

Assisting artificial intelligence adoption drivers in human resources management: a mediation model

Eman Hassan AL Qahtani

Ministry of Education, Asir, Saudi Arabia, alqahtanieman4@gmail.com

Mohammad A.K Alsmairat

American University in the Emirates, Dubai, Dubai International Academic City,

P.O. Box: 503000, Dubai, United Arab Emirates

Luminus Technical university college, Airport Rd., Bridge, Jordan, <https://orcid.org/0000-0001-8543-2811>,

moh_cis2004@yahoo.com (corresponding author)

Keywords: artificial intelligence, human resources management, banking sector, artificial intelligence adoption drivers.

Abstract: This study investigates the artificial intelligence (AI) adoption drivers and the mediating effects of trust and how the latter influence human resources management (HRM) of the banking sector in Saudi Arabia. A survey-based questionnaire was employed to collect data from 261 practitioners and professionals working in different banks in Saudi Arabia. Partial least squares structural equation modelling (PLS-SEM) was used to analyze data. Significant and positive effects of perceived usefulness and trust on artificial intelligence adoption in human resource management are highlighted by the results. In addition, the indirect effects of trust between perceived usefulness and AI adoption in human resource management were also found to be significant.

1 Introduction

In the age of globalization and fast technological advancement, organizations have prioritized human resources as a way to obtain a competitive advantage and long-term sustainability [1,2]. By way of these systems, many businesses have refocused their attention on adopting new technologies to enhance their performance [3] and aligned their strategies to enhance overall performance as a consequence of the increasing adoption of those technical tools, such as human resources information system (HRIS) and artificial intelligence (AI) applications [4,5]. Accordingly, HRIS has ostensibly evolved into artificial intelligence, enabling organizations to significantly improve their performance and productivity, perform specified human resources functions, analyze data and assist human resources departments to focus on their primary responsibilities. The adoption of AI in an organization claims that patterns of HR practice, rather than single actions, are required to meet organizational goals [6]. Nonetheless, AI has recently gained a reputation as a more strategic tool, linked with organizational values, goals and visions [7,8]. Additionally, several studies have addressed AI in HRM from different perspectives, specifically the qualitative differences that are to be expected at the level of HRM skills and competencies, both prior to and after the implementation of AI within an organization [9]; the challenges and opportunities associated with the adoption of AI in HRM [10,11]; the impact of employee commitment and trust as regards the adoption of AI [9]. In particular, the study examined a range of factors identified by previous research based on the analysis of the theoretical literature which included trust, perceived usefulness, user behaviour, ease of use and infrastructure.

Based on that and according to the analysis of the previous literature, companies have begun to place a greater emphasis on AI and different technical tools through which they may develop organizational performance and compete accordingly, in order to achieve a variety of benefits. Integrated entities, information accessibility, the capability to analyze big data and notification systems are common examples of these benefits, which attempt to create a highly competitive advantage and added value for operations [12-14].

However, in the banking sector in Saudi Arabia, there are various challenges that need to be addressed in terms of human resources management. The implementation of artificial intelligence (AI) in this sector can bring about significant improvements in terms of efficiency and productivity. However, like other technology, the adoption of AI requires the strict implementation of quality principles and practices. According to [6] the banking sector in Saudi Arabia needs robust improvement and national preparedness to counter financial emergencies in the future not to repeat the sufferings that had damaged the whole society financially, physically, and emotionally. Therefore, it is high time to integrate and implement best managerial practices, principles, and approaches for creating agility in the banking sector of Saudi Arabia. Given the rapid growth of banking sector in Saudi Arabia, this study exists to fill this gap.

Accordingly, this study argues that there are many drivers affecting the adoption of AI in the HRM in the bank sector in Saudi Arabia. Those factors include ease of use, perceived usefulness, infrastructure, along with trust. However, the researchers attempt to establish a model by means of mediation relations across study variables to address gaps in the current literature. Furthermore, this

research contributes to the area of HRM in the Saudi banking sector by analysing the current literature more thoroughly and examining the mediation effect of trust and user behaviour. The rest of the article is structured as; the second section comprises the theoretical background of the study, and the third and fourth sections encapsulate the methodology, and results. While sections five and six are the discussion and conclusion sections.

2 Literature review and hypothesis development

Each organization, whether small or large requires human capital to be able to conduct business and achieve its goals. Human resources comprise personnel that is employed in an organization to perform their daily tasks in exchange for a salary or rewards. Besides, the creativity of employees is becoming increasingly imperative to the success of a business and its long-term sustainability [15]. Conversely, HRM refers to a set of professional practices which include a range of personal practices that can be combined to ensure that an organization has a professional approach to managing people. These practices might include training and supporting qualified workers through stages beginning with selection and recruitment and including compensation and motivation [6].

