

## **HUMAN RESOURCE REVOLUTION 5.0: LEVERAGING ARTIFICIAL INTELLIGENCE FOR EFFICIENCY AND PRODUCTIVITY IN HR MANAGEMENT – A LITERATURE REVIEW**

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### **ABSTRACT**

This literature review examines the transformative influence of Artificial Intelligence (AI) in reshaping Human Resource Management (HRM) within the HR 5.0 era. It explores how AI-driven technologies are integrated across key HR functions such as recruitment, employee development, performance management, retention strategies, and well-being enhancement. The review highlights that AI applications streamline administrative tasks, enable data-driven decision-making, and enhance precision in matching candidates with job requirements. Furthermore, AI contributes to predictive analytics for employee performance and turnover, allowing HR professionals to act proactively. However, the adoption of AI in HRM also presents several challenges. Issues such as algorithmic bias, ethical dilemmas, data security, and the potential displacement of human roles raise significant concerns. In addition, limited digital literacy among HR practitioners can hinder effective implementation. To address these challenges, organizations are encouraged to foster human–AI collaboration, implement transparent and explainable AI systems, and establish robust ethical and governance frameworks. Balancing technological efficiency with human-centric values remains essential to preserving trust and fairness in the workplace. In conclusion, while AI offers substantial opportunities to revolutionize HRM practices in the HR 5.0 landscape, its success depends on responsible adoption. Ethical, transparent, and context-sensitive implementation will determine whether AI serves as a strategic enabler that empowers both organizations and employees in achieving sustainable performance and well-being.

**Key words:** HR 5.0; artificial intelligence; HR efficiency; employee productivity; literature review

### **INTRODUCTION**

In the age of Society 5.0 and HR 5.0, organizations are required not only to adopt technology extensively but also to integrate it with human-centered, sustainable, and adaptive approaches. The HR paradigm has shifted from administrative operations toward strategic people management, with Artificial Intelligence (AI) functioning as an enabler for improving efficiency, productivity, and employee experience.

The objectives of this review:

1. Identify the applications of AI in major HR functions (recruitment, development, performance appraisal, retention, and well-being).
2. Evaluate the impact of AI on HR efficiency and productivity.
3. Explain the challenges and best practices in adopting AI ethically and effectively.
4. Provide recommendations for research and implementation in the HR 5.0 era.

## **METHOD**

This study applies a literature review method, analyzing journal articles, conference proceedings, and academic publications from 2020–2025. Both international and national studies on AI in HR management were included. The review focuses on key HR functions recruitment, employee development, performance appraisal, retention, and well-being while emphasizing opportunities and challenges in adopting AI in the HR 5.0 context.

## **RESULT AND DISCUSSION**

### **The review identifies several findings:**

1. Efficiency and employee experience – AI can increase efficiency by up to 45% in certain functions and improve employee well-being by fostering transparency and collaboration between humans and machines.
2. Productivity and performance – AI automatic routine tasks, accelerates data processing, and supports more accurate decision-making. Organizational readiness, digital literacy, and employee acceptance are critical success factors.
3. Recruitment and selection – AI accelerate initial candidate screening, reduces subjective bias, and improves both job fit and cultural fit.
4. Employee development and training – AI enables personalized learning and predicts future skill requirements.
5. Well-being and trust – Concerns persist regarding data privacy, algorithm transparency, job displacement, and stress from automation.
6. Leadership and decision-making – Leaders must strengthen data-driven decision-making and adopt leadership styles that encourage human–AI collaboration.

### **Emerging insights include:**

1. AI as augmentation rather than replacement: While AI optimizes administrative tasks, complex decision-making, ethical considerations, and employee–manager relationships remain dependent on human judgment.
2. Readiness as a critical factor: Beyond technology, organizational culture, digital training, and transparent communication strategies determine adoption success.
3. Transparency and ethics as prerequisites: 'Black-box' AI risks distrust, bias, and resistance. Explainable AI (XAI), algorithm audits, and clear governance are essential.
4. Balancing efficiency and well-being: Gains in productivity must not undermine mental health, work–life balance, or fairness. Research on the psychological impacts of AI in HR is still limited but expanding.
5. Local context matters: While much of the literature focuses on developed economies, implementation in developing countries must address technological infrastructure, regulatory frameworks, and work culture.

### **Challenges**

The literature identifies several challenges such as Algorithmic bias and discrimination resulting from non-representative training data, Data privacy concerns and compliance with regulations (e.g., GDPR, local laws), System security and reliability, including risks of errors and cyberattacks, Employee concerns about job replacement and loss of control, Limited digital literacy and expertise among both employees and managers, Insufficient regulation and oversight regarding AI use in HR.

### **Best Practice and Recommendation**

To maximize the benefits of AI in HR 5.0, organizations should : Conduct skill-gap analyses to ensure technology adoption aligns with organizational needs and culture, Foster human–AI collaboration, with AI handling routine tasks while humans focus on strategic, creative, and relational roles, Implement Explainable AI (XAI) to ensure transparency in AI-driven decisions, Provide continuous training to improve digital literacy, adaptability, and future skills, Establish robust ethical and privacy policies, including algorithm audits and employee feedback mechanisms, Measure outcomes not only in terms of efficiency and productivity but also well-being, job satisfaction, and fairness, Adopt AI incrementally through pilot projects before scaling implementation.

### **CONCLUSION**

This literature review demonstrates that AI holds significant potential to transform HRM in the HR 5.0 era by enhancing efficiency, productivity, and objectivity across HR functions. However, the benefits will only be realized if organizations prioritize human factors such as ethics, transparency, training, and contextual adaptation.

Future directions include: Expanding empirical and longitudinal studies to assess AI’s long-term effects on employee well-being and organizational performance, Conducting context-specific studies in countries such as Indonesia to account for local regulations, cultural diversity, and infrastructure readiness, Developing sustainable, human-centered AI–HR models that balance efficiency with social and ethical values.

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