

## **AI Adoption in Human Resource Management: Evidence from Pakistan**

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### **Abstract**

In recent years, there have been significant changes in organizations driven by the increased use of new technologies. One of these trends refers to the use of artificial intelligence (AI) in Human Resource Management (HRM). This study aims to investigate the current use of AI in HR departments. Specifically, this scoping study is focused on the benefits and limitations of artificial intelligence (AI) adoption in Human Resource Management (HRM) and employees' attitudes and knowledge about AI use in their field. The study employed a mixed-methodology approach that combined a systematic review of the literature and an empirical study based on a quantitative survey. For this study, ProQuest, EBSCO, Emerald, JSTOR, and Science Direct databases were used in the systematic review. In addition, 50 HR professionals participated in the study by answering a questionnaire. The results of the research revealed that HRM areas where AI is most often used or can be used are recruitment and selection. However, the professionals mentioned that AI can be implemented in other areas of HRM. Study participants evaluated AI mostly positively, mentioning that AI can optimize many HR processes by automating repetitive tasks. The results of the study showed that the most common benefit of using AI in HRM is the ability to automate repetitive tasks, while the most common limitation is the absence of empathy and "human approach." Despite the participants' positive attitudes towards AI, the results of the study revealed that most organizations do not currently use AI in HRM and do not plan to adopt it in the near future. This discovery confirmed previous research findings that AI adoption in HRM has not progressed as expected. Thus, this study revealed a gap between the potential benefits of using AI and its actual implementation in HRM, as well as the need for AI knowledge and training for HR professionals.

**Keywords:** AI, HR Processes, HR Implementation, HR Department, Pakistan

### **Introduction**

In recent years, companies have been confronted with significant technological changes driven by innovations such as the Internet of Things (IoT), Big Data, blockchain, artificial intelligence (AI), and Industry 4.0 (Urba et al., 2022). In last decades the digital technologies have been grown rapidly (Bangash et. al. 2014), including Artificial Intelligence (Khalil et. al. 2016, Zaman et. al., 2020). Such technologies have also influenced the role and functioning of HR departments, creating opportunities and challenges related to the skills and capabilities required in organizations (Poba-Nzaou et al., 2021). In the context of the Fourth Industrial Revolution, Smart Human Resources 4.0 (SHR 4.0) has emerged with the vision of leveraging advanced technologies, including AI, IoT, and Big Data analytics, to effectively manage contemporary and diverse workforces (Sivathanu & Pillai, 2018). Among these technologies, AI has attracted significant attention as an emerging and rapidly developing area of HRM research (Palos-Sánchez et al., 2022). Its applications go beyond the automation of routine administrative activities and can influence various aspects of organizational functioning. Specifically, AI can contribute to the automation and enhancement of business processes, facilitate cognitive activities that support managerial decision-making, and enhance perceptive meeting via smart negotiators and chatbots (Johnson et al., 2020). Such, the increasing use of AI in HRM can transform how organizations recruit, develop, evaluate, engage, and retain employees.

Despite the growing academic and practical interest in AI-enabled HRM, there are still gaps in understanding how AI is currently adopting and perceived by HR professionals. The rapid changes in AI technologies and their expanding range of applications necessitate continuous assessment of their implementation in HR departments. Specifically, it is important to explore not only the potential advantages of AI but also its disadvantages, HR professionals' attitudes and knowledge, the current level of implementation, and organizations' intentions regarding adopting AI. Therefore, this study aims to assess the nature of AI implementation in HRM units with an emphasis on the professed benefits and detriments of AI, HR professionals' attitudes, and level of knowledge, current extent of implementation, and future adoption plans. To accomplish this objective, in addition to evidence from the literature review, an empirical quantitative study of HR professionals' attitudes was conducted.

