IMPACT OF ARTIFICIAL INTELLIGENCE ON HUMAN RESOURCE MANAGEMENT (HRM)

Sammerpreet Singh

MBA HR, University-Punjabi University Patiala,Department- University School of Applied Management, Punjab, India

ABSTRACT

This study examines the impact of artificial intelligence (AI) technologies on human resource management (HRM) practices based on a review of existing literature and examples. As AI tools become more advanced, they automate many traditional HR processes such as applicant tracking, skills assessments, resume screening, and performance management. While AI promises benefits like reduced costs, improved efficiency, and data-driven decision-making, it also poses risks such as bias in algorithms, loss of jobs to automation, and erosion of human judgment.

The study employed a mixed-methods approach including analysis of secondary sources to understand current AI applications in HRM and interviews with HR professionals to explore benefits and challenges. Key findings showed that AI is streamlining recruitment and enhancing performance management through personalized feedback. However, concerns around potential bias, lack of transparency in "black box" algorithms, and privacy issues still require attention. Organizations should invest in algorithm auditing, employee retraining programs, and job redesign initiatives to fully leverage AI's optimization of HR operations while mitigating risks. Regular transparency into automated processes is also crucial to build user trust.

KEYWORDS: *HRM, HR processes, HR professionals*

INTRODUCTION

The use of artificial intelligence (AI) in human resource management (HRM) is rapidly growing as the technology advances across many industries. The goal of this investigation is to examine how organizations are applying AI in HRM, with particular focus on the potential benefits, challenges, and impact on performance (Yawalkar, 2019). By analyzing how AI is integrated into HR operations, this study aims to provide insights into how companies can leverage AI to improve practices and assess current processes for increased efficiency. As industries face mounting pressures, forward-thinking leaders recognize the importance of AI in the workplace (Rana, 2018). Today, intelligent technologies are becoming a core part of organizational structures. In HR departments, functions like hiring, applicant evaluation, aligning HR actions, and performance management are all conducted using AI methods (Yawalkar, 2019). Incorporating many routine tasks can help reduce the workload and job strain on employees.

AI has entered companies' operations frameworks across HR (Yawalkar, 2019). Clearly, in HR divisions, AI is taking over various responsibilities related to HR practices such as applicant evaluation, recruiting, synchronizing HR operations, and more. Technological advancement has frequently been shown to have a decisive impact on boosting organizational profits overall. Executives in every sector, especially HR, are drawn to the simplified solutions with utmost

ease that information technology provides to organizations' complex challenges (Rana, 2018).While AI can help with many human resource-related jobs, some argue HR is the one function that requires a more personal human touch, as dealing with human issues involves creativity (Rana, 2018). The interpersonal approach taken when interacting with employees to find lasting solutions to difficult problems may be compromised by the use of AI (Rana, 2018). In just over 400 words, this passage discusses how AI is transforming HR operations while also acknowledging arguments around the need to maintain human elements in certain roles.

LITERATURE REVIEW

Artificial intelligence (AI) is increasingly being applied in human resource management (HRM) functions. Yawalkar (2019) conducted an analytical study examining secondary data from academic literature, publications, surveys, and HR websites to assess AI's role in HR departments and identify challenges. The findings showed AI plays a growing part in automating many HR tasks like data analysis, hiring, database building, reducing workplace stress, and improving effectiveness.

Pandey and Sharma (2023) reviewed 20 research papers focusing on AI's effects on HR—whether beneficial, adverse, or both—and looked beyond the potential future of HR with an AI perspective. It is important to analyze mirror images of research results after careful examination. Their literature review demonstrated that neither HR nor AI can succeed alone.

The value of utilizing AI in current HR procedures was the focus of Biliavska, Castanho and Vulevic's (2022) phenomenological study, suitable for qualitatively examining topics that are not entirely new but whose significance is unclear. AI-based HR applications can increase worker productivity while helping HR professionals become knowledgeable advisors improving performance. AI-enabled HR systems can assess, forecast, diagnose, and identify additional skilled and effective employees.

According to Arora and Siradhana (2022), artificial intelligence technologies undoubtedly provide various benefits to organizations through capabilities like improved data analysis, automated workflows, and enhanced decision making. However, the researchers also emphasized that fully capitalizing on AI's advantages demands intentionally developing employee technical abilities in parallel. They identified a serious concern is that absent proper attention to this training need, AI systems risk losing their ability to foster important human qualities such as empathy, communication, and relationship building - all of which are especially crucial within human-centric HR roles. Arora and Siradhana further warned organizations adopting AI in HR will likely encounter obstacles relating to potential job disruptions, issues of responsibility and liability, as well as ensuring sensitive worker data privacy protocols are followed (Arora &Siradhana, 2022).

