Journal of Animal Environment

(E-ISSN 2717-1396, ISSN 2717-1388)

Beyond Automation: Responsible Artificial Intelligence, Human–AI Collaboration, and Sustainable Human Resource Management

G. Bharathi Raja[1*], Dr. A. Shameem[2]

[1]Research Scholar, AMET Business School, AMET University, Chennai, India
Email: bharathirajaag@gmail.com
ORCID: https://orcid.org/0009-0004-9519-828X
[2]Professor, AMET Business School, AMET University, Chennai, India
Email: drshameem@ametuiv.ac.in
ORCID: https://orcid.org/0000-0002-2869-2702
***Corresponding Author:** G. Bharathi Raja, Research Scholar, AMET Business School, AMET University, Chennai, India
Email: bharathirajaag@gmail.com

ABSTRACT

The adoption of artificial intelligence (AI) techniques in human resource management (HRM) is bringing about great change in technology, organizational decision-making, and human capital development. Although AI-based systems provide many ways to improve workforce planning, talent acquisition, training, assessment of performance, and engagement of personnel, their organizational significance goes beyond the efficiency of technology and automation. To successfully employ AI in business activities, it is necessary to study the adaptability of employees, human-AI cooperation, algorithmic accountability, readiness in institutions, and responsible management.

This theoretical article suggests a comprehensive framework which explains how AI-based capabilities in HR contribute to sustainable HR performance by means of the relevant organizational and behavioural mechanisms. Based on the Resource-Based View, Sociotechnical Systems Theory, and Organizational Support Theory, the framework reveals AI-based capabilities in HR and readiness to employ AI in the organization as preconditions; human-AI cooperation and adaptability of employees as mediators; and responsible governance as the contextual moderator. Sustainable HR effectiveness is conceived as a multidimensional outcome that consists of workforce productivity, employee well-being, equitable employment practices, organisational resilience, and long-term human capital development. The paper puts forward research propositions pertaining to direct, indirect, and conditional relationships among these constructs.

The key contribution of the paper consists of shifting the focus from the role of AI deployment to the organizational conditions under which technological capabilities can yield responsible and sustainable HR outcomes. The introduced framework lays a groundwork for future empirical research and gives managers recommendations for companies that aim to balance algorithmic intelligence with human judgment, employee development, and ethical accountability.

Keywords: Artificial Intelligence, Strategic Human Resource Management, Human–AI Collaboration and Sustainable HR Effectiveness

1-.Introduction

The impact of artificial intelligence on organisations in their processes of recruiting, developing, assessing, and retaining human resources is growing continuously. The cutting-edge technologies in machine learning, natural language processing, predictive analytics, or generative AI have broadened the scope for intelligent decision-making assistance in organisational environment. Hence, HRM shifts from a mainly administrative and process-based function to more analytical, flexible, and strategically integrated organisational competence. The relevance of this shift lies not only in the replacement of monotonous administrative tasks. AI enables HR specialists to identify new skills' requirements, predict changes in human resources, tailor development programmes for employees, and improve decision-making processes at all organisational levels. Nevertheless, technological complexity alone cannot ensure better organisational results.

***Corresponding Author:**
Received: 25th May, 2026; Revised: 6th July, 2026; Accepted: 28th July, 2026; Available Online: 29th August, 2026
(DOI): 10.70102/AEJ.2026.18.8s.24

The growing application of algorithm-based systems in decision-making related to employment presents serious hurdles for businesses. Issues like algorithmic bias, information privacy, employee monitoring and oversight, transparency, and accountability highlight the issues of a proper division of authority over decision-making between human managers and intelligent systems. These issues are particularly important since HR decision-making affects job opportunities, career advancement, fair treatment in the workplace, and well-being of employees. Traditional HR technology approaches have often focused on process efficiency, information management, and operational improvement. These points still hold value. However, they do not fully explain the existing conditions necessary for effective implementation of the AI. Modern organisations must define the possible areas of AI use and find the right approaches to establishing the cooperation between employees and managers and intelligent systems without infringing upon the rights of the humans or the responsibilities of the institutions.

This paper, therefore, presents a human-centred view of HRM in relation to AI. The argument is made that the value created through the use of AI lies in the interplay of the technological capabilities, level of readiness of an organisation, nature of cooperation between staff and management, and responsible governance. The basic assumption is that in order to generate sustainable value, AI does not simply automate human resources processes, but also enhances human potential through efficient organisational form of operation. The paper presents a conceptual framework that links AI-enabled human resources capabilities with sustainable human resources effectiveness through human–AI collaboration. Additionally, the preparedness of an organisation for adoption of the new technology is analysed as a precondition for its successful introduction, while responsible governance of AI is identified as a potential mediator of these relations between AI-enabled human resources capabilities and their effectiveness.