HRM is critical in motivating employees to achieve the highest level of productivity and efficiency in today's business world. However, this may possibly require the adoption of AI technology to ensure agile operations have the best possible tools and to be a high-tech company compared to rapid world innovation and revolution. In fact, the relationship between businesses, employees and customers is fundamentally changing as a result of the fast-paced expansion and widespread deployment of Artificial Intelligence (AI) and other ground-breaking technologies. It should be noted that AI is referred to as "computer intelligence," "human intellect emulation" or "mind machine" [9]. [16] defined AI as "the science and engineering of constructing intelligent machines". According to [17] and [18], the primary principle of AI is that automated equipment, for instance, machines, robots and software can perform everyday jobs that have typically been undertaken by people. In other words, AI refers to using technology to perform a task that requires some level of intelligence to be accomplished [19]. Moreover, the adoption AI is particularly useful for businesses as it can foster more productive coordination and cooperation. Likewise, the adoption of such a tool offers several opportunities to improve and reduce the cost of HRM tasks [20].

Specifically, AI can reform the structure of HRM and be an integrated system that delivers excellent results with the aim of enhancing performance management, workforce planning, people analytics, virtual assistants for self-service/HR service delivery, career patching, leadership, and coaching [21]. AI creates accurate and trustworthy

information databases via the use of algorithms by enabling instant access to data and rapid transmission which enhances human resources [22]. The ability of AI to promote individual workplace learning through a crucial aspect of database management [23]. Consequently, the manager has access to all records and can use them whenever necessary. It also supports decision-makers through the use of big data and machine learning algorithms [24]. Additionally, fostering organizational learning and eventually improved knowledge management enables businesses to derive valuable insights from individual behavior. Besides, [25] provides a piece of evidence for the transformational outcomes of AI in HR functions. [26] pointed out that AI has a significant positive influence on employee performance and work engagement.

In practice, AI aids the HRM process in a variety of ways. Database management is offered to support individualized workplace learning [27], using big data techniques and machine learning. It offers an inclusive approach to handling hiring, training, development of employees, and performance reviews [28], AI also provides intuitive decision-making [24] whilst AI's capacity to build a substantial library of knowledge, process and history that HR managers may consult and use as required is invaluable [23].

More generally, AI is changing how businesses manage their staff, develop HR calendars and assess productivity. As AI offers new approaches, such as social robots for HRM, they open up several opportunities and assist different HRM services [20]. Several scholars support this argument and highlight the ways in which computer-based software and AI tools facilitate the organizational setting and enhance productivity levels [29].

Many recent studies have discussed the adoption of AI drivers within the context of HRM and have questioned factors that affect the adoption of AI in HRM. [30] identified three primary drivers that influence the adoption of AI in HRM including technological, environmental, and organizational context factors. However, [22] extended the classification of these factors to include organizational preparedness, perceived benefits, and technical expertise. Moreover, [31] provided systematic classifications of these factors including effort expectancy, facilitating condition, performance expectancy, perceived credibility, along with social influence. Issues and drivers that affect the adoption of AI, as mentioned in previous studies, include technical or performance-related factors, organizational or environmental factors and user-customer factors. These studies have primarily focused on one or a few of these factors. This study seeks to investigate other factors including ease of use (EOU), perceived usefulness (PU), infrastructure, trust, as well as user behavior (UB).

The first driver in this study pertains to ease of use (EOU) which refers to the extent to which a product can be used by individual users to achieve specific objectives, both effectively and satisfactorily [32]. [33] asserted that EOU is directly related to a person's perception of the effort

required to operate a system and is a key component of perceived ease of use. It is important to mention that EOU could be extremely important in determining the acceptance of AI from the perspective of the user on account of the unique nature of AI, which demands a certain level of knowledge and expertise. Various previous investigations have provided empirical evidence for this argument [34-36]. Similarly, EOU is preferred and included among the suggested conceptual model for a particular reason. Practically, the results of using AI applications have been widely considered as having a high degree of complexity and ambiguity [37-39]. Therefore, it was plainly noted that EOU might be one of the most crucial factors that might significantly influence whether Saudi Arabia's banking industry decides to implement AI applications. From the above discussion, it can be hypothesized that:

H1: Ease of use has a significant impact on the adoption of AI applications in HRM in the banking sector in Saudi Arabia.

