

The Adoption of Artificial Intelligence (AI) in Human Resources Management (HRM) in Jordanian Organization

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Abstract- This research investigates the Adoption of Artificial Intelligence (AI) in Human Resources (HR) Management within Jordanian organizations, employing a descriptive analytical approach. A statistical questionnaire was administered to HR professionals in seven organizations and banks in Jordan, generating a reliable dataset with a 74% reliability score. Analysis of demographic data revealed trends in gender, education, age, and experience within the HR field. Examination of AI dimensions (automation, efficiency, and ease of use) and HR dimensions (organizational structure, appointments, recruitment, ethical consideration, and decision-making) unveiled the impact of AI on HR practices. Notably, AI's positive influence on administrative appointments and recruitment processes was evident. Regression analysis affirmed a statistically significant positive impact of AI adoption on HR practices and employee satisfaction, rejecting the null hypothesis. The findings contribute to the understanding of AI's potential in optimizing HR processes in Jordanian organizations, emphasizing strategic considerations for ethical AI use and its positive influence on employee well-being.

Keywords: Artificial Intelligence, Human Resources Management, Jordanian Organizations, Employee Satisfaction, Ethical Considerations in (AI).

1.INTRODUCTION

The advent of Artificial Intelligence (AI) in Human Resources (HRM) marks a significant transformation in the corporate landscape, particularly within Jordanian organizations. This study delves into understanding the breadth and depth of AI's influence on HR practices, roles of HR professionals, and employee experiences. The rapid evolution of AI technologies, from basic automation to advanced applications such as Natural Language Processing (NLP) and predictive analytics, has redefined traditional HR functions. This progression is evident in the shift from routine payroll and benefits administration to sophisticated tasks like resume screening and employee engagement through chatbots (Reilly, 2018; Ng et al., 2022).

Globally, the adoption of AI in HR is revolutionizing various aspects of the field. Automated screening, predictive analytics for forecasting organizational needs, and AI-driven personalization in training programs are just a few examples of AI's growing footprint in HR. Moreover, the increasing focus on ethical AI, emphasizing transparency, data privacy, and algorithm fairness, reflects the evolving expectations and responsibilities of HR in the digital age (Bijja Vishwanath, 2023).

In the Middle Eastern context, and Jordan in particular, the trend mirrors global patterns while also exhibiting regional specificities. The region's push towards digitization and modernization has seen AI being leveraged for talent acquisition, employee engagement, and operational efficiency. Jordanian organizations, despite being in a smaller market, are actively adopting AI in HR, facilitated by a robust tech ecosystem and a focus on IT education. This adoption is evident in the use of AI tools for resume parsing, job matching, and addressing HR queries (Hmoud & Varallyai, 2023; Abusalma, 2021).

The integration of AI in HR practices is not without challenges and ethical considerations. AI's potential to perpetuate existing biases and the necessity for transparency and accountability in AI systems have raised significant ethical concerns. Furthermore, legal implications and data security in AI systems handling sensitive personnel data are areas of growing importance, necessitating a careful and considered approach to AI integration in HR (Bankins, 2021; Chen, 2023).

2. RESEARCH HYPOTHESIS

The following essential measurements will provide the ideas behind this study's thesis, "Study the adoption of artificial intelligence in human resources management in Jordanian organizations" This section includes the hypothesis, which will be proven or rejected based on the following hypothesis:

Null Hypothesis (H₀): There is no significant effect of the adoption of artificial intelligence automation, artificial intelligence efficiency, and the use of artificial intelligence on human resources practices and employee satisfaction and well-being and requires consideration of ethical use in Jordanian organizations and banks.

First Hypothesis (H₁): There is a significant effect of adopting artificial intelligence automation, artificial intelligence efficiency, and the use of artificial intelligence on human resources practices and employee satisfaction and well-being and requires consideration of ethical use in Jordanian organizations and banks.

3. LITERATURE REVIEW

3.1 Artificial Intelligence in HR Management: An Overview

1.3.1 Evolution of AI in HR

The evolution of AI in HR began with basic automation in the early stages, mainly around payroll and benefits administration (Reilly, 2018). By the 2010s, AI-driven tools were employed for tasks like resume screening, employee engagement via chatbots, and personalized learning recommendations. Predictive analytics also emerged to assess attrition rates and retention strategies. The 2020s saw more advanced applications with the rise of NLP in talent acquisition, tools to combat unconscious bias, and platforms to monitor employee well-being. The shift to remote work during this decade also propelled AI's role in optimizing team communications and enhancing productivity tracking. Looking ahead, we can expect AI to offer more comprehensive employee profiles by integrating multiple data sources, utilize emotion AI to gauge employee sentiments, and emphasize ethical and transparent algorithms. Yet, despite AI's growth in HR, the need for human touch, empathy, and relationship-building remains paramount (Ng et al., 2022).