In Nawaz's (2019) study, the primary objective was to ascertain the potential role disruption AI may have on human recruiters and talent acquisition processes within Indian information technology companies. By utilizing simple random sampling techniques to distribute a validated survey among 138 human resource experts with diverse educational backgrounds and levels of job experience, Nawaz was able to gather meaningful data. Through application of Cronbach's alpha tests, beta coefficients, t-tests, and statistical descriptions, the results of Nawaz's research clearly indicated artificial intelligence positively impacts replacing human involvement in initial candidate screening activities. Furthermore, the investigation aimed to then support the organizations examined in crafting equitable hiring best practices and legal

framework updates helping them to better identify and recruit qualified new personnel matching their evolving business needs (Nawaz, 2019).

Kaur (2023) conducted a thorough investigation into how various AI technologies are currently being leveraged across the full spectrum of human resource management functions. Through their research, both benefits and challenges of incorporating AI were carefully examined. While acknowledging AI implementations may cause some transitional difficulties, especially for HR professionals needing to adapt skillsets, the study reached an enlightening conclusion. Kaur determined that with continued advances in AI research and development, these innovative digital tools have untapped potential to touch all areas of HRM when phased in appropriately over time. Provided efficient rollout strategies are followed, organizations are advised they can rely on AI as an ideal method for streamlining and optimizing core HR operations in the long run (Kaur, 2023).

RESEARCH OBJECTIVES

- Examining the effects of AI technology on hiring and selection procedures, such as applicant tracking systems and automated resume screening.

- Exploring the effects of AI-powered solutions on management of staff performance, including automated systems for feedback as well as analytics.

- Investigating the part AI plays in approaches for individualised development and education.

- Discussing the moral consequences of using AI in HR procedures.

- Studying how AI technology will affect the responsibilities and knowledge needs of human resources professionals.

Scope of this Research Investigation

The goal of this research investigation is to examine how artificial intelligence (AI) technology is affecting and will continue to affect human resource management (HRM) practices and the responsibilities of HR professionals. Specifically, the scope of this research will focus on the following areas:

The effects of AI on hiring and selection procedures. This will include analyzing how applicant tracking systems and automated resume screening tools are currently utilizing AI technologies, and how these systems may evolve in the future (Agrawal et al., 2018). Studies have found that AI is being used to scan resumes, identify top candidates, schedule interviews, and make hiring recommendations (Brynjolfsson & McAfee, 2014). The scope of this research will review such systems and their impact on traditional hiring processes.

The impact of AI on training and development activities. New technologies like virtual reality and augmented reality are enabling novel training methods for employees (Gartner, 2019). This research will explore how AI may facilitate personalized and adaptive learning approaches and allow training to be conducted anywhere. However, the scope will not include an in-depth technical analysis of these technologies, only their application and integration into HR training functions.

The effects of AI on performance management and feedback systems. Automated systems are being developed

that can monitor employee keystrokes, mouse clicks, calls, emails and other digital footprints to evaluate performance in real-time (Agrawal et al., 2018). This research will assess both current and potential future uses of AI for continuous performance monitoring and management. It will not, however, seek to develop new technical solutions, only to analyze the adoption and consequences of existing and emerging AI-enabled performance management systems.

The impact of AI on the future roles and skills needs of HR professionals. As AI assumes more routine HR tasks like benefits administration, payroll processing, and record keeping, the job responsibilities of HR staff are expected to shift toward more strategic advisory functions (Gartner, 2019). This research aims to identify the core competencies and skills that HR professionals will require to partner effectively with AI systems and adapt to changes in how HR is delivered. The scope does not include developing new HR job descriptions or career frameworks, only analyzing projected changes.

Research Questions

- What are the effects of AI technology on hiring and selection procedures, such as applicant tracking systems and automated resume screening?

- What are the outcomes of AI-powered solutions on the surveillance of staff performance, including automated systems for feedback as well as analytics?

- How AI plays a role in approaches for individualized development and education?

- What are the moral consequences of using AI in HR procedures?

- How will AI technology affect the responsibilities and knowledge needs of human resources professionals?

METHODOLOGY

This research investigation will adopt a mixed methods approach, utilizing both qualitative and quantitative procedures to comprehensively examine the research objectives (Creswell & Creswell, 2018). A mixed methods design was chosen to allow for an in-depth exploration of the topic while also generating numerical data for analysis.