Theoretical Foundations

Resource-Based View

The Resource-Based View interprets competitive advantage in terms of unique and valuable resources that can be appropriately used by organisations (Barney, 1991). In the context of AI-enabled HRM, technological infrastructure and analytic capabilities may serve as valuable organisational resources. Nevertheless, their effectiveness depends on the ability of organisations to combine these resources with the employees' skills, managerial decisions, and organisational knowledge. Hence, it can be said that AI-enabled HR capabilities are regarded as possible valuable strategic resources which may or may not lead to the sustainable competitive edge.

Sociotechnical Systems Theory

Socio-technical Systems Theory is based on the idea of the interaction between technology and the organisation of work processes. Its relevance for AI-enabled HRM stems from the belief that intelligent systems change both operational processes and the roles of employees. Even though technologically advanced organisations may possess complex AI infrastructure, this will not provide successful outcomes, unless employees are ready to interact with this technology and demonstrate the right skills. Therefore, human-AI collaboration is defined in terms of the integration of human and technological capabilities in the context of work processes within the organisation.

Organisational Support Theory

According to the Organisational Support Theory, employees come to form attitudes about the degree to which their organisations appreciate their contributions and show concern for their welfare (Eisenberger et al., 1986). In workplaces enhanced through AI, employee reactions to the introduction of technology can vary depending on whether such technological changes are perceived as beneficial or harmful. Organisational practices that focus on retraining, communication, involvement of employees, and responsible use of technology create an environment in which successful adaptation to technology takes place. From this perspective, it becomes possible to study the influence of employee adaptation on the results of HR management.

Review of Literature and Research Gap

The progression of the research on Artificial Intelligence in HRM began with studying the automated processes of HR. In their study, Jia et al. (2018) laid the foundations for understanding AI-related policies and practices. The later research examined the influence of algorithms on decision-making processes in organizations and the implications for the human agency. Accordingly, Raisch and Krakowski (2021) presented the concept of interconnectedness of automation and augmentation and stressed the need to balance both of these methods. It is of great importance for HRM since the introduction of intelligent systems can drastically enhance analytical capabilities but lead to the revision of human judgment's function.

According to Budhwar and associates (2023), the introduction of generative AI brings with it both challenges and risks in areas such as employment, bias, privacy, employee welfare and relationships within organisations. Their research also illustrates the absence of previous studies conducted in areas beyond simply evaluating the technical performance of AI applications. Further studies are needed to examine the evolution of algorithmic HRM by Cameron et al. (2024) and their findings regarding the ambiguity of the application of algorithmic approaches in HRM strategy. This ambiguity points towards the necessity of extending

non-evaluating research in this area. It aligns with the notions made by Gong et al. (2025) in their review of algorithmic HRM through the function-based affordance lens.

These studies can be considered as ground for further integration. Yet, major elements of the relations between conditions like technological competence, readiness of an organization, adaptability of staff members, partnerships, responsible governance, and sustainable effectiveness of HRM are not yet explained clearly. Hence, the plan of this research is based on the assumption of building an integrated model exploring the contribution of AI to human resources effectiveness, as well as mechanisms and governance conditions of this contribution.

Proposed Conceptual Framework

The structure consists of six main components, arranged in accordance to their intended theoretical implications.

Classification	Research components
Independent variable 1	Capabilities enabled by AI in the area of HR
Independent variable 2	Organisational readiness for AI
Mediating variable 1	Collaboration between human resources and AI
Mediating variable 2	Ability of employees to adopt
Moderating variable	AI governance aimed at responsible use of AI
Dependent variable	Efficiency of the HRM function on a sustainable basis

Proposed model integrating AI and human-related components of HRM

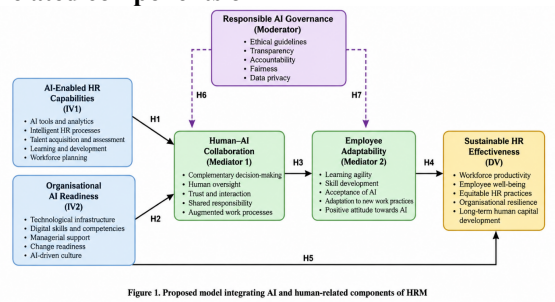


Figure 1. Proposed model integrating AI and human-related components of HRM

The Model developed by the author indicates that governance condition the transformation of capabilities of AI into collaborative and efficient outcomes. The proposed model implies that organisations that possess significant AI capacities and are ready to accept technology are more likely to establish effective collaboration between AI and people. Such collaboration may help employees to adapt to new circumstances, as well as to ensure that technology is employed efficiently in all areas of work.