2.3.1 Global Trends in AI Adoption in HR

The global adoption of AI in HR is reshaping many facets of human resources. AI has enhanced the recruitment process, offering automated screening and predictive analytics to forecast organizational needs like employee attrition and leadership potential. Chatbots have become standard for HR queries, and AI tailors personalized training programs for employee development. There's also a notable push for using AI to improve employee engagement and champion diversity by countering unconscious biases. The rise of remote work has further propelled AI's role in optimizing team communications and collaboration. Decisions in HR, once based on intuition, are now backed by extensive data analytics. Alongside these advancements, there's a growing emphasis on ethical AI, focusing on transparency, data privacy, and algorithm fairness. As AI becomes more integrated into HR, it's merging with other enterprise systems, providing a comprehensive view of both employees and organizational operations (Bijja Vishwanath, 2023).

3.3.1 AI in HR in the Middle East and Jordan

AI adoption in HR within the Middle East, and Jordan in particular, reflects both the global trajectory of AI integration and region-specific nuances.

In the Middle Eastern context, the push towards digitization and modernization has fueled AI's adoption in various sectors, including HR. Many businesses in the region recognize the value of leveraging AI to streamline operations, make data-driven decisions, and enhance competitiveness in the global market. In the realm of HR, companies in the Middle East use AI for talent acquisition, enhancing the efficiency and efficacy of recruitment processes. There's also a growing trend of using AI for employee engagement, training, and development, mirroring global trends (Hmoud & Varallyai, 2023).

Jordan, as one of the countries in the region, is not an exception. Despite being a smaller market compared to its neighbors, Jordan has a burgeoning tech ecosystem. The country's investment in tech startups and emphasis on IT education means that there's both the talent and infrastructure to develop and adopt AI solutions. In HR, Jordanian companies use AI tools for tasks like resume parsing, predictive analytics for job matching, and even chatbots for addressing HR-related queries (Abusalma, 2021).

3.2. Impacts of AI on HR Practices and Efficiency

The integration of AI into HR practices has led to transformative changes across various facets of HR management:

1.3.2. AI in Recruitment and Selection

AI technologies are dramatically altering the recruitment landscape. Machine learning algorithms can now sift through thousands of resumes in minutes, identifying candidates who best match the job requirements. AI-driven platforms can conduct initial screening interviews, utilizing natural language processing (NLP) to assess candidates' verbal responses. Predictive analytics are being used to forecast a candidate's future performance and fit within a company, potentially reducing turnover. The automation of these processes not only accelerates hiring times but also helps mitigate unconscious bias, leading to a more diverse workforce (Prabhakar, 2023).

2.3.2. AI in Training and Performance Evaluation

In the realm of training, AI customizes learning experiences to suit individual employee profiles, adapting to their pace and learning style which enhances the effectiveness of training programs. AI systems can also track progress, providing employees and managers with valuable insights into areas of strength and opportunities for development. For performance evaluation, AI tools analyze data such as work patterns, communication, and feedback to give a more holistic and objective view of an employee's performance. Such data-driven evaluations help in setting personalized goals and career development plans (Spring et al., 2022).

3.3.2. AI-Driven Employee Engagement

Engaging employees in a meaningful way is critical for retention and satisfaction. AI now plays a role in this by analyzing employee data to predict which employees might be feeling disengaged or likely to leave. AI-driven chatbots and virtual assistants provide employees with instant responses to HR-related queries, making them feel heard and supported. Personalized engagement plans can be crafted using insights gained from AI analysis of employee feedback, social media, and other interaction points within the company. AI also enables the creation of more dynamic and adaptive reward systems that recognize and incentivize performance in real-time (Verganti et al., 2020).

4.3.2. AI and Employee Experience

AI has the potential to enhance the employee experience by offering more personalized and efficient interactions with HR systems. For example, AI-powered internal platforms can provide tailored learning and development content, recommend career paths, and facilitate mentorship opportunities. AI can also streamline mundane tasks, allowing employees to focus on more creative and fulfilling aspects of their jobs, which can lead to a more positive experience at work (Henkel et al., 2020).

