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Research Article

The Impact Of Artificial Intelligence On Improving Human Resources Competencies In The King Hussein Business Park

Heba AL Daradkeh[1*], Khalid Yosuf A L-Zoubi[2]

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ABSTRACT

This study aims to assess the impact of artificial intelligence (AI) on human resource competencies in King Hussein Business Park (KHBP). The study population included senior and middle management managers in major companies within the park, with a total of 382 managers, and 269 questionnaires were analyzed. The results showed that there is a positive impact of AI on HR skills in KHBP, indicating the importance of using technology to improve work efficiency and human resource management.

Based on the results of the study that showed a positive impact of AI on HR meritocracy, the following recommendation can be made: Companies should invest in AI applications for HRM in a holistic and integrated manner, including the use of AI in recruitment and training processes, analyzing employee data, and improving the employee experience. Organizations should also ensure that investments are directed towards developing the skills and capabilities of employees to adapt to technological shifts and make the most of AI.

Keywords: Artificial Intelligence, Human Resources Competencies, The King Hussein Business Park.

Introduction

Artificial Intelligence (AI) is a field concerned with the development of systems and programs that have the ability to carry out tasks that require a high level of human intelligence, and AI has become an essential part of our daily lives, as it is used in a wide range of fields such as technology, medicine, marketing and others (Messeri & Crockett, 2024).

One of the most important aspects of AI is its impact on human resources, as AI is considered a transformative technology that may lead to radical changes in the labor market and in the nature of jobs that humans can do (Huang et al., 2024).

Understanding the impact of AI on HR skills is vital in today's era, as companies, organizations, and individuals must be aware of technological developments and how to use them positively to achieve success and prosperity (Giudici et al., 2024).

It is important to realize that AI does not necessarily mean replacing human workers, but can be a powerful partner that helps enhance work efficiency and improve performance. On the contrary, AI can help improve decision-making processes, guide strategies, and analyze data more accurately and quickly (Klauschen et al., 2024).

It is essential that human resources have the necessary skills and capabilities to adapt to and benefit from these transformations, so workers must develop their skills and learn new technologies to improve their performance and increase their value in the labor market (Elbadawi et al., 2024).

Thus, it can be said that AI represents both a challenge and an opportunity for human resources, and it is necessary to adopt positive attitudes towards this new technology and work on developing ourselves and our skills to achieve a balance between technology and humanity and continue to develop and progress (Kousha et al., 2024).

Moreover, AI can contribute to improving the employee experience and increasing job satisfaction, for example, AI can be used to analyze job performance data to provide accurate guidance to employees on how to improve their performance and develop their skills, and AI can be used to provide personalized and effective training to employees based on their individual needs (Islam, 2024).

In addition, AI can contribute to new and innovative job opportunities in areas such as software development, data analysis, and robotics. Thus, AI can encourage innovation and creativity in the labor market (Neumann et al., 2024).

In short, AI is an opportunity to improve the performance and efficiency of human resources, opening new horizons for development and progress. It is important to adopt a strategic approach to the integration of AI in the field of human resources and utilize its benefits positively to achieve the goals of companies and develop the skills and competencies of workers (Baydoun et al., 2024).

Studying the impact of AI on HR is an important topic in light of the rapid technological developments that many industries are witnessing. AI raises new challenges and opportunities for human resources in the modern work environment. The adoption of modern technology and AI can lead to structural shifts in the labor market and changes in skill requirements (Mia & Shuford, 2024).

Problem of the study

Previous studies provide mixed results on how artificial intelligence (AI) affects human resources (HR), with some studies suggesting that AI can improve HR efficiency and performance by improving decision-making processes and guiding strategies, while others suggest that AI may reduce the demand for human labor and increase unemployment in some sectors (Badrulhisham et al., 2014). Other studies suggest that AI may lead to reduced demand for human labor and increased unemployment in some sectors (Badrulhisham et al., 2024).

In addition, there is a growing concern among workers about the impact of AI on employment opportunities and retention of human jobs, as the adoption of new technologies and AI may lead to structural shifts in the labor market and changes in skill requirements (Thangavel et al., 2024).

Given these challenges and tensions, a comprehensive study is needed to understand how AI affects human resource skills and how the integration of technology and humanity can be improved to achieve sustainable development in the labor market (Xiao et al., 2024).