### **Related Literature**

Artificial intelligence (AI) was initially defined by McCarthy in 1956 as "the science and engineering of making intelligent machines" (Mukherjee, 2022). Basically, AI refers to computer-based technology capable of performing activities demanding for human intellect, including learning, reasoning, solving problems, decision-making, and understanding languages. While AI continues to evolve, its applications have proliferated in various sectors of the economy. Within organizational management, and specifically human resource management (HRM), AI seems to offer great potential to enhance the effectiveness, precision, and quality of human capital-related

processes. AI technologies have been increasingly adopted in organizations, starting with expert systems in 1994, tracked by ambiguous judgment in 2000, artificial neural networks in 2001, data mining in 2006, genetic algorithms in 2008, and machine learning in 2011 (Qamar et al., 2021). More recently, sensory technologies and employee-tracking technologies, as well as metabolic monitoring systems, have also been considered as technological tools for decision-making in organizations (Arslan et al., 2022).

AI encompasses a range of forms and applications, including robotic process automation, machine learning, natural language processing, recommendation engines, and virtual assistants responding to routine employee inquiries. Such technologies can also help to manage and mine large and diverse sets of data, support managers in their decision-making, and predict future trends and outcomes (Sakka et al., 2022; Votto et al., 2021). AI is generally suitable for executing repetitive and data-intensive tasks, whereas human intellectual and emotional abilities are needed for more creative, contextual, judicious, and empathetic activities (Kambur et al., 2022; Tian et al., 2022). Three key features distinguish modern AI technologies from conventional computer programs and make them highly effective decision-makers. These features include high-performance computers, extensive amounts of high-quality data, and sophisticated algorithms that help to process and mine this data (Vorzhakova & Boiarynova, 2020). One of the most common applications of AI in HRM is recruitment and selection (Palos-Sánchez et al., 2022). This technology can be integrated into various stages of the recruitment process, notably candidate sourcing, résumé screening, and candidate matching (Garg et al., 2021; Tian et al., 2022). AI-driven chatbots and virtual assistants can be used to provide continuous support to job applicants by answering their queries, providing updates on the progress of their applications, and facilitating their communication with the organization (Kambur et al., 2022). The rising interest in engaging with social chatbots reflects the growing importance of using such technologies in recruitment and selection (Kusý & Varečková, 2021). In addition to automating various aspects of recruitment, AI can also be utilized to collate and evaluate multiple pieces of information related to candidates' personal details, psychometric tests, and behavioral tests to determine their competencies, predicted performance, and retention prospects (Mukherjee, 2022). Robotic process automation can also be deployed to interview candidates by providing them with information related to the interview process, asking certain competency-based questions, and recording and/or transcribing the candidates' answers (Trocin et al., 2021). In a similar vein, machine-learning algorithms have been considered for analyzing candidates' facial expressions and other behaviors during selection interviews (Kappen & Naber, 2021). By automating various standardized recruitment stages and reducing the scope for subjective human judgments, AI may contribute to making the selection process more efficient and transparent and help eliminate some human biases, including nepotism and favoritism (Bailao et al., 2022; Kshetri, 2021). But, such outcomes will largely depend on the quality of data and algorithms as well as the extent of human input integrated into these technologies.

AI may also be leveraged in a number of other HR processes, including:

Onboarding: the technology can recognize employees' individual requirements and offer information, resources and support specific to their roles. Employee development: AI may enable personalized learning and development by suggesting relevant training opportunities matching individual needs and delivering learning content at appropriate times. Performance management: the technology can aid in establishing a thorough view of employees' performance by gathering and analyzing performance-related information and comparing between employees. Compensation management: AI can facilitate the automated collection and analysis of compensation-related information from various data sources (Johnson et al., 2022) and assist in building salary forecasting algorithms (Gong et al., 2022). Employee engagement: AI-based tools may enable employee engagement by enabling intelligent surveying, feedback mechanisms, automatic recognition and rewards, personalized communication, and targeted messaging (Vorzhakova & Boiarynova, 2020).