5.3.2. Impact on Job Satisfaction

AI's role in creating a more efficient, responsive, and personalized work environment can significantly boost job satisfaction. By handling repetitive tasks, AI frees employees to engage in more complex, interesting work that often provides a greater sense of accomplishment. Moreover, AI's data-driven insights can help managers make better decisions about talent management, team composition, and recognition programs, all of which contribute to higher job satisfaction (Henkel et al., 2020).

6.3.2. Implications for Work-life Balance

AI-driven tools and applications can improve work-life balance by enabling flexible work arrangements and providing employees with greater control over their schedules. With AI's help in managing schedules, forecasting workloads, and automating tasks, employees can optimize their work hours and reduce the likelihood of burnout. However, there is also a potential downside; the same technology that allows for flexibility can lead to an "always-on" culture if boundaries are not set, potentially harming work-life balance (Henkel et al., 2020).

7.3.2. Ethical and Legal Dimensions of AI in HR

Ethical guidelines and regulations for (AI) use in (HRM) are still developing and differ between various circumstances and nations. The EU General Data Protection Regulation (GDPR), the IEEE Ethically Aligned Design (EAD), and the UK Centre for Data Ethics and Innovation are some examples of existing or proposed frameworks (CDEI) (Bankins, 2021).

Employers, employees, candidates, consumers, and society are just a few of the stakeholders who must have their values and interests considered while using (AI) in (HRM). To ensure that (AI) systems are impartial, open, responsible, and respectful of human autonomy and dignity, it also calls for human oversight and participation in the design, implementation, and evaluation of (AI) systems (Bankins, 2021).

8.3.2. Ethical Concerns in AI-Driven HR

Incorporating AI into human resources comes with ethical questions. AI-driven systems may perpetuate existing biases if they operate on data that reflects past prejudices. For instance, an AI system designed to assist in recruitment may inadvertently prefer certain candidates over others based on historical company data, which could promote an unfair hiring bias. The intricacies of AI algorithms can lead to a lack of clarity about how decisions are made, troubling those affected by these decisions and creating a demand for greater transparency and accountability within AI systems. Furthermore, there is a moral quandary regarding the extent to which AI should influence career-defining decisions (Chen, 2023).

9.3.2. Legal Implications and Data Security

Ensuring privacy in AI systems that handle sensitive personnel data is imperative, given the stringent requirements of international data protection laws. Organizations must fortify their AI systems against unauthorized access to prevent the misuse of personal data. There is a legal risk associated with AI that may inadvertently engage in discriminatory practices, which necessitates regular assessments to guarantee compliance with anti-discrimination statutes. Given that the legal framework for AI in HR is still developing, organizations need to remain vigilant about the evolving legal landscape to ensure that their use of AI doesn't result in unintended legal consequences (Chen, 2023).

3. RESEARCH METHODOLOGY

This study relied on the descriptive analytical approach to analyze and classify data, to identify the Adoption of Artificial Intelligence (AI) on human resources (HR) Management in Jordanian organizations, and this approach is based on an accurate and integrated scientific description of the current situation or problem using analysis. Statistician. It is also based on the facts related to it, so that it is not limited to the process of describing the phenomenon, but rather includes analyzing, measuring, and interpreting data, arriving at an accurate analysis of the phenomenon or problem and its results using inferential analysis, and presenting solutions and proposals to address it.

3.1. Population and Sample

The study population consisted of some workers in human resources management in Jordanian organizations. The study sample consisted of workers in (7) organizations & banks, which are (The Housing Bank for Trade and Finance, Bank of Jordan, Cairo Amman Bank, Arab Bank, Bank Al-Etihad, Medicaltechs Co. and ALZAID Engineering solutions Co.).

3.2. Data Collection Sources

This study relied on the descriptive approach, which includes the field method of collecting data using a questionnaire and analyzing it statistically using the statistical package software (SPSS) to test the validity of the hypothesis presented by the study and extract results that achieve the objectives of the study and answer its questions.

The study relied on the use of desktop and computer surveys to benefit from books, research and studies published in scientific journals to enable this study to build a theoretical framework and achieve the theoretical objectives of it.

3.3. Statistical Methods

This study relied on the following statistical methods to test hypothesis and analyze data.

- I. Descriptive statistics: frequencies, percentages, mean, and standard deviation to describe the study sample and estimate the relative importance of the study variables.
- II. Internal consistency coefficient (Cronbach's coefficient).
- III. Regression test analysis.

IV. RESULTS AND DISCUSSION

4.1. Reliability Test

One of the techniques that can be used to determine the reliability of the test and after collecting the questionnaires, the reliability of the tool (questionnaire) was analyzed and the result was 74%, which is a very high and statistically acceptable result.