One of the criteria applied in the study relates to perceived usefulness (PU). This is defined as “the degree to which a person believes that using a particular system would enhance his or her job performance” [33]. In the previous literature, PU has been identified as one of the most influential drivers for managers to adopt AI [29,40-42]. Accordingly, it could be argued that users of the banking system who have adequate skills and believe in the benefits of AI applications are more likely to perceive AI as beneficial in their work. From an HR standpoint, workers must receive adequate training and information to better comprehend the advantages and anticipated results. By doing so, the perceived usefulness of the technology will increase and, in turn, this will influence the adoption of AI [35,37]. From the above discussion, it can be hypothesized that:

H2: Perceived usefulness has a significant impact on the adoption of AI applications in HRM in the banking sector in Saudi Arabia.

In the context of a corporate IT environment, infrastructure refers to the collective hardware, software, network resources, and services that are necessary for the existence, operation, and management of the environment [43-45]. Infrastructure systems will be crucial in supplying and maintaining services for this ever-increasing demand as AI applications become more connected, complicated, and digitalized [46]. [47] determined that without the

critical infrastructure in an organization and without a high level of readiness, AI applications will fail. From the above discussion, it can be hypothesized that:

H3: Infrastructure has a significant impact on the adoption of AI applications in HRM in the banking sector in Saudi Arabia.

The feature that attracts or impedes a user from adopting AI apps is trust, which is vital in regard to promoting the adoption of AI. In his definition of trust, [48] explained that it is "a confidence or anticipation about the other party or as a behavioral intention or desire to depend on or rely on another party, coupled with a sense of vulnerability or danger if the trust is violated. From the viewpoint of the user or HRM, trust is described as the user's expectations of how the AI applications may provide opportunities and guarantees [49]. [50] ascertained that the creation of trust between people depends significantly on the trustee's outward look and that the embodiment of AI will quite possibly play a significant role in building that trust between people and AI applications. Accordingly, trust may be cognitive (based on reason) as well as emotional (based on affect), [51]. In this study, we will concentrate on trust as an emotional effect.

Numerous previous researchers have demonstrated the practical influence of trust on the acceptability of IT, AI and technological applications [52-54]. In this study, we addressed the mediation role of trust between EOU, PU, infrastructure and the adoption of AI in HRM. In their investigation of the mediation role between PU, EOU and purchase intention, [55] determined the significance of this relationship. Nevertheless, we contend that infrastructure, PU and EOU are crucial in raising user's trust levels and as a result, act as a dynamic construct that may persuade users to adopt AI applications. From the above discussion, it can be hypothesized that:

H4: Trust mediates the relationship between EOU and the adoption of AI applications in HRM in the banking sector in Saudi Arabia.

H5: Trust mediates the relationship between PU and the adoption of AI applications in HRM in the banking sector in Saudi Arabia.

H6: Trust mediates the relationship between infrastructure and the adoption of AI applications in HRM in the banking sector in Saudi Arabia.

H7: Trust has a significant impact on the adoption of AI applications in HRM in the banking sector in Saudi Arabia.

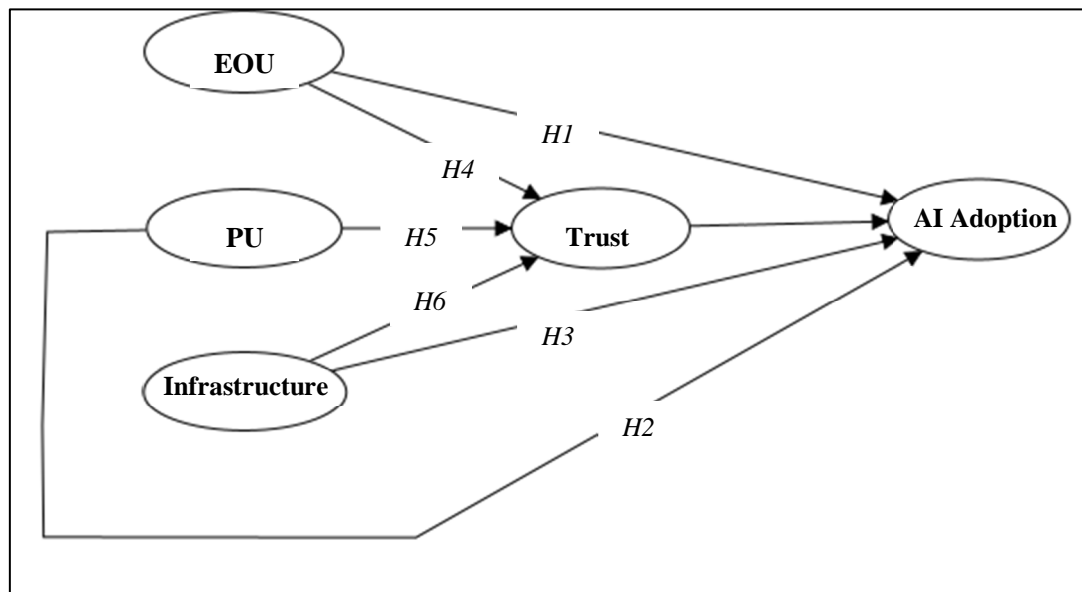


Figure 1 The research model

3 Methodology

A quantitative technique was used in this study to obtain quantitative results and a level of significance reflecting the impact of AI adoption drivers in human resource management and the mediating role of trust. A survey-based questionnaire was used to gather data. The survey consisted of four primary constructs in the questionnaire, each with a validated instrument from previous studies. A five points Likert scale was used. To collect data, banks in Saudi Arabia were selected and their human resource departments were contacted to outreach the potential participants. The emails of the potential