Talent management: AI may aid in talent management decisions by enabling organizations to gather and analyze vast amounts of data related to employees' skill sets, potential, performance and career-related requirements, and hence identify and retain key talent (Claus, 2019). Employee attrition: machine-learning methodologies may be utilized to recognize the key contributors to employee turnover and estimate the likelihood of an individual goodbye the organization (Fallucchi et al., 2020).

Prior studies demonstrates that the integration of Artificial Intelligence (AI) can have a significant impact on employer reputation (Kot et al., 2021). Nonetheless, there are a number of concerns and challenges associated with the adoption of AI in Human Resource Management (HRM). One of the primary concerns that employees have regarding the use of AI in HRM is the possibility of losing their jobs as well as the possible implications of adopting AI for their future career (Kong et al., 2021). In addition, employees also feel fearful and skeptical towards AI due to the possible inaccuracies of automated decisions (Ore & Sposato, 2021). Moreover, algorithmic decision-making in HRM leads to overreliance on automated recommendations resulting in the devaluation of human sense-making, professional judgment, and ethics (Leicht-Deobald et al., 2019). Similarly, people are also likely to adopt extremely negative attitudes towards others if their disciplinary action has been automated and recommended by an algorithm (Bartosiak & Modlinski, 2022).

On the other hand, ethical concerns present another major impediment to the application of AI in HRM. The concerns include the need to engineer ethical HR systems that are able to recognize and limit algorithmic bias (Rodgers et al., 2023; Khan et al., 2018). Additionally, the use of AI in recruitment and other HR processes presents various ethical concerns to both employers and employees since there are no mechanisms that can easily identify discrimination committed by algorithms, especially where the inner workings of a particular system are not open to scrutiny (Van Bekkum & Zuiderveen Borgesius, 2023). On the other hand, algorithms are also likely to make discriminatory decisions, even if they were designed to be completely blind to differences (Gay & Kagan, 2018). These ethical concerns demonstrate the dilemma posed by the broad practice of big data and AI to transform HRM, as well as

the need for organizations to process employee and applicant data ethically and in a socially responsible manner (Khattak et al., 2021; Mantelero, 2018).

The successful implementation of AI in HRM can also be hindered by organizational and managerial factors, including the lack of a strong implementation vision, limited organizational knowledge about AI, the absence of adequate employee data, and managerial reluctance to adopt AI-driven decisions (Tuffaha et al., 2022; Batool et al., 2016). The complexity of HR processes, the limitations in the availability of human resource data, as well as employees' attitudes to AI-driven management can also impede the adoption and implementation of AI in the organizations (Tambe et al., 2019). Finally, the successful implementation of AI requires organizations to re-engineer the existing HRM processes, as well as to invest in the employees' training and development (Tian et al., 2022; Urba et al., 2022). The organization must hire employees with the appropriate skills to implement and monitor AI systems to ensure that they are operating as intended (Vorzhakova & Boiarynova, 2020). Therefore, the successful adoption and implementation of AI in the HRM depend on the employees' attitudes to the use of the technology, ethical concerns, organizational readiness, managerial support, and the availability of the skilled resources.

### **Methods**

For the purpose of the study, two stages of research were applied: a review of the literature and a quantitative analysis based on a questionnaire.

At the first stage, a structured review of international literature on the use of artificial intelligence in human resource (HR) was conducted. This was the exploratory part of the study aiming at identifying general trends and areas of interest. The search was conducted in six academic databases, including ProQuest, EBSCO, Emerald, JSTOR, and Science Direct. Databases were selected on the basis of the author's accessibility. The search was conducted using the keywords "artificial intelligence," "Human Resources," and "HR department" and included abstracts of scientific papers published in English since 2018. The search included the most recent publications to ensure the relevance of findings and respond to the latest trends in technological advancement and changes related to HR departments. The search resulted in 182 articles.