Analyzing the impact of AI on HR talent requires a deep understanding of how technology integrates with human labor. The study should focus on how to optimize recruitment and selection processes using AI, as well as assess its impact on skill development and employee productivity. The study should also include exploring ways to enhance the integration of technology and humanity to achieve sustainable development in the labor market (Ueda et al., 2024).

Literature Review

The concept of artificial intelligence is related to the intelligence of electronic and digital devices such as computers, robots and cellular devices, as artificial intelligence refers to the ability of these digital devices to perform the tasks required of them, and there are many definitions of the concept of artificial intelligence, including what Jasmin (2023) referred to as systems that are characterized by their ability to perform human intellectual processes such as the ability to think, learn from previous experiences, and discover meaning.

Ouyang et al (2023) defined it as the preparation and design of intelligent systems capable of understanding their environment, with the ability to take learning actions and increase their chances of success.

Luciana et al (2023) explained it as the intelligence shown by programs and machines as in the case of human mental abilities and their ways of working, such as the ability to deduce, learn and react to new situations that have not been previously programmed into the program.

As for the concept of human resource skills, Risya (2023) described it as a number of characteristics that contribute to increasing the productivity of the performance of the human element and help the organization to achieve business strategies in the markets in a competitive manner.

Evangelista et al (2023) defined it as the set of knowledge, skills, practices and attitudes, which the employees of the organization possess, which aim to provide a competitive advantage for the organization, win customer satisfaction, and continuously work to achieve the future goals of the organization.

The relationship between AI and HR skills relates to the impact that AI technologies can have on the field of human resources in organizations. AI can help improve employee selection processes, analyze performance, and guide HR policies and strategies (Gomes & Ashley, 2023).

For example, AI techniques can be used to analyze big data to identify the traits and skills that make employees successful at work, thereby improving selection and recruitment processes. AI can also be used to develop machine learning and self-training systems for employees, helping them improve their performance and develop their skills (Rao et al., 2023).

Overall, it can be said that AI can be a strong partner for the HR department in improving HR management and achieving the organization's goals better and more efficiently (Perifanis & Kitsios, 2023).

In addition, AI techniques can be used to analyze data to better understand the needs of employees and guide HR policies and strategies. For example, AI can be used to analyze data on employee performance, discipline, and job satisfaction, and based on this data, the right decisions can be made to improve the work environment and increase productivity (Bharadiya, 2023).

Thus, it can be said that AI can contribute to improving human resource management, enhancing employee performance, and increasing the overall efficiency of the organization. It is important that AI technologies are

used responsibly and ethically, ensuring that they serve humanity and enhance the role of humans in the labor market rather than replacing them (Bharadiya, 2023).

In addition, AI can be used to develop robotics and automation systems to optimize production and manufacturing processes in companies. AI-enabled robots can help perform routine tasks faster and more accurately, minimizing human error and increasing production efficiency (Jain et al., 2023).

Furthermore, AI can be used in the development of customer relationship management (CRM) systems to improve customer experience and satisfaction. AI technologies can analyze customer data and guide companies towards providing personalized services and products that better meet customer needs (Kumar et al., 2023).

Due to the importance of artificial intelligence and its various applications, many studies have been conducted that dealt with the concept of artificial intelligence from different aspects, such as the study of Nishad et. al. (2024), whose results showed a positive impact of artificial intelligence applications on human resources, and Pawan et. al (2022), which found that artificial intelligence contributes to developing employees' skills, and identifying the basic skills that are necessary to refine their skills to carry out the required tasks. The study (2024) et al Talebi, which found that there is a statistically significant relationship between the two variables of human resource efficiency and organizational excellence. Suniar (2023), whose results showed that HR competencies in improving employee performance were good but still not optimal, because employees are highly focused on the goals of specific tasks, without balancing them to develop their capabilities.

Based on the above, the study proposes the following hypothesis :

First hypothesis: There is no statistically significant effect of AI with its dimensions (digital applications, knowledge representation, and automatic learning) on human resource competencies at King Hussein Business Park.

Conceptual Model

Based on the previous literature support and hypothesis development, following hypothesis has been developed as shown in Figure 1.