participants were taken and an online survey using Google forms was undertaken. a convenience sample technique was applied. We were able to collect 261 completed questionnaires, which is an adequate sample size for the kind of data analysis applied in this study. Structural Equation Modelling (SEM) using smart PLS was used to analyse the research data. PLS-SEM is an efficient technique to investigate the interrelation among multi-item constructs [56,57]. Table 1 summarises the characteristics of the sample, highlighting the variation in the respondents' gender, ages, levels of education, work experiences and hierarchical positions.

Table 1 Sample characteristic

Category	Items	Count	%
Sex	Male	136	0.521
	Female	125	0.479
Age	20 to 35 years	60	0.230
	36 to 50 years	180	0.690
	51 years and above	21	0.080
Education Level	Diploma or less	59	0.226
	Bachelor's	125	0.479
	Postgraduate (Master and PhD)	77	0.295
Experience	< 2 years	50	0.1916
	2-5 years	70	0.2682
	6 to 10 years	75	0.2874
	>11 years	66	0.2529
	Total	261	100%

The majority of the study participants were males (52.1%). Most of the participants were aged 36 to 50 years and had Bachelor in qualifications. In terms of experience, the majority (28.74%) had experience between 6 and 10 years. While 32.8 % were serving in managerial positions.

3.1 Measurement model

Assessments of measurement models are made in light of construct validity through internal consistency, reliability, and discriminant reliability [58,59]. To determine the construct validity, the factor loading values

Assisting artificial intelligence adoption drivers in human resources management: a mediation model

Eman Hassan AL Qahtani, Mohammad A.K Alsmairat

of all of the items must be greater than 0.6) which is the case for all the items [60]. (See Table 2). Likewise, the construct's reliability was then evaluated using Cronbach's alpha and the composite reliability with a cut-off value of

0.7. To confirm the convergent validity of all the constructs, the average variance extracted (AVE) for each construct must be more than 0.5 [61]. These requirements are all satisfied, as evidenced by the findings in Table 2.

Table 2 Construct validity

Constructs	Items	Loading	Mean	SD
Ease of use (EOU) (Cronbach's α = 0.871; CR=0.903; AVE=0.609)	Q1	0.815	4.286	0.795
	Q2	0.780	4.186	0.816
	Q3	0.853	4.286	0.831
	Q4	0.801	4.01	0.878
	Q5	0.651	4.314	0.645
	Q6	0.768	4.271	0.716
Perceived Usefulness (PU) (Cronbach's α = 0.825; CR=0.877; AVE=0.589)	Q7	0.725	4.471	0.691
	Q8	0.809	4.471	0.626
	Q9	0.694	4.414	0.597
	Q10	0.804	4.414	0.643
	Q11	0.799	4.386	0.639
Infrastructure (Cronbach's α =0.835; CR=0.873; AVE=0.634)	Q12	0.833	4.257	0.578
	Q13	0.620	4.057	0.826
	Q14	0.830	4.186	0.816
	Q15	0.803	4.029	1.069
	Q16	0.667	4.343	0.826
Trust (Cronbach's α =0.803; CR=0.873; AVE=0.634)	Q17	0.829	4.157	0.822
	Q18	0.663	4.271	0.773
	Q19	0.848	4.129	0.809
	Q20	0.832	3.971	0.878
AI Adoption (Cronbach's α =0.862; CR=0.895; AVE=0.551)	Q21	0.821	4.329	0.712
	Q22	0.721	4.271	0.754
	Q23	0.782	4.257	0.805
	Q24	0.635	4.343	0.652
	Q25	0.776	4.186	0.961
	Q26	0.665	4.529	0.626
	Q27	0.778	4.643	0.535

The heterotrait-monotrait ratio test (HTMT) and Fornell and Larcker's (1982) criterion were then employed to assess the discriminant validity. The Fornell and Larcker test initially suggests determining whether each construct's

AVE square root of AVE is larger than its association with other variables [59]. (Hair et al., 2017). The variables' HTMT values must subsequently be less than 0.9 [58]. Table 3 displays the results of the discriminant validity.