The next step included the screening of abstracts to remove duplicates, non-scientific publications, and articles not reporting on the use of AI in HR processes. 13 publications were removed on the basis of this inclusion-criteria screening. A full text review of the remaining articles was then conducted. On the basis of a qualitative assessment of fit for this study, 120 articles were excluded from the next stage of analysis as they reported only limited information on the use of AI in HR or included this topic among a range of other topics. After screening and eligibility assessment, 40 articles were included in the final stage of qualitative analysis of this stage.

The analysis of abstracts and the selection of publications eligible for inclusion in the review were conducted in February 2023. The final stage of the first methodological stage included a qualitative content analysis of the selected 40 publications to identify key themes and trends and was conducted with reference to the findings identified.

The findings of the review informed the preparation of concluding paragraphs of this literature review and informed the next, empirical stage of the study.

Table 1: Research methodology

| S. No. | Stage No. | Description                                                                                                                                                                   |
|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Stage 1   | Define and explain the purpose of the research                                                                                                                                |
| 2      | Stage 2   | Selection of renowned research databases                                                                                                                                      |
| 3      | Stage 3   | Articles selection with criteria including a scientific articles published since 2017 in English and the keywords are HR department, Human resources, artificial intelligence |
| 4      | Stage 4   | Selection of 182 articles including 18 from Proquest, EBSCO 20, Emerald, 52, JSTOR 22, and Science Direct 70                                                                  |
| 5      | Stage 5   | Removed 130 papers including 7 repetitive articles, 120 inadequate, and 6 non-scientific                                                                                      |
| 6      | Stage 6   | Analyzing the remaining 40 articles                                                                                                                                           |
| 7      | Stage 7   | Conclusion and summary of the research                                                                                                                                        |

Source: Author own

The second stage included a quantitative study based on a questionnaire designed by the author. Data were collected from 53 participants in March and April 2023. The respondents were selected using a purposeful sampling technique. First, the author reached out to people in his professional and social networks, namely, LinkedIn and Facebook. Second, the potential respondents were identified by screening those who indicated their interest in human resource management and the HR industry in general. Third, those who met the inclusion criteria were contacted and invited to participate in the study.

The majority of the respondents (28%) were HR managers and senior level human resource specialists (see Table 2). In terms of their work experience, almost half of the participants (48%) had less than five years of experience working in the HR field. Moreover, 26% of the respondents had between six and ten years of experience, while 21% had more than 16 years of experience. Furthermore, the respondents came from different industries, with IT (28%) and services (20%) being the most represented. Concerning the size of the organization, 50% of the respondents worked in very large organizations (more than 500 employees), 16% worked in large organizations (250-499), and 20% worked in medium-sized organizations (50-249). The description of the sample is provided in Table 2 below.

Table 2: Respondents demographics

|                              |                                                                                                                          |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Position in the organization | Director/manager of HR department – 30% HR senior specialist – 30% HR junior specialist – 14% HR intern – 4% other – 22% |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------|

|            |                                                                                                                                                                                                            |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Experience | 1–5 years of experience – 50% 6–10 years of experience – 24% 11–15 years of experience – 4% over 16 years of experience – 22%                                                                              |
| Industry   | Banking – 4%, Construction – 2%, Finance and Insurance – 4%, Industry – 10%, Pharmaceuticals and Healthcare – 4%, Public Administration – 2%, Sales – 10%, Services – 20%, IT sector – 28% and other – 16% |
| Employment | up to 10 employees – 8% 10–49, employees – 6% 50–249, employees – 20% 250–499, employees – 16% over 500 employees – 50%                                                                                    |

Source: Author own develop

### Results

The first stage of the current research aimed to identify the attitudes of HR professionals toward the execution of AI in HR units. Four testimonials was offered to the participants, with whom they were asked to express their degree of agreement or disagreement. The results are displayed in the graphs below.