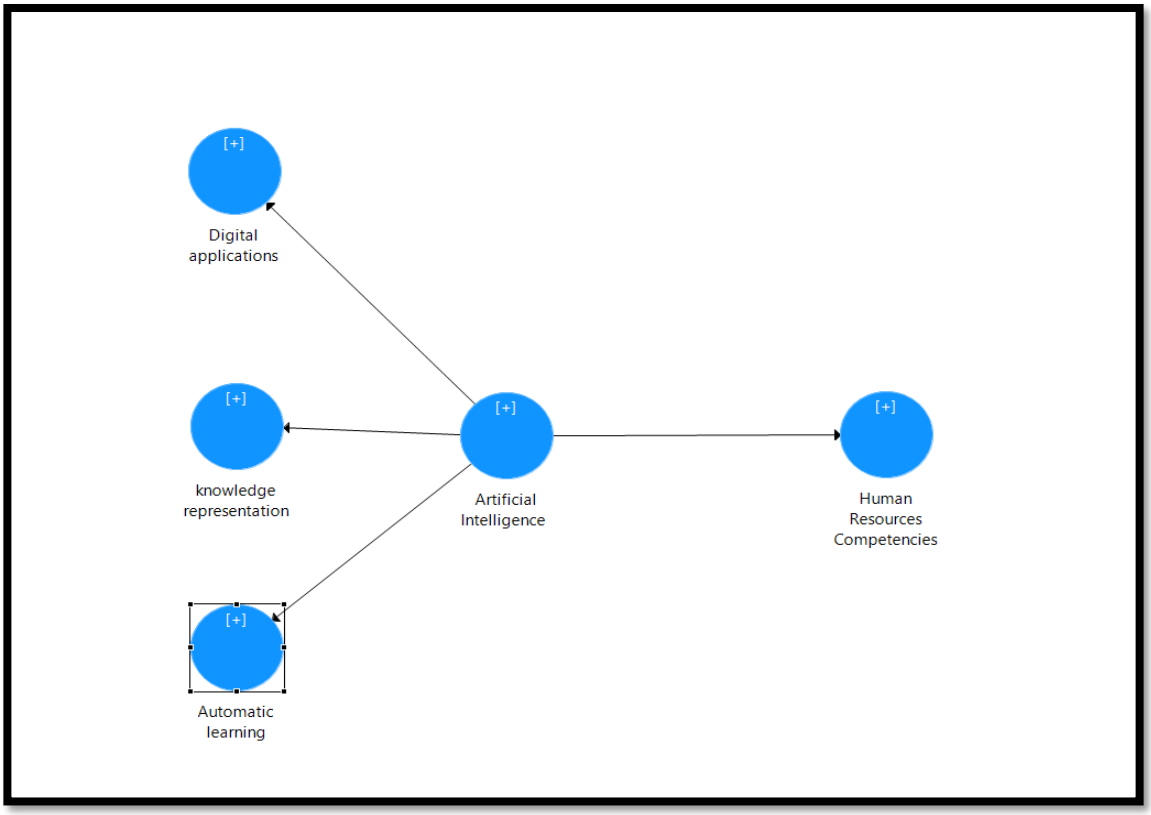

Figure 1. Conceptual framework

Methodology

Study population and sample

The study population consisted of all senior and middle managers in large companies in King Hussein Business Park, specifically the companies covered by logistics and artificial intelligence .(382)

Due to the small size of the study population, the researchers used a comprehensive survey strategy by distributing (382) questionnaires to all senior and middle managers in the companies covered by logistics and AI in KHBP, and (283) questionnaires were returned, i.e. (74%). After scrutinizing them, (14) questionnaires were excluded due to incomplete answers (3.7%) of the original distribution, thus the number of questionnaires valid for analysis reached (n=269), which constituted (70.4%) of the original distribution.

Measurement model

Partial least squares (PLS) structural equation modelling was used in the current work to quantify the performance of the more effective model. To make this measurement, Smart PLS was used. This quality indicator takes into account average variance extracted (AVE), confirmatory factor analysis (CFA), convergent validity, and discriminant validity. Validity and reliability are the two main criteria used in PLS analysis (Hamdollah & Baghaei, 2016). This is due to the fact that estimating the model's quality is the primary goal of model measurement. Both discriminant and convergent validity evaluations were done to make sure the construct under investigation is valid.The average variance extracted (AVE) values and item loading values were used to test convergent validity, sometimes referred to as internal consistency of the variables. The consistency of the items was evaluated in this convergent validity analysis.