Table 3 Discriminant validity*

	AI Adoption	EOU	Infrastructure	PU	Trust
AI Adoption	0.742				
EOU	0.590	0.781			
Infrastructure	0.379	0.647	0.756		
PU	0.630	0.725	0.414	0.768	
Trust	0.686	0.577	0.550	0.552	0.796

*The square root values of the (AVE) are in bold in the diagonal cells. Below, we present the values of correlations between the constructs. The heterotrait-monotrait ratio scores are inserted above the diagonal cells.

3.2 Structural model assessment

The assessment of a structural model includes determining the model's level of quality. We made use of common methods, such as the R2 coefficient and the

standardised root mean squared residual (SRMR) score, to evaluate the model's predictive accuracy indicators. Additionally, the SRMR statistics need to be lower than 0.08 to confirm that the proposed model fits the data

[60,61]. The findings reveal that the R2 for AI adoption is 0.545, whilst for trust, it is 0.435. The SRMR is 0.057 which demonstrates adequate scores for both indicators.

3.3 Hypotheses testing

The results of the hypothesis tests based on the PLS structural model analysis are explained in Table 5. Following the recommendations of [62]. A bootstrapping approach was used to produce reliable coefficient estimates with 5000 subsamples.

Table 4 Hypotheses test

Path Relationships	(β)	Standard deviation	T Statistics	p-values
Hypothesis 1				
EOU → AI Adoption	0.189	0.166	1.138	0.255
Hypothesis 2				
PU → AI Adoption	0.272	0.155	2.753	0.040
Hypothesis 3				
Infrastructure → AI Adoption	0.129	0.120	1.078	0.281
Hypothesis 4				
EOU → Trust → AI Adoption	0.064	0.092	0.691	0.490
Hypothesis 5				
PU → Trust → AI Adoption	0.159	0.074	2.138	0.000
Hypothesis 6				
Infrastructure → Trust → AI Adoption	0.166	0.104	1.603	0.109
Hypothesis 7				
Trust → AI Adoption	0.497	0.152	3.277	0.001

According to hypothesis (1), the EOU has a positive and significant impact on the adoption of AI. The result did not support this prediction ($\beta = 0.189, p > 0.05$). H.1 is therefore rejected. According to hypothesis (2), PU significantly and positively influences the adoption of AI. The results support this prediction ($\beta = 0.272; p < 0.05$). H.2 is therefore accepted. Hypothesis (3) predicts that infrastructure has a positive and significant influence on the adoption of AI. The result does not support this prediction ($\beta = 0.129; p > 0.05$). Thus, H.3 is rejected.

Furthermore, H4, H5 and H6 predict that trust mediates the relationship between EOU, PU, infrastructure and AI adoption. The findings provide evidence that just one path that includes the trust factor between PU and the adoption of AI ($\beta = 0.159; p < 0.05$) is accepted. Consequently, H5 is supported while H4 and H6 are not supported. Finally, H7 predicts that trust has a direct impact on the adoption of AI. The findings support and provide evidence for this prediction ($\beta = 0.497; p < 0.05$). As a result, H7 is supported.

4 Results and discussion

To recap, the research question in this study focused on assisting the adoption of AI drivers in HRM in the Saudi banking sector. The mediation role of trust is also investigated. The findings attributable to the PLS-SEM analysis on data collected from 261 practitioners at various

Saudi Arabian banks revealed that PU and trust have a direct impact on the adoption of AI.

The analysis findings are in line with earlier publications. PU (H2) plays a significant role in motivating HR professionals and decision-makers in banks to adopt AI applications [35,37]. Similar to this, previous research supports the importance of trust in the adoption of AI (H7). [50] pointed out that establishing a technological culture within banks that will increase user acceptability and allow management to reduce errors and boost performance [52,53].

Likewise, the mediation effects of trust on the relationship between PU and the adoption of AI was ascertained to be significant and positive (H5). This result indicates the fundamental role trust plays in promoting the adoption of AI among users in the banking sector in Saudi Arabia. The association between the adoption of PU and AI was also determined to be significantly and favourably mediated by trust (H5). This conclusion emphasises how important PU is in boosting user confidence and encouraging the use of AI technologies in Saudi Arabia's banking sector.

Accordingly, the numerous theoretical and managerial implications gained from our research can be presented as follows. By identifying the key factors influencing user adoption in the banking sector in a developing nation (Saudi Arabia), this study makes a significant contribution

to the field of AI in HRM. The research presents PU and trust as efficient antecedents of AI adoption in HRM and as a result, generates additional insights to the existing literature on AI (e.g., [12,22,30]). This research contends that rather than focusing on the direct influence of trust on the adoption of AI, management should concentrate on emphasizing the expected advantages of such applications. This can be achieved by actively involving employees in such practices, besides developing a continuous improvement policy before providing employees with instructions related to how to use AI applications. This demonstrates how trust between PU and the adoption of AI has an indirect effect.