AI could augment the work of HR Units. The results of the survey prove that the majority of participants see AI as a useful tool for improving different human capital management processes. Specifically, 54% strongly agree with the statement, 30% rather agree, 6% rather disagree, and 10% are undecided. Thus, the attitude to the capacity of AI for improving HR work is positive. AI is a hazard to professional safety in HR units. The participants had a mixed attitude toward the idea that AI implementation may affect the job-related protection of HR workers. Almost partial of the participants (8% strongly and 38% rather disagreed) do not see AI as a threat, while 28% (22% rather agreed and 6% strongly agreed) believe that it can jeopardize their occupational safety, and 26% are undecided. Thus, there is an issue of concern with regard to a risk of AI, but it does not outweigh their overall attitude towards the implementation of the technology.

I am a supporter of the application of AI in HR work. The analysis of the results indicates that the majority of HR professionals are in support of implementing AI in HR work. 60% either strongly supported (24%) or rather supported (36%) the idea of incorporating the technology into HR activities. However, 28% were undecided, and 12% rather disagreed with the statement. Thus, the general attitude toward the implementation of AI is positive but comes with considerable hesitation.

I have too tiny information about AI in HR work. According to the results, over half (54%) of the participants agreed that they have too tiny information about AI in HR work, 22% strongly and 32% rather disagreed, and 20% were undecided. This result is particularly interesting given the generally positive sentiment toward the implementation of AI in HR activities and the concern about insufficient occupational safety in the face of technology implementation. Thus, the respondents demonstrated considerable cognitive dissonance about the idea of implementing AI in the field of human capital management.

The respondents were also asked to identify which technologies or applications are associated with the use of artificial intelligence (AI) in human resource (HR). From the results, it can be seen that the most common associations of HR professionals with AI technologies are chatbots and virtual assistants, which were identified by 84% of respondents. In second place, data management and analytics were associated with AI by 78% of respondents, while process automation was indicated by 76%. Smart search engines were linked to AI by 70% of respondents. The least common associations with AI in HR were algorithms (61%), HR data management systems (50%), and augmented reality (AR) for training (43%).

In general, it can be concluded that the term artificial intelligence primarily associates with technologies that automate processes, provide access to information, and collect and analyze data in the context of HR. The comparative lack of references to such concepts as algorithms, HR information systems, and AR suggests that respondents have a predominantly instrumental perception of AI, focusing on specific technologies and automation functions.

Respondents identified various areas of human resource activities where artificial intelligence (AI) could be applied. Recruitment was found to be the area where the use of AI was most suitable, as 90% of participants indicated its appropriateness for employee selection. At the same time, 86% of participants identified areas related to recruitment, chatbots, and virtual assistants as AI applications highly suited for HR purposes because they could be used for communication with job applicants at various stages of the selection process.

The results also demonstrated that participants identified opportunities to apply AI in other areas of human resource management. Onboarding was found to be a suitable area where AI could be applied, as indicated by 70% of participants. Similarly, 60% of respondents identified employee development as an area where AI could be applied. However, participants were less willing to apply AI for employee evaluation, and only 52% indicated the appropriateness of using AI for this purpose. Finally, only 24% of participants identified using AI for employee dismissal as an appropriate application of AI in HR activities.

In summary, the results of the study demonstrated that most respondents were willing to use AI for assisting with recruitment and training but were less willing to use this technology for making decisions with regard to employee dismissal.

HR professionals see various benefits and drawbacks in implementing artificial intelligence in the workplace. The most common benefit is the possibility to automatize routine tasks, which was mentioned by almost all interviewees (94%). Such tasks may include the processing of the same documents in a circle, answering frequently asked questions, or filling out identical tables. The second most numerous advantage is the ability of AI to analyze big data, which was mentioned by 90%. Processing and organizing information about various aspects of employees, such as recruitment, career development, professional growth, potential, and performance, can be a complex and demanding process, which requires high skills of analytics and management. Therefore, respondents underline the ability of AI to help HR professionals in this complex work. Finally, the third common advantage is the

possibility to increase the speed of work, which was mentioned by 72%. It can be especially beneficial for automatizing calculation or other routine and time-consuming operations.

