
INTEGRATION OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEMS: BENEFITS AND CHALLENGES

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Abstract

The study investigated integration of artificial intelligence in human resources management information systems, benefits and challenges. The research objectives are to examine the key benefits that artificial intelligence provides to Human Resource Management practices, and to identify the challenges associated with artificial intelligence adoption, and its broad implications for organizational efficiency. The technology acceptance theory was adopted for the study. Furthermore, the qualitative research design was utilized as data was collected through semi-structured interviews, and from magazines, journals and internet sources. The data collected are qualitative and were presented and discussed in the study. The finding reveals that the integration of AI into HRIS in HRM activities provides substantial benefits such as data storage, fast decision-making, data accuracy, speed, and objectivity in expediting HRM functions. AI system quickly processes and analyzes data efficiently, and provides timely decisions. Furthermore, AI-powered adaptation was found to be slow due to employee's lack of expertise in the use of AI tools, and there was certain operational implication at the early stage of its integration. Based on the findings, the study recommends that change in strategic management should be allowed as it can serve as the cornerstone for successful AI integration. Effective communication within the organization should be in preference for AI adoption as to maximize its full potential enhancement for human resource capabilities and activities. Involvement of stakeholders in addressing human resource concerns, and gathering of more support to foster collaboration and acceptance of AI should be of great priority to human resource management.

Keywords: Integration, Artificial Intelligence, Human Resource, Information System.

Introduction

The emergence of artificial intelligence (AI) has become a catalyst in the series of digital transformations being witnessed in the corporate world Bhojane & Parte (2022). AI is vastly revolutionizing the corporate environment through its efficacy and efficiency to organize, perform and analyze data. It automizes work processes and enables machines intelligent interactions Werenowska & Jaska (2020). The global awareness on AI keeps driving firms toward making changes in business world as well as creating substantial impacts on activities of companies that have started applying it to solve complex operational issues in various capacity. Furthermore, the applications of AI can be viewed as the innovative utilization of machine language and learning, complex data analysis, work process automation as well as natural language processing Maganti (2023). However, artificial intelligence innovative technologies are invented to improve human resources management, promote client satisfaction, and operational efficiency through information systems management Dani (2022).

The Artificial Intelligence (AI) technologies remain profound due to changes it has brought to different sectors, such as Human Resource Management (HRM), financial institutions, and healthcare (Connelly et al., 2021). AI technologies comprise machine learning, natural language processing as well as data analysis. They are substantial in providing innovative and complex solutions that fully enhances the effectiveness, efficiency and result oriented HRM processes (Kamruzzaman et al., 2022). Artificial Intelligence technologies permit the automation of repetitive information systems, digital tasks, analysis of large volume of data as well as generating predictive insights and outcomes that accelerate decision-making processes within HRM confine (De Kock et al., 2020). Furthermore, Human Resource Management play critical roles within firms such as recruitment, selection, appraisals, compensation and payroll system, management, training, and development of employees among others.

Human Resource Management information systems and practices are crucial for organizing and analyzing employee data, payroll system, work performance, training and development, ensuring compliance with regulations and labour laws as well as fostering better decision making in organizations. Before the inception of Artificial Intelligence (AI) Technology, HRM systems mostly relied on manual tabulations and processes as well as in subjective decision-making in various firms (Sivathanu & Pillai, 2018). But the current integration of AI has invented changes in operational processes, thereby presenting a data-driven and core automation of practices. The transformation indicate how AI-driven recruitment and selection tools can organize and analyze resumes, identify and select the brighter candidates on the basis of predefined criteria, while reducing biases during recruitment processes (Kshetri, 2021).

