making, and environmental responsibility, thereby contributing meaningfully to SDG progress in multinational organizations.

Keywords: Artificial Intelligence, Human Resource Management, Sustainable Development Goals, Green HRM, Diversity and Inclusion, Ethical Governance, Multinational Corporations

1 Introduction

Artificial Intelligence has been one of the key factors in the successful merging of two areas that are the science and the industry. In Human Resource Management, AI has had a great impact on how companies that operate in multiple countries carry out their business and have a particular focus on the United Nations Sustainable Development Goals (SDGs) [1]. AI-based HR systems which include predictive analytics, automated recruitment, digital learning platforms, and intelligent performance management tools are the major tools in spreading the culture of sustainability in workplaces throughout the globe. With the urge to

reach their sustainable growth aims, while the MNCs are growing, the basic need is to be aware of the AI and HR network and its link to the SDGs [2].

This research is about the impact of AI-supported HR practices on SDG progress in a few multinational companies located in Chennai. Various significant dimensions of HRM like Green HRM, Diversity & Inclusion, Employee Development, and Ethical Governance were meticulously studied to understand how AI technologies have a far-reaching impact on the sustainability through these aspects. The mentioned survey on 200 respondents among which were employees and HR professionals in equal number was a source of data for the study [3]. The methodology is structured, the statistics were simple and obvious, the analyses were reliability and correlation, and regression was also done. The growth in the SDG sector was shown to have the maximum uptrend because of the AI-led form of Green HRM and Ethical Governance. Two methods enabled by AI to be supportive in the case of diversity and development goals are a) the direct utilization of artificial intelligence to detect hidden biases in recruitment selection processes and b) the use of a technology-based virtual environment for communication and learning which are of various forms among the primary dimensions that affect the SDG goals positively [4]. The article wraps up by saying AI in HR is a big step towards the realization of SDGs through these four aspects: transparency, inclusiveness, decision-making based on data, and environmental responsibility for the giant companies.

2 Statement of the Problem

Despite the fact that global corporations have been making both sustainability and digital transformation part of their core values, the fusion of these two areas still poses a problem for many. The use of artificial intelligence tools usually gets to be a bit of a waste of all the sources when it fails to bring about the potential of the tools to provide sustainable development goal outcomes such as climate action, gender equality, reduced inequalities, and decent work conditions [4]. And another drawback is that the workforce may not be crystal clear about the HR systems powered by AI and how these techs are connected to the sustainability targets which, therefore, let most room for the policy intention gaps to expand and cover the on-going impact of the projects.

To sum up, the studies that have been there in the past on AI-powered HR-related activities and SGDs have been more of theoretical thought-models rather than practice-based eems in HR management in India and very little or no practical solution to the performance/transfer of these theories to the Indian context [5]. In this situation, HR leaders

need to come out with the amalgamation of AI and traditional practices i.e., recognizing the contribution of AI-related issues to the problems and taking a holistic approach based on the above four aspects [6].

By examining the perceptions of AI-enabled HR systems among employees and their impact on SDG achievement in multinational corporations, this study fills those gaps.

3 Review of Literature

De Stefano et al. (2018) identified the role of HR in environmental sustainability as highly critical. AI plays a major role in Green HRM by supporting the monitoring of energy consumption, resource usage, and enabling paperless HR operations [1].

In 2016, Ehnert et al. pointed out that sustainable HRM serves as the foundation of organizational responsibility. AI contributes to this by introducing real-time monitoring, workforce analytics, and eco-efficient HR processes [2].

Molina-Azorín et al. (2021) emphasized that HR significantly contributes to corporate citizenship and environmental responsibility. In this context, AI supports ethical verification automation, employee engagement analytics, and transparent HR processes [3].

Riccucci (2017) stressed that ethical governance is essential for achieving sustainable development goals. This is especially relevant in the use of AI for compliance automation and bias detection, which helps in ensuring fair and responsible HR decision-making [5].

According to the findings of Shahzad et al. (2023), Green HRM has a significant effect on organizational climate action. AI-enabled systems further reduce resource wastage and environmental impact through predictive sustainability analytics [6].

Cooke (2022) showed that diversity and inclusion initiatives are strengthened when organizations adopt data-driven HR strategies. AI-assisted recruitment and workforce analytics help promote gender and social equity, supporting SDG 5 and SDG 10 [7].