However, when considering the implementation of AI in different fields, including the workplace, it is essential to consider possible drawbacks and concerns. Thus, the most common concern related to the application of AI in HR is the absence of empathy and a “human” approach, which was mentioned by 82% of respondents. Indeed, in the modern workplace, effective communication, empathy, and other soft skills are vital components of work, which can hardly be substituted by a virtual assistant. The second most frequently mentioned concern is the inability of virtual assistants to understand complex issues or statements from employees, which was noted by 72% of respondents. For many languages, including English, understanding the meaning of statements can sometimes be challenging, even for humans. Therefore, if a virtual assistant cannot comprehend the meaning of a sentence or a word, its credibility and effectiveness can be impacted. The third most frequently mentioned concern is the lack of creativity, but it was mentioned by only 48% of respondents. Thus, Table 3 below presents several other benefits and drawbacks mentioned by the respondents.

Table 3: Advantages and disadvantages of using AI in HR Process

| S. No. | Advantages                                    | Disadvantages                                                                       |
|--------|-----------------------------------------------|-------------------------------------------------------------------------------------|
| 1      | Ability to analyze big data – 90%             | Lack of creativity – 48%                                                            |
| 2      | Elimination of so-called “human” errors – 66% | Lack of understanding of complicated issues, statements by virtual assistants – 72% |
| 3      | Possibility to automate routine tasks – 94%   | Difficulty in understanding and implementing software or algorithm – 32%            |
| 4      | Speed of operation – 72%                      | Lack of empathy and “human” approach – 82%                                          |
| 5      | Lack of emotion in decision-making – 48%      | Machines taking people’s jobs – 28%                                                 |

Although the respondents’ attitudes towards the use of artificial intelligence in the human resource area are generally positive, the research results suggest that AI has been implemented to a very limited extent. Almost half of the respondents (44%) indicated that their organization does not apply artificial intelligence at all in the human resource departments, while 48% of respondents stated that it is used to a small extent. Only 6% of respondents indicated that they use AI in most of the HR processes, while 2% of them said it is used extensively. The research results suggest that the actual use of AI in the human resource area is significantly lower than the recognition of its benefits. To sum up, although Polish enterprises are aware of the potential application of artificial intelligence and its advantages, its current use in the HR departments is very limited.

The analysis indicates that the extent of artificial intelligence (AI) adoption in human resource processes will not significantly change in the nearest future – no more than five years from now. For instance, 44% of the respondent organizations indicated that they do not intend to apply AI in human resource management. Furthermore, 14% of the organizations plan to adopt AI technology in human resource management in the next one or two years, and 8% expect to apply it in three to five years. 34% of the respondents were undecided whether to integrate AI technology into their human resource management processes. Therefore, the data suggest that even though many respondents recognize the potential of AI applications in human resource management, most organizations will not adopt it in the closest future. However, the relatively significant percentage of undecided respondents means that the adoption rate of AI technology in human resource management can considerably increase if these organizations gain enough experience with AI to develop effective strategies.

### **Discussion**

The results present a positive view of HR professionals towards the use of AI. These results align with the previously conducted research among Hungarian HR professionals, which also indicated generally positive attitudes towards AI. Additionally, the same source revealed that HR professionals did not expect to lose their jobs as a result of increased robot usage in the workplace (Karacsony, 2022; Mukhtar et al., 2019).