Theoretical Contributions

This framework offers important insights on AI-enabled HRM research as it provides an integrated framework encompassing technological, behavioural, and governance aspects. The first contribution of this framework is in the formulation of AI-enabled HR capabilities as strategic organisational resources where their value is based on additional human and institutional capabilities. In doing so, it goes beyond understanding possession of technology to looking at the processes in producing the functionality of AI capabilities. The second contribution is in the identification of collaboration between human and AI. Instead of presuming automatic productivity added by AI technologies, the framework highlights collaborative working arrangements as a necessary link between technological capabilities and employees' results of work.

In the third contribution of the paper, employee adaptability as a behavioural mechanism is put forward in the analysis. It is becoming increasingly important for employees to process information generated by AI, as they need to adapt to new practices, acquire new skills, and make various judgments in a technologically enabled environment. Thus, adaptability is suggested to serve as a potential mediator between the use of collaborative AI and long-term HR effectiveness.

The fourth contribution is related to the question of responsible AI governance, which is viewed not just as a compliance-driven activity, but rather as a context-related factor that can determine whether the way AI is used in the workplace is regarded as trustworthy, fair, and legitimate. Finally, the contribution of the framework consists in extending the understanding of HR effectiveness by introducing into the mix some terms like well-being, organizational resilience, justice, and workforce development, alongside productivity.

Managerial Implications

According to the framework outlined, HR executives must realize that the current success of AI usage in companies requires an integrated investment in technology innovations, training of human resources, introduction of changes in the operations of firms, and suitable governance methods. This means that any AI strategies need definitions as to the reskilling processes, employee engagement levels, and humanity of AI usage reflected in the overview of algorithmic technical decisions.

Moreover, it is important to differentiate between HR processes that could be automated from those that require human intervention. Most notably, decision-making concerning employees' careers, disciplinary measures against employees, performance evaluations, etc. can seriously impact employees' future and should not be fully automated. Lastly, taking into account the challenges associated with AI implementation, an organization should analyze its AI strategies in terms of productivity, employee experience, adaptability, fairness, and sustainability.

Future Research Directions

In this paper, conceptual relationships create a channel for data gathering through quantitative and qualitative methodologies.

Future research will be able to operationalise the six constructs of the paper by employing the established or reasonably modified measures for testing the proposed relationships using a structural equation modelling approach.

Multi-industry analysis will help in understanding whether the framework is equal in different industries, including but not limited to IT-services, manufacturing, healthcare, logistics, and other industries that utilise knowledge-based processes. Longitudinal research will be particularly useful in understanding whether collaboration supported by AI contributes to improvements in employee adaptability and efficiency of company operations. Following studies may address alternate governance models, employees' perception of algorithmic fairness, and differences between managers and non-managers.

Additionally, empirical research should pay attention to negative outcomes such as technological addiction, increasing job intensity, loss of autonomy and anxiety of employees. The emerging issues mean that it may be wrong to assume that the higher AI penetration in organization leads to better HR outcomes.

Conclusion

With the advent of artificial intelligence, there are significant possibilities for the reform in strategic human resource management. However, long-term success in organizational implementation of AI does not depend solely on technology and the automatization of previously established administrative tasks. The present paper advances the idea that it is possible to achieve sustainable HR effectiveness by means of the interaction of some prerequisites, such as the capabilities of AI in HR management, readiness of the organization, collaboration between humans and AI technologies, adaptability of employees, and responsible governance. Through the incorporation of these ideas, the study sheds light on the theoretical framework explaining how organizations can use intelligent technologies to get the desired outcomes in employment. The introduction of AI is likely to create the competition between the demands of the organization in terms of efficiency, independence, accountability, and welfare of employees. The development of the proposed model may serve as a solid basis for further studies and organizations using it make contributions to the development of the theory of integration of AI into human resources.