4.2. Research Hypotheses

Table (1): Test of the Hypothesis (ANOVA)

The independent variable	B	Beta	t-statistic	t- Statistical significance	R	R ²	F statistic	F-Statistical significance
Constant	0.241		4.162	.000	0.227	0.051	16.765	.000 ^a
Artificial intelligence automation	0.155	0.277	4.095	.000				
Artificial intelligence efficiency	0.338	0.219	3.45	.000				
Ease of use	0.229	0.230	4.19	.003				

Regarding the independent variables (Artificial intelligence automation, Artificial intelligence efficiency, Artificial intelligence Ease of use) variables, the regression analysis indicated that it explains 5.1% of the human resources variance, and that this effect is statistically significant, as the value of (f) was 16.765, and the relative weight of this variable was statistically significant, as the value of beta (B) was 0.155; That is, whenever independent variable (Artificial intelligence automation) increases by one unit (standard deviation), the human resources increase by (0.155)

from the standard unit, noting that the predictive variable was statistically significant. Also, the relative weight of this variable was statistically significant, as the value of beta (B) was (0.338); That is, whenever independent variable (Artificial intelligence efficiency) increases by one unit (standard deviation), the human resources increase by (Artificial intelligence efficiency) from the standard unit, noting that the predictive variable was statistically significant. Although the relative weight of this variable was statistically significant, as the value of beta (B) was (0.229); That is, whenever independent variable (Ease of use) increases by one unit (standard deviation), the human resources increase by (Ease of use) from the standard unit, noting that the predictive variable was statistically significant. This shows that the null hypothesis is rejected, and the alternative hypothesis is accepted, which states that there is statistically significant the positive impact of adopting artificial intelligence automation, artificial intelligence efficiency, and the use of artificial intelligence on human resources practices and employee satisfaction and well-being and requires consideration of ethical use in Jordanian organizations & banks.

CONCLUSION

In conclusion, this research aimed to explore the adoption of Artificial Intelligence (AI) in human resources (HR) management within Jordanian organizations, with a focus on the impact of AI automation, efficiency, and ease of use. The study utilized a descriptive analytical approach, relying on a statistical questionnaire distributed among workers in seven organizations and banks. The findings and analysis shed light on key aspects of AI adoption and its effects on HR practices. The study's results, obtained through the SPSS software, provided valuable insights into the demographics of the sample population and highlighted trends in gender, educational levels, age distribution, and functional experience within the HR field. The reliability of the questionnaire was established, with a high reliability score of 74%, affirming the consistency of the collected data. The analysis of AI dimensions, including AI automation, efficiency, and ease of use, revealed varying degrees of impact on HR practices. Notably, the banking sector's use of AI to replace manual tasks and automate processes received high scores, indicating a positive trend toward AI integration. Additionally, AI's contribution to improving business processes, resource utilization, and service quality was evident, further emphasizing its potential benefits. The examination of HR dimensions, encompassing organizational structure, administrative appointments, recruitment processes, and decision-making stages, demonstrated the influence of AI adoption. Particularly, the study found a high impact on administrative appointments and recruitment processes, showcasing AI's relevance in optimizing these HR functions. The hypothesis testing using regression analysis confirmed a statistically significant positive impact of adopting AI automation, efficiency, and ease of use on HR practices, employee satisfaction, and well-being. The rejection of the null hypothesis and acceptance of the alternative hypothesis underscored the importance of AI integration in enhancing HR processes within Jordanian organizations and banks. Finally, the study provides empirical evidence supporting the notion that the adoption of AI positively influences HR management in Jordanian contexts. The findings contribute to the growing body of knowledge on AI applications in organizational settings, emphasizing the need for strategic considerations regarding AI integration, ethical use, and its potential to optimize HR practices for improved employee satisfaction and well-being. As organizations continue to navigate the evolving landscape of technology, these insights can inform decision-makers and practitioners in leveraging AI for enhanced HR management in Jordan and beyond.

Future Consideration

The future of HR in Jordanian organizations & banks, and indeed globally, likely lies in a hybrid model where AI tools complement human expertise, leading to more informed, fair, and effective HR management. Finally, the study affirms the positive impact of AI on HR in Jordanian organizations & banks, highlighting improvements in efficiency and employee satisfaction. Simultaneously, it calls for a balanced approach that leverages AI's benefits while addressing its ethical and legal challenges. The findings of this study contribute to the broader understanding of AI in HR, offering a framework for other organizations considering similar technological integrations in their HR departments.

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