On the other hand, previously conducted research indicates that interactions between human workers and robots present several challenges, including resistance towards accepting robots as colleagues, concerns regarding job loss, difficulties in communication, limited AI knowledge, and the difference between human and robotic performance, considering that robots do not require sleep (Arslan et al., 2022). As the results of the current research indicate, a significant portion of respondents believed their knowledge of AI was inadequate. This presents a challenge towards the increased usage of AI in the workplace since a substantial portion of HR professionals hold negative views towards its implementation, which could hinder its progress within the organizations. This result can be compared to research conducted among other employee groups, which indicated that approximately half of the respondents would be interested in seeing innovations implemented within the human resource field (Mubarakshina et al., 2022). In sum, the research suggests an interesting combination of positive attitudes towards AI coupled with poor knowledge. While the majority of HR professionals are generally open to the idea of using AI, the lack of understanding of technology and its implications can limit their ability to positively incorporate it into the workplace environment.

While the findings indicate that concerns over the lack of an emotional and human approach to employees is one of the main disadvantage identified by HR professionals as part of second research question, it is in line with studies that have demonstrated the limitations of AI in mimicking human empathy, understanding and interaction (Khattak et al., 2021; Salim et al., 2016; Meduri & Yadav, 2021; Khattak et al., 2017). At the same time, respondents identified many potential benefits derived from the use

of AI, namely its ability to automate routine activities and process large volumes of data as well as speed up HR-related tasks. These findings are aligned with previous research that also reported several advantages stemming from the application of AI in HRM (Karacsony, 2022). Thus, the findings suggest that HR professionals are aware of AI as a potentially valuable tool while recognizing its limitations in areas requiring human interaction as well as empathy. The findings also address the third research question and highlight that despite generally positive attitudes towards AI and its potential benefits, relatively few organizations have implemented AI in their HR processes and only a limited proportion plan to introduce it in the future. This is in line with previous research that has indicated that the practical application of AI in HR has not developed as rapidly as might have been expected given the increased number of academic publications and the increased interest in AI technologies (Nankervis et al., 2021; Khattak et al., 2019). Several factors can contribute to this implementation gap, including concerns regarding data, limited understanding of how to effectively leverage analytics, unclear governance arrangements, and competing organizational priorities (Bekken, 2019). In addition, organizations need to consider compliance with existing as well as emerging legal requirements governing the use of AI as well as employee data (Gay & Kagan, 2018). Such requirements may particularly relevant should AI be considered to analyze employee information, monitor health and well-being as well as evaluate employee performance as well as efficiency. Consequently, the limited implementation of AI in HRM may not necessarily be linked to the lack of interest on the part of HR professionals but rather the fact that organizations are addressing technological, organizational, ethical as well as legal challenges before embracing AI more fully.

### **Conclusion**

The research helps to fill a gap in the literature by investigating the extent to which the human resource (HR) departments currently apply artificial intelligence (AI). The study also explores HR professionals' perceptions of the potential benefits and drawbacks of such implementation. The generally positive attitudes discovered in the research may indicate that there is likely to be further adoption and transformation of the functions and practices in the HR area. In a business context, the findings allow companies to evaluate both the benefits and challenges associated with implementing AI in human resource management (HRM). In particular, it is essential to provide proper training for HR personnel to acquire the necessary competencies to work with AI-based technologies. Additionally, managers should formulate a clear strategic vision regarding the role, scope, and use of AI in the human resource area.

Several limitations should be acknowledged, including that the study used a relatively small and deliberately selected sample, which prohibits generalizing the findings to the larger population. Secondly, the sample was dominated by very large organizations and those operating in the IT and services sectors, which may have affected the observed perceptions and levels of AI adoption. Thirdly, the dynamic nature of the economy and technology development constitutes a significant limitation

as the current push for innovation may prompt organizations to transform their HR practices at a faster pace than suggested by the present findings.

The future research should therefore explore how HR departments evolve as they embark on the increased adoption of AI, including potential shifts in their roles and patterns of collaboration with AI, robots, and humans. Further investigation is needed to elucidate how the attitudes, digital literacy, and expectations of younger generations influence the adoption and development of AI-supported practices in the human resource area. Longitudinal analyses would be particularly valuable to assess how AI adoption and HR transformation unfold over time.

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