References

1. Arntz, M., Gregory, T., & Zierahn, U. (2016). The risk of automation for jobs in OECD countries: A comparative analysis. OECD Social, Employment and Migration Working Papers, No. 189. OECD Publishing. https://doi.org/10.1787/5jlz9h56dvq7-en

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

3. Brougham, D., & Haar, J. (2018). Smart technology, artificial intelligence, robotics, and algorithms (STARA): Employees' perceptions of our future workplace. Journal of Management & Organization, 24(2), 239–257. https://doi.org/10.1017/jmo.2016.55

4. Budhwar, P., Chowdhury, S., Wood, G., Aguinis, H., Bamber, G. J., Beltran, J. R., Boselie, P., Lee Cooke, F., Decker, S., DeNisi, A., Dey, P. K., Guest, D., Knoblich, A. J., Malik, A., Paauwe, J., Papagiannidis, S., Patel, C., Pereira, V., Ren, S., ... Varma, A. (2023). Human resource management in the age of generative artificial intelligence: Perspectives and research directions on ChatGPT. Human Resource Management Journal, 33(3), 606–659. https://doi.org/10.1111/1748-8583.12524

5. Cameron, R., Herrmann, H., & Nankervis, A. (2024). Mapping the evolution of algorithmic HRM (AHRM): A multidisciplinary synthesis. Humanities and Social Sciences Communications, 11, Article 303. https://doi.org/10.1057/s41599-024-02786-z

6. Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. Harvard Business Review, 96(1), 108–116.

7. Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., Eirug, A., Galanos, V., Ilavarasan, P. V., Janssen, M., Jones, P., Kar, A. K., Kizgin, H., Kronemann, B., Lal, B., Lucini, B., ... Williams, M. D. (2021). Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. International Journal of Information Management, 57, Article 101994. https://doi.org/10.1016/j.ijinfomgt.2019.08.002

8. Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. Journal of Applied Psychology, 71(3), 500–507. https://doi.org/10.1037/0021-9010.71.3.500

9. Floridi, L., Cowls, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., Luetge, C., Madelin, R., Pagallo, U., Rossi, F., Schafer, B., Valcke, P., & Vayena, E. (2018). AI4People—An ethical framework for a good AI society: Opportunities, risks, principles, and recommendations. Minds and Machines, 28, 689–707. https://doi.org/10.1007/s11023-018-9482-5

10. Gong, Q., Fan, D., & Bartram, T. (2025). Algorithmic human resource management: Toward a functional affordance perspective. Personnel Review, 54(5), 1150–1177. https://doi.org/10.1108/PR-01-2024-0099

11. Jarrahi, M. H. (2018). Artificial intelligence and the future of work: Human–AI symbiosis in organizational decision making. Business Horizons, 61(4), 577–586. https://doi.org/10.1016/j.bushor.2018.03.007

12. Jia, Q., Guo, Y., Li, R., Li, Y., & Chen, Y. (2018). A conceptual artificial intelligence application framework in human resource management. In Proceedings of the 18th International Conference on Electronic Business (pp. 106–114).

13. Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. Academy of Management Journal, 33(4), 692–724. https://doi.org/10.5465/256287
14. Malik, A., Budhwar, P., Patel, C., & Srikanth, N. R. (2022). May the bots be with you! Delivering HR cost-effectiveness and individualised employee experiences in an MNE. The International Journal of Human Resource Management, 33(6), 1148–1178. https://doi.org/10.1080/09585192.2020.1859582
15. Raisch, S., & Krakowski, S. (2021). Artificial intelligence and management: The automation–augmentation paradox. Academy of Management Review, 46(1), 192–210. https://doi.org/10.5465/amr.2018.0072
16. Russell, S., & Norvig, P. (2021). Artificial intelligence: A modern approach (4th ed.). Pearson.
17. Shrestha, Y. R., Ben-Menahem, S. M., & von Krogh, G. (2019). Organizational decision-making structures in the age of artificial intelligence. California Management Review, 61(4), 66–83. https://doi.org/10.1177/0008125619862257
18. Tambe, P., Cappelli, P., & Yakubovich, V. (2019). Artificial intelligence in human resources management: Challenges and a path forward. California Management Review, 61(4), 15–42. https://doi.org/10.1177/0008125619867910
19. Vrontis, D., Christofi, M., Pereira, V., Tarba, S., Makrides, A., & Trichina, E. (2022). Artificial intelligence, robotics, advanced technologies and human resource management: A systematic review. The International Journal of Human Resource Management, 33(6), 1237–1266. https://doi.org/10.1080/09585192.2020.1871398
20. Wilson, H. J., & Daugherty, P. R. (2018). Collaborative intelligence: Humans and AI are joining forces. Harvard Business Review, 96(4), 114–123.