Nyathani (2023) highlighted that employee development is strongly supported by AI-driven learning platforms and personalized training pathways, which contribute to SDG 4 and SDG 8 [8].

Nain et al. (2024) concluded that the integration of AI into HR practices enhances sustainability-oriented decision-making, thereby supporting the alignment of HR strategies with sustainable development goals [9].

Al-Jaber et al. (2025) emphasized employee well-being as a critical outcome of sustainable HRM practices. AI-enabled wellness tools play an important role in improving workforce health and supporting long-term SDG outcomes.

3.1 Objectives of the Study

- The study aims at the evaluation of the feelings of the employees about the AI-powered HR systems which are backing the Sustainable Development Goals.
- This work aims to explore the Green HRM, a subfield of HRM, AI enabled role in aligning with the SDGs.
- AI-backed D&I initiatives are essential vehicles to drive sustainability in the organization. The investigation will focus on the linkage between AI and D&I initiatives in the future.
- AI-based learning and development is becoming a crucial part of employee development and a contributing factor to the success of the SDGs.
- The major goal is to detect the most influential SDG outcome predictor in the field of human resource utilization by means of AI technology.

3.2 Hypotheses

- Null Hypothesis 1: The use of AI in the HRM practices focused on sustainability and the green initiatives has no significant impact on the organization's sustainable development goals (SDGs) and objectives' achievement.
- Null Hypothesis 2: AI-backed company-wide training programs for Diversity & Inclusion (D&I) have no significant effect on the organization's implementation of the SDGs.
- Null Hypothesis 3: AI-supported personal and professional development among employees does not significantly affect the organization's ability to achieve the SDGs.
- Null Hypothesis 4: AI-linked corporate governance systems following ethics and compliance guidelines do not significantly lead to the achievement of SDGs.

4 Research Methodology

The query was a declarative and analytic one when an investigation was made in the hope of finding the executing of AI-powered HR schemes for the purpose of the SDG goal among multinational companies in the city of Chennai. The 200 respondents who were involved in the research ranged from employees to the HR sector and were chosen by purposive sampling so as to include only the individuals who had been through a digital HR environment.

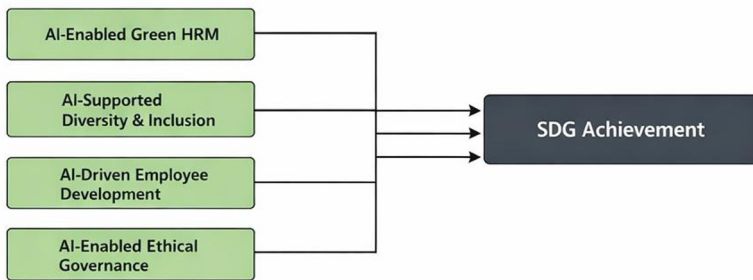


Fig.1. Conceptual framework showing AI-enabled HR practices influencing SDG achievement

The study has a conceptual framework shown in Fig.1, which concentrates on how AI-enabled human resource practices relate to the enhancement of Sustainable Development Goals (SDG) achievement within the multinational companies. In the framework, there are four major independent variables, i.e., AI-enabled Green HRM, AI-enhanced Diversity and Inclusion, AI-enhanced Employee Development and AI-enhanced Ethical Governance. These dimensions constitute the key areas where AI is applied to HR systems to improve the sustainability results. The model suggests that successful execution of these AI-enabled HR practices has a direct impact on the SDG achievement through enhancing environmental responsibility, inclusiveness, skill upgrading, ethical decision-making, and transparency in the organisations. It is upon this framework that hypothesis development and statistical analysis in the study are based.