The prudence of AI technologies enables performance management systems in tracking and assessing employee performance, generate personalized feedback in real-time as well as identifying areas that need further development. It is the Management Information Systems (MIS) team that is responsible in integrating or commissioning the Artificial Intelligence (AI) technology into the firms Human Resource Management (HRM). MIS is designed to control information or data within companies, and it supports fast decision-making by releasing accurate data that are essential for strategic and prompt planning as well as for operational efficiency in data analysis (Schroeder et al., 2021). The collection, storage, and analysis of large amounts of operational data, and employee data are being facilitated by the MIS to achieve organizational success. Therefore, the integration of AI technologies into MIS can transform raw data into practicable and actionable outcomes, and emphatically advancing

several Human Resource activities (Rodgers et al., 2023). Furthermore, AI-controlled MIS can enhance workforce planning since it can predict onboarding and recruitment needs on the basis of the firm's historical data, operations, and ensuring that firms are neither overstaffed or understaffed.

Duggan et al., (2019) found that Artificial intelligence (AI) allows Human Resource Management arm to become intensely proactive as well as strategic in fostering satisfied, productive, and efficient workforce (Duggan et al., 2019). Further, (Eboigbe et al., 2023) observed that AI can accelerate decision-making, but have limitation to interrogate the possible shortfall of managerial intuition due to long-term over-reliance on AI. However, (Liladhar-Rane et al., 2023) found that AI fail to mitigate the risks related with data privacy nor navigate legal difficulties across various authorities. (Gill et al., 2022) found that AI offers deep business ideologies via real-time data analysis, but may not guarantee the quality of the data applied to assist AI-driven decision-making process. (Rožman et al., 2023) found that AI automates daily tasks and also improve efficiency, but cannot explore the effect of employee rejection to adopting of new technologies. Meanwhile, (Kar et al., 2021) found that the challenges companies are facing in developing countries as they try adopting AI are lack of technological infrastructure and low workforce expertise and skills.

(Tambe et al., 2019) found that the challenges of AI usage data for Human Resources tasks are the complex, ethical and have adverse workers reaction to data-based algorithms, and legal constraints. (Vrontis et. al., 2021) found that integrating of Artificial Intelligence Technologies, and Human Resource Management are essential in information management in firms. (Pan et. al., 2021) observed that the adoption of AI in applicants' recruitment has influence in making the best decision in the selection processes. (Budhwar et. al., 2023) found that there are implications between generative AI, particularly ChatGPT on Human Resource management (HRM) practices among firms adopting the technologies in recent times in other to revolutionize HRM by enhancing decision-making procedures as well as addressing challenges, and improving workplace performance. Moreover, the integrating of AI into HRM practices usually requires adequate understanding of employee and associated concerns, legal and ethical requirements, legal prescriptions to ensure its efficiency and proper implementation. It against this backdrops that this study seeks to investigate the challenges and opportunities of integration of Artificial Intelligence (AI) in Human Resource Management information systems (HRIS) and how it can efficiently support decision-making processes within the operations of companies.

Objectives of the Research

1. To examine the key benefits that Artificial Intelligence provides to Human Resource Management practices.
2. To identify the challenges associated with Artificial Intelligence adoption, and its broad implications for organizational efficiency.
3. To ascertain how management information system facilitates the integration of AI in Human Resource Management decision-making processes.

Research Questions

1. What are the key benefits that artificial intelligence provides to Human Resource Management practices?
2. What are the challenges associated with Artificial Intelligence adoption, and its broad implications for organizational efficiency?

3. How does management information system facilitate the integration of AI in Human Resource Management decision-making processes?

Artificial Intelligence Benefits

According to Bharadwaj (2024) the integration of Artificial Intelligence (AI) in Human Resource Management (HRM) enhances several processes and practices in HRM. This new technology in human resources provides various benefits to HRM. Such as improving operational efficiency, offering data-driven outputs, creating strategic and optimal HRM function. The impacts of AI to different industries as well as HRM cannot be over emphasized. AI on its own has revolutionized and revitalized various HRM practices, enabling tolerated processes that enhance decision-making as well as overall operation efficiency. In addition, AI can enable talent acquisition and recruitment. In this case AI can be used for screening applicant resume, tracking applicants, and assists in selecting qualified candidates' more efficiently. AI technology can also analyze job descriptions, and match suitable candidates to specific designations. Meanwhile, AI Chatbots and virtual assistants engages candidates in answering queries, participating in schedule interviews, and providing opportunities for easy work interactive experience.