Composite Reliability and Validity

Furthermore, the factor loadings, validity, and reliability of the data gathered were evaluated using PLS-SEM. Information on the item factor loading, validity, and reliability for the PLS measurement model is detailed in Table 2. Cronbach's alpha test value, which must be 0.70 or greater, is typically used to evaluate an item's internal consistency (Fornell & Larcker, 2014). Cronbach's Alpha and composite reliability scores for the variables under investigation were both higher than 0.70. Because the average variance extracted (AVE) values for discriminant validity were higher than 0.50, convergence validity and high reliability were demonstrated (Fornell & Larcker, 2014). The composite reliability values, which ranged from 0.841 to 0.902, were over the threshold range of 0.70.

Table 2. Composite reliability, Cronbach's Alpha, and AVE values

Construct	Item	Loadings	CA	CR	AVE
Digital applications	Q1	0.865	0.792	0.862	0.841
	Q2	0.801	0.735	0.855	0.833
	Q3	0.925	0.861	0.874	0.854
	Q4	0.933	0.893	0.888	0.868
	Q5	0.946	0.901	0.895	0.875
	Q6	0.764	0.701	0.841	0.820
knowledge representation	Q7	0.966	0.931	0.901	0.860
	Q8	0.904	0.874	0.844	0.804
	Q9	0.922	0.895	0.865	0.825
	Q10	0.937	0.927	0.907	0.867
	Q11	0.945	0.937	0.918	0.891
Automatic learning	Q12	0.822	0.888	0.842	0.832
	Q13	0.834	0.976	0.913	0.891
	Q14	0.865	0.938	0.905	0.883
	Q15	0.944	0.854	0.814	0.783
	Q16	0.933	0.762	0.742	0.674
	Q17	0.971	0.883	0.839	0.792

Note: CR=composite reliability; AVE=average variance extracted; CA= Cronbach's Alpha

Discriminant Validity

Every research approach must also demonstrate that it has discriminant validity. Discriminant validity describes how one predictor variable differs from some of the other latent constructs (Fornell & Larcker, 2014). To assess the discriminant validity, the AVE value, associated factor variability, and other range of fundamental should all be lower than the AVE value of the independent components (Hamdollah & Baghaei, 2016). Discriminant validity, which includes comparing an idea to other constructs, serves to validate it. As soon as we were confident that the variables' reliability and validity fulfilled all standards, researchers conducted additional study for structural analysis.

Table 3. Discriminant validity

	Digital applications	knowledge representation	Automatic learning	Human resources competencies
Digital applications	0.931			
knowledge representation	0.893	0.910		
Automatic learning	0.862	0.745	0.965	
Human resources competencies	0.762	0.654	0.745	0.901

Hypothesis testing results:

Results of the analysis of the first hypothesis: There is no statistically significant effect of artificial intelligence in its dimensions (digital applications, knowledge representation, automatic learning) on human resources competencies in the King Hussein Business Park.

Table (): Results of testing the first main hypothesis

	Original Sample	T Statistics	P Values
Artificial intelligence -> Human resources competencies	0.976	4.064	0.000
R^2=0.952			