Additionally, this study highlights the importance of PU and trust, which can provide practitioners and decision-makers with beneficial information concerning banking sector practices when implementing AI in HRM. As a result, the findings are in favor of PU's active involvement in promoting the adoption of AI. Top management has to understand the value of PU and how banking institutions may use it to develop HRM and AI application integration policies that keep pace with developments in IT.

One significant benefit of AI applications in human resource management in the banking sector is its potential to improve efficiency in various HR processes such as recruitment, selection, and performance evaluation. AI-based recruitment systems can help banks to identify suitable candidates, thereby reducing recruitment time and costs. Additionally, AI can help to analyze employee data to identify patterns and insights that can inform performance evaluation and training needs. These benefits have been supported by several studies, including [18,21,28] which showed that AI applications improve recruitment efficiency and employee performance in the banking sector. Studies such as [2,18] have provided recommendations on how banks can effectively adopt AI applications in their HR processes to maximize the benefits and mitigate the risks.

By doing this, banks in developing nations like Saudi Arabia will improve their AI in HRM results and customer satisfaction levels regarding adoption preparedness. The results of this study assist managers to recognise the significance of their dedication, PU, and trust in influencing the banks' adoption of AI and in comprehending the significant function of those drivers, with the aim of increasing the quality of HRM through the adoption of AI.

5 Conclusion

The main first contribution of this study to theory is providing evidence that EOU and PU in the banking sector enhance AI adoption in human resources management. Secondly, practicing the role of trust as a mediator factor for increasing AI adoption. These findings support that trust is a dynamic factor required for optimizing AI within the banks' operations. However, these findings are consistent with [32,42] who pointed out that banks that

have more awareness among employees and PU with EOU as AI features will be reflected in their effects on their HRM performance. The results of this study show that trust can achieve by PU and EOU with different supporting claims about the importance of these enablers [40,45]. Since this study revealed that PU and EOU have a positive effect on trust when implementing AI in HRM, it follows that if an organization has higher levels of PU and EOU, it will be better able to identify and manage the potential risks in the AI, resulting in a more effective and responsive mechanism. Similarly, the positive impact of PU and EOU leads to an increased level of trust if an organization is better equipped to AI implementation exploration and exploitation in its banking activities. However, it must be considered that this correlation does not imply causality as numerous can be factors that might impact this relationship between AI adoption and HRM. Future research could examine the impact of AI on employee performance in more detail. This could include identifying which job functions are most affected by AI and how employees react to working alongside AI tools. Besides, future research can also address employee attitudes towards AI, including how comfortable they are working alongside AI tools and how they perceive the impact of AI on their job security.

References

- [1] KHANDEKAR, A., SHARMA, A.: Managing human resource capabilities for sustainable competitive advantage, *Education + Training*, Vol. 47, No. 8/9, pp. 628-639, 2005.
- [2] STOFKOVA, Z., SUKALOVA, V.: Sustainable development of human resources in globalization period, *Sustainability*, Vol. 12, No. 18, pp. 1-14, 2020. <https://doi.org/10.3390/su12187681>
- [3] SCHLEICHER, D.J., BAUMANN, H.M., SULLIVAN, D.W., LEVY, P.E., HARGROVE, D.C., BARROS-RIVERA, B.A.: Putting the system into performance management systems: A review and agenda for performance management research, *Journal of Management*, Vol. 44, No. 6, pp. 2209-2245, 2018.
- [4] HILMAN, H., KALIAPPEN, N.: Innovation strategies and performance: Are they truly linked?, *World Journal of Entrepreneurship, Management and Sustainable Development*, Vol. 11, No. 1, pp. 48-63, 2015.
- [5] MERT, I.S., SEN, C., ALZGHOUL, A.: Organizational justice, life satisfaction, and happiness: the mediating role of workplace social courage, *Kybernetes*, Vol. 51, No. 7, pp. 2215-2232, 2021. <https://doi.org/10.1108/K-02-2021-0116>
- [6] ELREHAIL, H., EMEAGWALI, O.L., ALSAAD, A., ALZGHOUL, A.: The impact of transformational and authentic leadership on innovation in Higher Education: The Contingent Role of Knowledge Sharing, *Telematics and Informatics*, Vol. 35, No. 1, pp. 55-67, 2018.