Artificial Intelligence (AI) can assist in discarding biases from recruitment and selection practices as well as promoting and ensuring diversity in decision-making. AI can provide analytical insights into metrics, enable firms to track work progress while implementing targeted initiatives Bharadwaj (2024). AI can be utilized for assessments and interviews. It can evaluate potential candidates' specific abilities, solution provision skills, and intelligence. AI-powered chatbots allows the handling of periodic onboarding roles, attend to employee enquiries, and release information that concerns the company policies to employees, provides benefits that create a more interactive onboarding experience. AI can offer personalized learning platforms that are tailored to training programmes for employees on the basis of their strengths, weaknesses, and career goals. This process offers consistent learning and development opportunities, improves employee job performance and work satisfaction. It provides suggestions for relevant courses or resources that can improve employees, and engage them in continuous learning.

The AI integration in Human Resource Management comes with various benefits that can support firms' operational performance. A major benefit is the enhancement it offers to the recruitment and selection process. AI-support recruitment by automating and screening of applicants resumes, conduct evaluations as well as interact with applicants through chatbots, thereby assist in reduction of the time or resources that might be required within the hiring process (Haynes, 2008). It can assess potential and responsive performance management systems, and dynamic steps can be followed to viciously provide assistance to employee development activities (Haenlein & Kaplan, 2019). AI also enhances better employee personal engagement and interactions as well as providing insights into various employee-based sentiment or morale. Moreover, sentiment evaluation tools can analyze employee satisfaction via the analysis of automated communication channels, feedback, and tools supporting HRM to intervene promptly (Wilson & Gosiewska, 2014).

Challenges of Artificial Intelligence Adoption and Organizational Efficiency

Artificial Intelligence has numerous benefits, but at the same time possesses social and ethical challenges that can significantly affect its adoption, mainly on issues of cybersecurity, data privacy, and the potential capacity of AI in replacing of human labour. Therefore, it calls collective partnership of collaborators in technological innovation of AI software developers,

governments, and all stakeholders to develop systemic regulations for fair AI implementation as well as ensuring the protection of people's collective interests within technological and innovative ecosystem. Moreso, to implement Human Resource Information System (HRIS), there are existing and potential challenges that are associated with organizational culture dynamics and obvious resistance to new or trending technology. Most employees can feel threatened by the new technological changes, and management may likely communicate the changes and its benefits accordingly (Bhawna & Sharma, 2024). The communication and essence of an effective change management is to reduce resistance and increase new technology acceptance among employees. Following the right steps can minimize the barriers. The HRIS implementation process can proceed smoothly and efficiently as firms considers the needs of users and organizational objectives (Bhawna & Sharma, 2024).

To fully achieve the realities of AI, certain condition must be realized. This includes the access to large data, quality datasets as well as the necessity of technology infrastructure the enable data processing. AI integration needs a seamless link with databases, datasets and enabling platforms that are put in place for connectivity Tsiakas & Murray-Rust, (2022). However, such also involve complex data platforms that might have little disturbance. Furthermore, AI utilization necessitates more attention to necessary requirements for scalability, customization, and assessment Yasin & Azmi, (2023). The lack of expertise in supervisory role, difficulty in understanding AI algorithms, as well as the intrinsic complications of AI domain decision-making processes all accentuate to the challenges of AI integration Babaeva et al., (2020). Furthermore, AI in overall acts as a catalyst and can offer insights and suggestions for organizational efficiency in relation to HRM operational activities Aguerrebere et al., (2024).