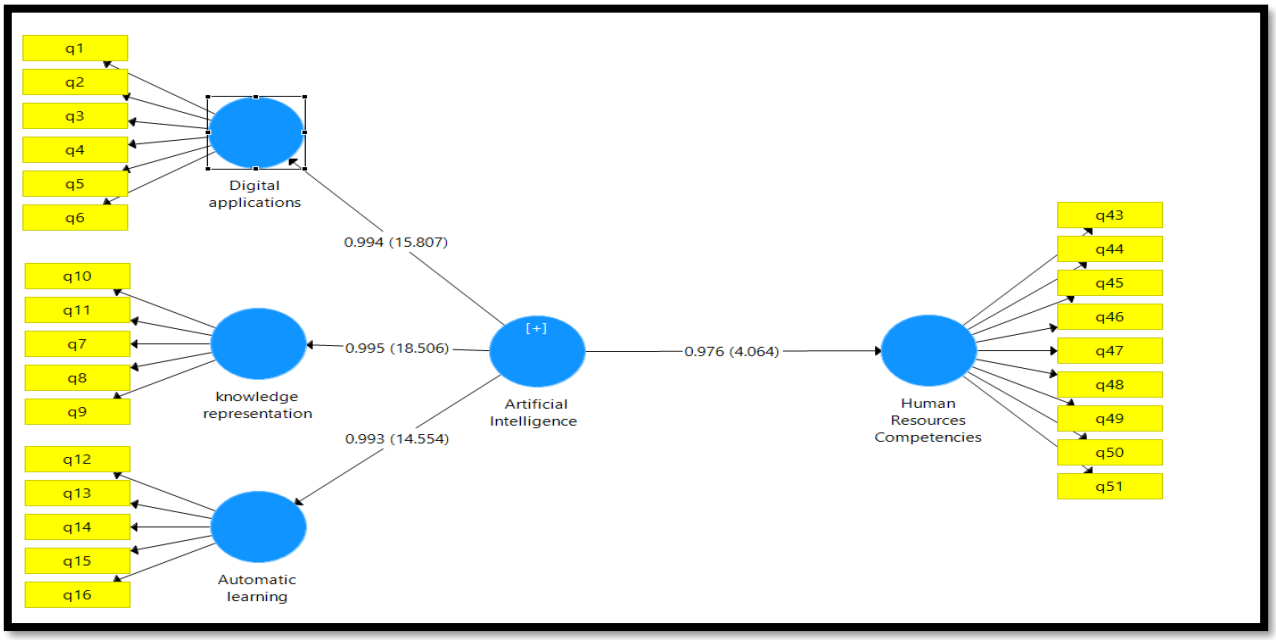

Figure 3. Structural model

The results of the study indicated that the value of the path coefficient reached (0.976), and that the calculated T value reached (4.064), and all of these values are statistically significant, which means that there is a positive impact of artificial intelligence on human resources competencies in the King Hussein Business Park, as indicated by The results are that the independent variable (artificial intelligence) explained an amount of (95.2%) of the variance in the dependent variable (human resource competencies). Accordingly, the null hypothesis is rejected, and the proof hypothesis is accepted, which states: There is a statistically significant effect for artificial intelligence in its dimensions (digital applications, knowledge representation, automatic learning) on human resources competencies at the King Hussein Business Park.

Conclusion

The effective use of artificial intelligence (AI) in the field of human resources management is one of the key factors that contribute to improving the performance of companies and increasing work efficiency. For example, AI can help HR departments make better and more accurate decisions by analyzing data and predicting the future needs of the company.

In addition, AI can improve the employee experience by providing technology solutions that facilitate recruitment, training, and performance management. AI can also be used to analyze employee data to improve work-life balance and increase job satisfaction.

Based on this, it can be argued that AI is a real value-add for HRM and can help organizations achieve their goals more effectively and efficiently.

However, we must take into account some of the potential challenges and concerns of using AI in the field of HRM. The use of technology in this context may raise concerns about job losses and its impact on humanity in the future. In addition, companies may face challenges in balancing the use of technology with maintaining the human element and human relations in the work environment.

Therefore, it is important that the strategy of using AI in HRM is balanced and thoughtful, and that there is a clear vision of how to foster collaboration between technology and the human element in order to achieve company goals and improve performance. It can be said that AI represents a great opportunity to improve

human resource management and increase its efficiency, but it must be handled with caution and be wary of the potential challenges that may arise from its use in this context.
Thus, companies can benefit from AI in the field of HRM by adopting balanced strategies that combine technology and the human element. Companies can use AI to improve the employee experience, enhance efficiency and effectiveness in recruitment and training processes, improve performance management, and analyze employee data.
It is also necessary for companies to be cautious and responsible in the use of smart technology in the field of human resources management, by ensuring the protection of personal data and respecting the rights of employees.

Recommendations

Based on the results of the study that showed a positive impact of AI on HR meritocracy, the following recommendation can be made:
Companies should invest in AI applications for HRM in a holistic and integrated manner, including the use of AI in recruitment and training processes, analyzing employee data, and improving the employee experience. Organizations should also ensure that investments are directed towards developing the skills and capabilities of employees to adapt to technological shifts and make the most of AI.
By effectively utilizing AI in HRM, companies will be able to enhance the efficiency and effectiveness of team performance, improve the employee experience, and foster innovation and creativity in the work environment. Thus, investing in AI technology can contribute to the competitiveness and long-term success of organizations.
Therefore, it is recommended to adopt integrated strategies for the use of smart technology in the field of human resources management, with a focus on developing human capabilities and enhancing the interaction between technology and human resources. Companies should also be vigilant in safeguarding personal data, ensuring employee privacy is protected, and ensuring compliance with relevant laws and regulations.
In short, companies can benefit from AI in improving the performance and efficiency of HRM, provided it is adopted in a balanced and responsible manner, with a focus on developing human skills and ensuring transparency and respect for employees' rights.

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