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Harnessing the power of artificial intelligence (AI): a paradigm shift in HRM practices for employee sustainable performance

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Abstract

Purpose – This study aims to investigate the interplay between artificial intelligence (AI) integration, organizational digital culture, human resource management (HRM) practices and employee sustainable performance in luxury hotels in Malaysia. It seeks to elucidate how AI adoption influences organizational dynamics, shapes HRM practices and impacts employee sustainable performance over time.

Design/methodology/approach – Using a quantitative approach, survey questionnaires derived from prior research were utilized. Analysis using G*Power software determined an appropriate sample size, with psychometric evaluation validating scale development. Statistical analyses using Statistical Package for Social Sciences (SPSS) 28.0 and SmartPLS 4 confirmed data reliability and validity.

Findings – Out of the five hypotheses, three were supported. A positive relationship was found between AI adoption and employee sustainable performance, highlighting AI's potential to enhance productivity and job satisfaction. However, the relationship between AI adoption and organizational digital culture was not supported. On the other hand, HRM practices positively influenced employee sustainable performance. In addition, organizational digital culture was positively associated with employee sustainable performance, underscoring the role of digital fluency in driving workforce productivity. Conversely, AI failed to moderate the relationship between HRM practices and employee sustainable performance.

Research limitations/implications – The study's focus on luxury hotels in Malaysia and its reliance on cross-sectional data, suggesting the need for longitudinal designs and diverse organizational contexts in future research. Comparative studies across sectors and countries could offer insights into variations in AI adoption practices and their impact on organizational performance.

Originality/value – This study contributes to theoretical frameworks by empirically examining complex relationships between AI integration, HRM practices, organizational digital culture and employee performance, emphasizing the importance of considering organizational context and cultural factors in understanding the implications of AI adoption for sustainable performance enhancement.

Keywords Artificial intelligence, HRM practices, Organizational digital culture, Employee sustainable performance, PLS-SEM

Paper type Research paper

Introduction

The Fourth Industrial Revolution (4IR) marks an increased use of emerging technologies, such as artificial intelligence (AI), big data, machine learning, mobile technology, the Internet of Things (IoT), geotagging, virtual reality, speech recognition and biometrics (Budhwar *et al.*, 2022). AI technologies have begun to consistently grow and gain

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considerable prominence in almost all the fields, such as education, medicine, engineering, agriculture, organizational management, tourism and transportation (World Health Organization, 2021; Ahmad *et al.*, 2021; Xu and Ouyang, 2022; Elbasi *et al.*, 2022), which have entered both public and business environments. AI refers to a broad class of technologies that allows a computer to perform tasks that generally require human recognition, including adaptive decision-making (Tambe *et al.*, 2019). The AI applications and technologies prevailing today are not worldwide recipes, instead, they act as workshops with many tools in performing different functions and tasks (Nawaz *et al.*, 2024). The applications of these advanced technologies transform the way business is conducted locally or globally and have had a considerable impact on the way work is designed, workers are engaged and workplace processes changed (Malik *et al.*, 2022). Nevertheless, AI and other related intelligence-based applications bring opportunities for organizations to achieve optimal strategic business outcomes, such as enhancing service quality, productivity, operational efficiency, customer engagement and loyalty, employees' service quality and reducing considerable operational and capital cost (Nguyen and Malik, 2022).

Analysing the use of automation technologies in human resource management (HRM) suggests that there is still limited knowledge of how AI-enabled HRM functions affect employees, their work outcomes and overall organizational outcomes (Castellacci and Viñas-Bardolet, 2019). Despite the proliferation of AI technologies in HRM, the challenge persists in understanding and optimizing its role in sustaining employee performance within organizations (Anayat, 2023). While AI offers immense potential to revolutionize HRM practices, including talent acquisition, performance management and workforce optimization, the effective integration and utilization of these technologies remain elusive (Allioui and Mourdi, 2023). Organizations often struggle to develop clear strategies for integrating AI into their HRM frameworks, leading to uncertainty regarding its specific impact on sustaining employee performance (Chowdhury *et al.*, 2023). Without a well-defined roadmap for AI adoption, organizations may fail to realize the full potential of these technologies in enhancing workforce productivity and engagement. Besides, the implementation of AI technologies in HRM is fraught with various obstacles, including technical complexities, resource limitations and organizational resistance to change (Ayanponle *et al.*, 2024). Integrating AI-driven solutions requires significant investment in infrastructure, talent and training, which may pose challenges for organizations with limited resources or outdated systems. On the other hand, the rapid evolution of AI technology necessitates a corresponding investment in skills development and talent management within organizations (Bukartaite and Hooper, 2023). HR professionals and employees require training and upskilling to effectively leverage AI tools and techniques in their daily operations. Therefore, bridging the skills gap requires proactive initiatives such as training programmes, knowledge-sharing platforms and collaboration with educational institutions to ensure that the workforce possesses the necessary competencies to harness the full potential of AI in HRM.

Incorporating AI technologies into HRM has profound implications for sustaining employee performance over the long term. While AI holds promise in streamlining HRM operations, its impact on employee well-being and job satisfaction remains a complex area warranting further exploration (Zehir *et al.*, 2020; Arslan *et al.*, 2022; Pereira *et al.*, 2023). As organizations increasingly rely on AI for decision-making processes, questions arise regarding the fairness, transparency and accountability of such algorithms, critical aspects for fostering trust and confidence among employees (Shrestha *et al.*, 2019). Thus, comprehending the intricate interplay between AI technologies, HRM practices and employee sustainable performance is paramount for informing organizational strategies and