Artificial Intelligence Integration and Management Information System Decision-Making Processes

The efficiency of AI in HRIS is such that allows for data automation, processing, and reliance on information technology outcomes to facilitate or enable firms' decision-making approaches. (Napitupulu, 2023) added that MIS domain can present important information to Human Resource managers as regarding strategic, operational and efficient decisions. The HRIS has the ability to give timely and required data toward improving organizational efficiency and smooth running. Meanwhile, (Li, 2021) explained that HRIS is a domain that combines hardware, software as well as critical processes involving the collection, storage, and processing of data for the provision of valuable insights that can assist management assessment and optimization of Human Resource (HR) processes as well as enhancing operational advantages, strategic efficiency, and effectiveness, and organized data management that assist decision making and up to date information processing.

The integration of AI technology into Human Resource Information System (HRIS) is gathering wider acceptance in recent times both in industry and academic discourse. AI-propelled HRIS applications entail different functions of HR such as recruitment, onboarding, payroll, performance management, training, retention, learning, offboarding, and successional planning. Integrating AI also involves tasks automation, insights innovation, and personalization of employee experiences, interacting through chatbots, machine learning, natural language processing as well as predictive data analysis. HRIS play the critical role of providing the technological requirement needed for the efficient and effective carrying out of HRM functions. Meanwhile, the information system targets the collection, processing, storage, and dissemination of information that allows effective decision-making, efficient coordination, control of HR processes, data analysis as well as visualization of organizational operations (Kearns & Sabherwal, 2006).

Since HRIS allows the collection, storage, and analysis of data in HR practices, it is obvious that AI can offer robust tools or frameworks that enhance employee information management. The technology can enable the systematic, and automatized collection of operational data from readily available sources such as performance reviews, recruitment and selection activities, employee records, and ensuring that data is comprehensively analyzed and updated (Tambe et al., 2019). The HRIS ensures that stored data is well secured, maintained as well as easily accessible, and protected from being lost, and prevented from accessed by unauthorized individuals. Furthermore, data analysis tools enabled by AI integrated into HRIS offer HRM professionals the ability to perform sophisticated data analyses. HR personnel can perform predictive and trend analysis that allows valuable views and interrogation of workforce and organizational dynamics (Fleming, 2018).

In modern times, HRIS is characterized by advanced tools and platforms such as Chatbots, cloud-based platforms, visual and mobile accessibility. The integration of AI technologies in HRIS signals the ongoing digital transformation trending in HRM practices for organizational efficiency (Dwivedi et al., 2021). However, the advancements in technology have rapidly improved the capacity and expertise of HR departments to control more complex data processes, and provide strategic enhancement of organizational value of modern HRIS, and making it easy for data to be easily accessible, analyzed, and for effective decision-making (Leicht-Deobald et al., 2019). Therefore, the synergy between AI and HRIS is to enhance comprehensive HR decision-making as well as the reduction of human inefficiency, error and bias. The AI technologies assist HR managers to be more objectively focused, and to make informed decisions that generate better outcomes for both firms and employees (Bader & Kaiser, 2019).

Integrating AI into HRIS in HRM can foster a strategic implementation of decision-making processes. This approach can ensure automating routine tasks effectively, offer advanced data analytical capabilities, and allow HR professionals to perform more strategic tasks, such as talent hunt, talent development and training as well as workforce planning (Leicht-Deobald et al., 2019). To this end, AI-technology can effectively provide workforce planning template that can predict future recruitment needs on the basis of past operational data, HR current trends that can enable HR professionals to develop effective recruitment, training, and data analytical strategies for organization efficiency (Elkins et al., 2013). Finally, integrating AI technology into HRIS can play a supportive role in succession planning as well as giving insights on high-potential employees, tracking individuals career progression as well as ensuring that the firm is prepared for better leadership transition in the future. This strategy can enhance the efficiency and effectiveness of HR practices, with focus on critical organizational goals and operational success. In a nutshell, AI and HR activities can offer transformation in HRM functions, and rather than being reactive to a more proactive, strategic, and efficient force in all in HR practices within AI integration compliant organizations.