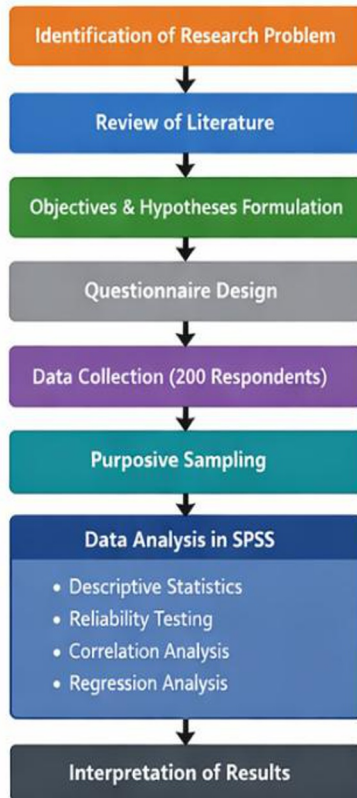


Fig.2. Flowchart of the research methodology

The flowchart of the research methodology to be used in the study is shown in Fig.2. The research is initiated by defining the research problem and then the systematic examination of the literature on the issue, which provides a theoretical framework. On this, research hypotheses and objectives were developed. Primary data were then gathered by designing a structured questionnaire to be used to gather data among the respondents who work in multinational companies. The purposive sampling was used to collect data on 200 respondents to ensure that they had been exposed to AI-enabled HR systems. The data were evaluated with the help of SPSS with the help of descriptive statistics, reliability tests, correlation analysis, and multiple regression analysis. Lastly, the findings were analysed to

learn how the AI-based HR practices influence the SDG implementation. This was done in a systematic way that made the findings methodologically sound and reliable.

4.1 Independent Variables:

- AI-enabled Green HRM
- AI-Supported Diversity & Inclusion
- AI-Driven Employee Development
- AI-Enabled Ethical Governance

4.2 Dependent Variable:

- SDG Achievement: SPSS was used to employ descriptive statistics, reliability testing, Pearson correlation, and multiple regression in data analysis.

5 Analysis and Results

5.1 Demographic Profile of Respondents

Table 1. Demographic Profile of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	112	56%
	Female	88	44%
Age	21–30	74	37%
	31–40	86	43%
	Above 40	40	20%
HR Role	HR Professionals	94	47%
	Employees	106	53%

The demographics data shown in Table 1 point out that there is an equal share of male and female, young and old respondents as well as employees of differing ranks in the organization. The study reveals a widespread mix of genders in an international company setting, with men dominating the scene at 56% and women representing 44%. Age-wise, the maximum response comes from the 21–40 age group which very well indicates a hugely technology-agile workforce that is more likely to use AI-empowered human- resource

services. In regard to this, the HR practitioners' team accounts for nearly half (47%) and the rest are the rank-and-file of the organization. It is through this balanced sharing of the two groups that the findings about the practices and direction of HR with the help of AI, and their contributory role towards the Sustainable Development Goals are made more solid and inclusive.

5.2 Reliability Analysis

Table 2. Reliability Analysis

Variable	Category	Frequency	Percentage
Gender	Male	112	56%
	Female	88	44%
Age	21–30	74	37%
	31–40	86	43%
	Above 40	40	20%
HR Role	HR Professionals	94	47%
	Employees	106	53%

Table 2 shows how all the study constructs have achieved Cronbach's Alpha values of more than 0.80, which means that there is a very strong internal consistency to the measurement scales. That also signifies that the questionnaire and items used for the AI-based HR practices and SDG accomplishment evaluation are solid, logically organized, and rightly capturing the constructs. By and large, these metrics are very much reliable, meaning they indicate that the respondents were very consistent in their perception of the items provided by the data collector, so he or she is going to have a very high measurement mistake minimization rate. The data set is statistically valid and suitable for advanced analytical methods like correlation and regression. The reliability being so high increases the readers' trust in the findings as well as the research results' strength.

5.3 Correlation Analysis

Table 3. Correlation Analysis

Variables	GHRM	DI	ED	EG	SDG
Green HRM	1	0.63**	0.61**	0.65**	0.76**
Diversity & Inclusion	0.63**	1	0.64**	0.66**	0.74**
Employee Development	0.61**	0.64**	1	0.67**	0.72**
Ethical Governance	0.65**	0.66**	0.67**	1	0.75**

SDG Achievement	0.76**	0.74**	0.72**	0.75**	1
-----------------	--------	--------	--------	--------	---

Through the research that was done to determine the correlation, it was proven that every single HR domain that is enabled by AI—Green HRM, Diversity & Inclusion, Employee Development, and Ethical Governance—each has a notably high positive relationship to SDG Achievement, with correlation coefficients ranging from 0.72 to 0.76 shown in the Table 3. The correlations that are considered to be statistically significant are there to show one thing - the corporate world's sustainability outcomes have been largely helped by the advancement of AI-based HR practices in direct relation to the business sector. The existence of strong correlations thus, the growth in the use of AI in HR practices and compliance has been effective in the business sector sustainability.