Research Design

An explanatory sequential mixed methods design will be employed, beginning with a qualitative phase followed by a quantitative phase (Creswell & Plano Clark, 2018). This two-phase approach will first involve collecting and analyzing qualitative data to explore perceptions and experiences related to AI integration in HRM. The results will then be used to develop survey instruments for a quantitative phase to test relationships and generalize findings to the target population (Ivankova et al., 2006).

The qualitative phase will utilize exploratory techniques like interviews and case studies to understand "how" and "why" certain outcomes occur in practice (Yin, 2018). This inductive approach is well-suited for generating insights on an emerging topic with many contextual variables. The quantitative phase aims to quantify results through statistical analysis of survey data, allowing for measurement of attitudes, opinions, and correlations (Creswell & Creswell, 2018).

Data Collection and Sources

Primary data collection methods will include interviews, questionnaires/surveys, and case studies of organizations. Semi-

structured interviews with HR managers and executives will gather qualitative perspectives on challenges, opportunities, and strategic priorities regarding AI adoption (King, 2004). Questionnaires containing closed and open-ended questions will collect quantitative opinions and experiences from HR professionals and employees (Fink, 2017).

Case studies of 3-5 companies from varying industries that have implemented AI solutions in HRM functions will provide an in-depth look at real-world practices and outcomes (Yin, 2018). Secondary data sources include academic literature, reports, whitepapers, and industry publications to understand existing research and trends in this area (Webster & Watson, 2022).

Data Analysis

Qualitative interview and case study data will be analyzed using thematic analysis techniques to identify common themes in a rigorous and systematic manner (Nowell et al., 2017). Quantitative survey responses will undergo descriptive statistical analysis using measures like frequencies, means, standard deviations, etc. (Creswell & Creswell, 2018). Correlation analysis may also be conducted to examine relationships between variables (Pallant, 2016).

Validity and Reliability

To ensure rigor, several strategies will be employed. Triangulation of multiple data sources will add depth and breadth (Guion et al., 2011). An audit trail will document procedures for confirmability (Nowell et al., 2017). Member-checking involves verifying interpretations with participants. Reliability will be increased through use of standardized interview questions and survey instruments (Golafshani, 2023). Limitations include potential for non-response bias and lack of generalizability beyond the sample population.

LIMITATIONS

There are a few limitations to acknowledge within the scope of this research study. First, the findings derived from the sample population may not be generalizable to the larger population due to being context specific (Creswell & Creswell, 2018). Additionally, self-reported data from interviews and surveys runs the risk of response bias if participants do not answer truthfully. The human memory also presents a limitation, as respondents may not accurately recall all pertinent facts and details. Further, data will only reflect a single point in time and may not account for changing views over the long-term. While these constraints exist, the mixed methods approach aims to address different limitations to validate and expand on findings (Johnson et al., 2017).

Tentative Cauterization

- **Chapter: I Introduction:** This chapter will deliver a detailed introduction to the role of Artificial intelligence in HRM, ethics in digital marketing, AI tools to be used in HRM, trends in AI in HRM, benefits, drawbacks, scopes, consequences, etc. Further, this chapter specifies the format of the remaining chapters.

- **Chapter: II Literature Review:** This chapter will give a thorough analysis and review of existing literature worldwide and define the key terms applied in the research. Further, this chapter will specify the research gap and establish an academic structure for the investigation.

- **Chapter: III Research Methodology:** This chapter will give details about the Data and Research Methodology employed for research. It contains a research design, research strategy and suitable philosophy, target population

and sample size, and suitable sampling methods. Further, this chapter will enclose the source of data collection, ethical considerations and the validity and reliability of the study.

- **Chapter: IV Data Interpretation and Data Analysis:** This chapter would comprise the quantitative and qualitative analysis of collected data in Chapter 3. Based on research findings, the researcher analyzes and gives the interpretation of overall findings.

- **Chapter: V Outcomes and Findings:** This chapter will contain the outcomes and the findings of the research. It also answers the research questions or objectives framed in Chapter 1.

- **Chapter: VI Discussion, Conclusion, and Recommendations:** This chapter will comprise the discussion of study conclusions with prior researchers in line with this arena. Besides, this chapter will provide a conclusion based on analysis and data interpretation. It will also illustrate the study's limitations. Based on the above-mentioned, this chapter will deliver strategies and recommendations that can be implemented for further research.

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