Theoretical Framework

The technology acceptance theory is in tandem with this study. The theory emphasis is that understanding the usefulness of new technology as well as the perceived ease of using such technology is the critical factors influencing users' in accepting a new technology (Davis et al., 1989). In line with this study on AI integration in HRIS, the theory prescribes that HR professionals stand the chance of adopting AI-driven approaches and systems if they perceive that the new technology is easy to use, and can enhance their job performance (Rodgers et al., 2019). Further, the theory also shows the role of external variables that enables the new technology utilization. The system design features, user training, perceived usefulness and

ease of using the technology are necessities that assist in understanding and using the technology. Therefore, having understanding on these factors, firms can readily facilitate the adoption and integration of AI technologies in HRM activities, thereby ensuring that these tools are effective, efficient as well as user-friendly (Rodgers & Gago, 2003).

Materials and Method

This study involves qualitative approach in data collection and analysis. To collect qualitative data, semi-structured interviews with two (2) key Human Resource executives and two (2) technologically inclined persons at two (2) organizations that have already implemented AI technology in their Human Resource Information System. The interviews centre on deriving insights on efficiency in the use of AI-tools, benefits, challenges, and future plans. However, the quantitative data collected was to ascertain current AI adoption and satisfaction levels for essential Human Resource functions. The data collected were also presented descriptively.

Results and Discussions

One significant finding is that the integration of AI into HRIS in HRM activities provides substantial benefits such as data storage, fast decision-making, data accuracy, speed, and objectivity in expediting HRM functions. AI systems quickly process and analyze data efficiently, and provide timely decisions. Furthermore, AI-powered adaptation was found to be slow due to employee's lack of expertise in the use of AI tools, and there was certain operational implication at the early stage of its integration. However, as employees' understanding improves, it helped in minimizing bias, and enabled more effective and efficient HRM practices. AI-powered systems were used to automate screening of applicants' personal details, conduct assessments through chatbots as well as selected qualified applicants on the basis of job criteria. The integration of AI into HRIS in the organizations also facilitated HRM decision-making across various aspects which also lead to efficient organizational HRM decision-making processes.

Conclusion

This study has shown that integrating Artificial Intelligence (AI) in Human Resource Information System Management significantly improves decision-making processes in Human Resource Management. The findings reveal valuable insights on how HR practitioners and organizations that are yet to adopt AI technologies should seek to comply. AI enabled HRIS, and organizations are more efficient and effective to achieve HR goals, which optimally lead to improved performance management as well as competitive advantage. AI-powered tools process large number of data and offer predictive insights as they enable HR professionals to possess accurate, timely, and automated decision-making opportunities. Furthermore, its integration facilitates routine tasks, lowers biases, and generates data analysis that support strategic and effective HR initiatives. Further research can include exploring broader implications of AI for the workforce, ethical considerations, and impacts assessment on employee satisfaction as well as organizational culture to pave way for more futuristic competition in organizations

Recommendations

1. Change in strategic management should be allowed as it can serve as the cornerstone for successful AI integration.
2. Effective communication within the organization should be in preference for AI adoption to maximize its full potential enhancement for human resource capabilities and activities.

3. Involvement of stakeholders in addressing human resource concerns, and gathering more support to foster collaboration and acceptance of AI should be of great priority to human resource management.
4. Establishment of robust and effective feedback channels should be ensured, and there should be a continuous refining, improving of AI powered systems, and enhancing of its efficacy periodically to mitigate risks, and challenges of ethical concerns.
5. Training and reskilling initiative should be provided to HR Professionals to equip them with the required skills to maximize AI effectively.