Assisting artificial intelligence adoption drivers in human resources management: a mediation model

Eman Hassan AL Qahtani, Mohammad A.K Alsmairat

- [7] MALO, F.B.: Human Resource Management: A Critical Approach by David G. Collings; Geoffrey Wood, *Relations Industrielles / Industrial Relations*, Vol. 66, No. 1, pp. 165-167, 2011.
- [8] AUST, I., MULLER-CAMEN, M., POUTSMA, E.: Sustainable HRM: *A comparative and international perspective*, Chapter 19, Edward Elgar Publishing, pp. 358-370, 2018. <https://doi.org/10.4337/9781784711139.00026>
- [9] SADOK, H., SAKKA, F., EL MAKNOUZI, M.E.: Artificial Intelligence and Bank Credit Analysis: A Review, *Cogent Economics & Finance*, Vol. 10, No. 1, pp. 1-12, 2022.
- [10] BUDHWAR, P., MALIK, A., DE SILVA, M.T., THEVISUTHAN, P.: Artificial Intelligence - Challenges and opportunities for International HRM: A review and research agenda, *The International Journal of Human Resource Management*, Vol. 33, No. 6, pp. 1065-1097, 2022.
- [11] VERMA, R., BANDI, S.: *Artificial Intelligence & Human Resource Management in Indian IT sector*, Proceedings of 10th International Conference on Digital Strategies for Organizational Success, 2019. <https://doi.org/10.2139/ssrn.3319897>
- [12] CHOWDHURY, S., DEY, P., JOEL-EDGAR, S., BHATTACHARYA, S., RODRIGUEZ-ESPINDOLA, O., ABADIE, A., TRUONG, L.: Unlocking the value of artificial intelligence in human resource management through AI Capability Framework, *Human Resource Management Review*, Vol. 33, No. 1, pp. 1-21, 2022.
- [13] VRONTIS, D., CHRISTOFI, M., PEREIRA, V., TARBA, S., MAKRIDES, A., TRICHINA, E.: Artificial Intelligence, robotics, Advanced Technologies and Human Resource Management: A systematic review, *The International Journal of Human Resource Management*, Vol. 33, No. 6, pp. 1237-1266, 2021.
- [14] QAMAR, Y., AGRAWAL, R.K., SAMAD, T.A., CHIAPPETTA JABBOUR, C.J.: When technology meets people: The Interplay of Artificial Intelligence and Human Resource Management, *Journal of Enterprise Information Management*, Vol. 34, No. 5, pp. 1339-1370, 2021.
- [15] NOVIANTI, K.R.: Achieving competitive advantage through knowledge management practices: Knowledge-based view (KBV) strategy on Indonesia Electricity Sector, *Asia Pacific Management and Business Application*, Vol. 7, No. 3, pp. 163-176, 2019.
- [16] FINCAN, M.: *Artificial Intelligence and Legal issues*, Schriften zum Strafrecht (SR), Volume 406, Duncker & Humboldt, Berlin, 2023.
- [17] MOCKUTE, R., DESAI, S., PERERA, S., ASSUNCAO, B., DANYSZ, K., TETARENKO, N., GADDAM, D., ABATEMARCO, D., WIDDOWSON, M., BEAUCHAMP, S., CICIRELLO, S., MINGLE, E.: Artificial intelligence within pharmacovigilance: A means to identify cognitive services and the framework for their validation, *Pharmaceutical Medicine*, Vol. 33, No. 2, pp. 109-120, 2019.
- [18] SCHERER, M.U.: Regulating artificial intelligence systems: Risks, Challenges, competencies, and strategies, *Harvard Journal of Law & Technology*, Vol. 29, No. 2, pp. 354-400, 2016.
- [19] ALDULAIMI, S.H., ABDELDAYEM, M.M., MOWAFK, B.M., ABDULAZIZ, M.M.: *Experimental perspective of Artificial Intelligence Technology in Human Resources Management*, Studies in Computational Intelligence, Vol. 954, Springer, Cham, 2021. https://doi.org/10.1007/978-3-030-72080-3_26
- [20] BONDAROUK, T., HARMS, R., LEPAK, D.: Does e-HRM lead to better HRM service?, *The International Journal of Human Resource Management*, Vol. 28, No. 9, pp. 1332-1362, 2015.
- [21] BERHIL, S., BENLAHMAR, H., LABANI, N.: A review paper on Artificial Intelligence at the service of Human Resources Management, *Indonesian Journal of Electrical Engineering and Computer Science*, Vol. 18, No. 1, pp. 32-40, 2020.
- [22] BASU, S., MAJUMDAR, B., MUKHERJEE, K., MUNJAL, S., PALAKSHA, C.: Artificial Intelligence-HRM interactions and outcomes: A systematic review and causal configurational explanation, *Human Resource Management Review*, Vol. 33, No. 1, pp. 1-16, 2023.
- [23] WILKENS, U.: Artificial Intelligence in the workplace - a double-edged sword, *The International Journal of Information and Learning Technology*, Vol. 37, No. 5, pp. 253-265, 2020.
- [24] ESTEVA, A., TOPOL, E.: Can skin cancer diagnosis be transformed by AI?, *The Lancet*, Vol. 394, No. 10211, pp. 1795-1795, 2019.
- [25] WAMBA-TAGUIMDJE, S.-L., FOSSO WAMBA, S., KALA KAMDJOU, J.R., TCHATCHOUANG WANKO, C.E.: Influence of Artificial Intelligence (AI) on firm performance: The Business Value of AI-based transformation projects, *Business Process Management Journal*, Vol. 26, No. 7, pp. 1893-1924, 2020.
- [26] WIJAYATI, D.T., RAHMAN, Z., FAHRULLAH, A., RAHMAN, M.F., ARIFAH, I.D., KAUTSAR, A.: A study of artificial intelligence on employee performance and work engagement: The moderating role of change leadership, *International Journal of Manpower*, Vol. 43, No. 2, pp. 486-512, 2022.
- [27] FISCHER, A.M., VARGA-SZEMES, A., MARTIN, S.S., SPERL, J.I., SAHBAEE, P., NEUMANN, D., GAWLITZA, J., HENZLER, T., JOHNSON, C.M., NANCE, J.W., SCHOENBERG, S.O., SCHOEPF, U.J.: Artificial intelligence-based fully automated per lobe segmentation and emphysema-quantification