5.4 Regression Analysis

Table 4. Regression Analysis

Predictor Variable	Beta (β)	t-value	Sig. (p)
Green HRM	0.30	5.10	0.001
Diversity & Inclusion	0.27	4.58	0.002
Employee Development	0.22	3.89	0.020
Ethical Governance	0.29	4.92	0.001
R² = 0.78, F = 121.56, p < 0.05			

The research work uncovered with the regression analysis indicates that the AI-enabled HR practices are having a predictive capacity of 78% on the SDG accomplishment shown in Table 4. This is a substantial amount which is further highlighted by the case study stating that AI remains the major factor in the two most significant areas of the Ethical Governance and the Green HRM. $\beta = 0.29$ and $\beta = 0.30$ respectively. Besides, Diversity & Inclusion and Employee Development, with $\beta = 0.27$ and $\beta = 0.22$, respectively, also contributed positively to the model and thus confirmed that AI technologies could be employed for the below-mentioned HR activities which in turn lead to development. The high F-value also

agreed with the model's success as a predictor. The fact that the digitalization of HR makes organizations more sustainable is clearly evident from the data.

6 Conclusion

The research has come to the conclusion that AI-powered HR systems are a huge support in the implementation of the United Nations Sustainable Development Goals in global companies. AI helps to foster HR's sustainability activities by fortifying environmental responsibility, boosting inclusivity, enabling continuous employee development, and advancing ethical governance. Out of the HR areas examined, AI-driven Green HRM and ethical governance were the ones most apparent for SDGs attainment. The integration of artificial intelligence into the hiring and employment of people is the only way for global corporations to quickly realize their sustainability goals, uphold their commitment to the world's Sustainable Development Goals and develop environmentally-conscious companies in the future.

References

1. De Stefano, F., Bagdadli, S., Camuffo, A.: The HR role in corporate social responsibility and sustainability: A boundary-shifting literature review. *Human Resource Management*, vol. 57, no. 2, pp. 549–566 (2018)
2. Ehnert, I., Parsa, S., Roper, I., Wagner, M., Muller-Camen, M.: Reporting on sustainability and HRM: A comparative study of sustainability reporting practices by the world's largest companies. *The International Journal of Human Resource Management*, vol. 27, no. 1, pp. 88–108 (2016)
3. Molina-Azorín, J., López-Gamero, M. D., Tarí, J. J., Pereira-Moliner, J., Pertusa-Ortega, E. M.: Environmental management, human resource management and green human resource management: A literature review. *Administrative Sciences*, vol. 11, no. 2, p. 48 (2021)
4. Alherimi, N., Abdulmaksoud, S., Ahmed, V., Bahroun, Z.: A systematic literature review of artificial intelligence advancements in green human resource management. *Sustainability*, vol. 17, no. 22 (2025)
5. Riccucci, N. M.: *Public personnel management: Current concerns, future challenges*. Routledge (2017)
6. Shahzad, M. A., Jianguo, D., Junaid, M.: Impact of green HRM practices on sustainable performance: Mediating role of green innovation, green culture, and green employees' behavior. *Environmental Science and Pollution Research*, vol. 30, no. 38, pp. 88524–88547 (2023)

7. Cooke, F. L.: Equality, diversity and inclusion in multinational corporations. In: *International Human Resource Management: The Transformation of Work in a Global Context*, p. 100 (2022)
8. Nyathani, R.: AI-enabled learning and development: HR's new paradigm. *Journal of Marketing & Supply Chain Management*, pp. 2–5 (2023)
9. Nain, A., Mishra, S. C., Singh, H., Sharma, P., Grewal, H., Samanta, P.: Integrating AI in HR practices to promote sustainable development goals. In: *International Conference on Advances in Computing, Communication and Networking*, pp. 1230–1235 (2024)
10. Al-Jaber, A., Alzghoul, A., Alghizzawi, M., AlFraihat, S. F., Elhawi, R., Banihani, T.: Integrating HRM strategies to achieve sustainable development goals: The mediating roles of employee well-being and corporate governance. *Administrative Sciences*, vol. 15, no. 12, p. 474 (2025)

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