References

- Aguerrebere, P. M., Medina, E., & Pacanowski, T. G. (2024). Building smart brands through online and artificial intelligence tools: A quantitative analysis about the best hospitals in Spain. *[Journal title not provided]*, 14(1), 1–15.
- Babaeva, R., Babaev, D., & Peters, M. (2020). Verbal communication of a person with a chatbot as a discursive practice in the era of digitalization: A pragmatic aspect. *[Publication details not provided]*.
- Bader, V., & Kaiser, S. (2019). Algorithmic decision-making: The user interface and its role for human involvement in decisions supported by artificial intelligence. *Organization*, 26(5), 655–672.
- Bhardwaj, G., Singh, S. V., & Kumar, V. (2020). An empirical study of artificial intelligence and its impact on human resource functions. In *2020 International Conference on Computation, Automation and Knowledge Management (ICCAKM)* (pp. 47–51).
- Bhawna, S. M., & Sharma, R. K. (2024). The impact of change management practices on employee resistance and acceptance: A case study analysis. *Journal of Informatics Education and Research*, 4(2).
- Bhojane, G. V., & Parte, M. A. (2022). Rise of chatbots and virtual assistants in customer service and support. *[Journal title not provided]*, 2(3), 44–48.
- Budhwar, P., Soumyadeb, C., Geoffrey, W., Herman, A., & Greg, J. (2023). Human resource management in the age of generative artificial intelligence: Perspectives and research directions on ChatGPT. *Human Resource Management Journal*.
- Connelly, C. E., Fieseler, C., Černe, M., Giessner, S. R., & Wong, S. I. (2021). Working in the digitized economy: HRM theory & practice. *Human Resource Management Review*, 31(1).
- Dani, R., Rawal, Y. S., Bagchi, P., & Khan, M. (2022). Opportunities and challenges in implementation of artificial intelligence in food & beverage service industry. *AIP Conference Proceedings*, 2481(1).
- Davis, F. D., Bagozzi, R., & Warshaw, P. (1989). Technology acceptance model. *Journal of Management Sciences*, 35(8), 982–1003.
- De Kock, F. S., Lievens, F., & Born, M. P. (2020). The profile of the “good judge” in HRM: A systematic review and agenda for future research. *Human Resource Management Review*, 30(2).
- Duggan, J., Sherman, U., Carbery, R., & McDonnell, A. (2019). Algorithmic management and app work in the gig economy: A research agenda for employment relations and HRM. *Human Resource Management Journal*, 30(1), 114–132.
- Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J. S., 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.

- Eboigbe, E. O., Farayola, O. A., Olatoye, F. O., Nnabugwu, O. C., & Daraojimba, C. (2023). Business intelligence transformation through AI and data analytics. *Engineering Science & Technology Journal*, 4(5), 285–307.
- Elkins, A. C., Dunbar, N. E., Adame, B. J., & Nunamaker, J. F. (2013). Are users threatened by credibility assessment systems? *Journal of Management Information Systems*, 29(4), 249–262.
- Fleming, P. (2018). Robots and organization studies: Why robots might not want to steal your job. *Organization Studies*, 40(1), 23–38.
- Gill, S. S., Xu, M., Ottaviani, C., Patros, P., Bahsoon, R., Shaghaghi, A., Golec, M., Stankovski, V., Wu, H., Abraham, A., Singh, M., Mehta, H., Ghosh, S. K., Baker, T., Parlikad, A. K., Lutfiyya, H., Kanhere, S. S., Sakellariou, R., Dustdar, S., & Uhlig, S. (2022). AI for next generation computing: Emerging trends and future directions. *Internet of Things*, 19(1).
- Haenlein, M., & Kaplan, A. M. (2019). A brief history of artificial intelligence: On the past, present, and future of artificial intelligence. *California Management Review*, 61(4), 5–14.
- Haynes, B. P. (2008). Impact of workplace connectivity on office productivity. *Journal of Corporate Real Estate*, 10(4), 286–302.
- Kamruzzaman, M., Abdur, R., & Mahfuzul, I. S. (2022). Human resource management practices impacting on turnover intention: Evidence from IT employees in Bangladesh. *International Journal on Economics, Finance and Sustainable Development*, 8(4), 78–92.
- Kar, S., Kar, A. K., & Gupta, M. P. (2021). Modeling drivers and barriers of artificial intelligence adoption: Insights from a strategic management perspective. *Intelligent Systems in Accounting, Finance and Management*, 28(4), 217–238.
- Kearns, G. S., & Sabherwal, R. (2006). Strategic alignment between business and information technology: A knowledge-based view of behaviors, outcome, and consequences. *Journal of Management Information Systems*, 23(3), 129–162.
- Kshetri, N. B. (2021). Evolving uses of artificial intelligence in human resource management in emerging economies in the global South: Some preliminary evidence. *Management Research Review*, 44(7), 970–990.
- Leicht-Deobald, U., Busch, T., Schank, C., Weibel, A., Schafheitle, S. D., Wildhaber, I., & Kasper, G. (2019). The challenges of algorithm-based HR decision-making for personal integrity. *Journal of Business Ethics*, 160(2), 377–392.
- Li, H. (2021). Optimization of the enterprise human resource management information system based on the Internet of Things. *Complexity*, 2(1).
- Liladhar, R. N., Achari, A., & Choudhary, S. P. (2023). Enhancing customer loyalty through quality of service: Effective strategies to improve customer satisfaction, experience, relationship, and engagement. *International Research Journal of Modernization in Engineering Technology and Science*, 5(5), 427–452.

- Loureiro, S., Guerreiro, J., & Tussyadiah, I. P. (2021). Artificial intelligence in business: State of the art and future research agenda. *Journal of Business Research*, 129, 911–926.
- Maganti, S. (2023). Transformative impact: Exploring the integration of AI on HRM. *Journal of Social Sciences*, 21(1), 172–179.
- Napitupulu, I. H. (2023). Internal control, manager's competency, management accounting information systems and good corporate governance: Evidence from rural banks in Indonesia. *SAGE Journals*, 24(3), 563–585.
- Rodgers, W., & Gago, S. (2003). A model capturing ethics and executive compensation. *Journal of Business Ethics*, 48(2), 189–202.
- Rodgers, W., Alhendi, E., & Xie, F. (2019). The impact of foreignness on the compliance with cybersecurity controls. *Journal of World Business*, 54(6), 101–112.
- Rodgers, W., Murray, J. M., Stefanidis, A., Degbey, W. Y., & Tarba, S. Y. (2023). An artificial intelligence algorithmic approach to ethical decision-making in human resource management processes. *Human Resource Management Review*, 33(1).
- Rožman, M., Oreški, D., & Tominc, P. (2023). Artificial intelligence supported reduction of employees' workload to increase the company's performance in today's environment. *Sustainability*, 15(6).
- Schroeder, A. N., Bricka, T. M., & Whitaker, J. H. (2021). Work design in a digitized gig economy. *Human Resource Management Review*, 31(1).
- Sivathanu, B., & Pillai, R. (2018). Smart HR 4.0 – How industry 4.0 is disrupting HR. *Human Resource Management International Digest*, 26(4), 7–11.
- Tambe, P. C., & Yakubovich, V. (2019). Artificial intelligence in human resources management: Challenges and a path forward. *California Management Review*.
- Tsiakas, K., & Murray-Rust, D. (2022). Using human-in-the-loop and explainable AI to envisage new future work practices. *ACM International Conference Proceeding Series*, 588–594.
- Vrontis, D., Michael, C., Vijay, P., Shlomo, T., Makrides, A., & Eleni, T. (2021). Artificial intelligence, robotics, advanced technologies and human resource management: A systematic review. *The International Journal of Human Resource Management*.
- Werenowska, A., & Jaska, E. (2020). Using chatbots in marketing communication. *[Publication title not provided]*, 3, 153–158.
- Wilson, J., & Gosiewska, S. (2014). Multi-agency gold incident command training for civil emergencies. *Disaster Prevention and Management*, 23(5), 632–648.
- Yasin, S. M., & Azmi, I. H. (2023). Email spam filtering technique: Challenges and solutions. *Journal of Theoretical and Applied Information Technology*, 101(13), 5130–5138.