Assisting artificial intelligence adoption drivers in human resources management: a mediation model

Eman Hassan AL Qahtani, Mohammad A.K Alsmairat

- based on chest computed tomography compared with Global Initiative for chronic obstructive lung disease severity of smokers, *Journal of Thoracic Imaging*, Vol. 35, No. Supplement 1, pp. 28-34, 2020.
- [28] KIRAN, V.S., SHANMUGAM, V., RAJU, R.K., KANAGASABAPATHY, J.R.: Impact of human capital management on organizational performance with the mediation effect of Human Resource Analytics, *International Journal of Professional Business Review*, Vol. 7, No. 3, pp. 1-27, 2022. <https://doi.org/10.26668/businessreview/2022.v7i3.0667>
- [29] PARK, J.Y. JUNG, Y.S.: Employees' intention to use Artificial Intelligence, *Korean Journal of Industrial and Organizational Psychology*, Vol. 34, No. 2, pp. 183-211, 2021.
- [30] PAN, Y., FROESE, F., LIU, N., HU, Y., YE, M.: The adoption of artificial intelligence in employee recruitment: The influence of contextual factors, *The International Journal of Human Resource Management*, Vol. 33, No. 6, pp. 1125-1147, 2021.
- [31] ISLAM, M., MAMUN, A.A., AFRIN, S., ALI QUAOSAR, G.M., UDDIN, M.A.: Technology adoption and human resource management practices: The use of Artificial Intelligence for recruitment in Bangladesh, *South Asian Journal of Human Resources Management*, Vol. 9, No. 2, pp. 324-349, 2022.
- [32] VENKATESH, V.: Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model, *Information Systems Research*, Vol. 11, No. 4, pp. 342-365, 2000.
- [33] GROVER, P., KAR, A.K., JANSSEN, M., ILAVARASAN, P.V.: Perceived usefulness, ease of use and user acceptance of blockchain technology for digital transactions - insights from user-generated content on Twitter, *Enterprise Information Systems*, Vol. 13, No. 6, pp. 771-800, 2019.
- [34] JEGUNDO, A.L., DANTAS, C., QUINTAS, J., DUTRA, J., ALMEIDA, A.L., CARAVAU, H., ROSA, A.F., MARTINS, A.I., PACHECO ROCHA, N.: Perceived usefulness, satisfaction, ease of use and potential of a virtual companion to support the care provision for older adults, *Technologies*, Vol. 8, No. 3, pp. 1-19, 2020.
- [35] GUPTA, M.: *The role of artificial intelligence in adopting green HRM practices*, Reinventing Manufacturing and Business Processes Through Artificial Intelligence, CRC Press, pp. 1-18, 2021.
- [36] MEHTA, C.K., KAUSHIK, V., BHARGAV, S.: *A study of the impact of internal control measures on ease of use of forensic audit mediated by Artificial Intelligence Techniques*, 2021 Emerging Trends in Industry 4.0 (ETI 4.0), pp. 1-5, 2021.
- [37] RATHI, V.K., RAJPUT, N.K., MISHRA, S., GROVER, B.A., TIWARI, P., JAISWAL, A.K., HOSSAIN, M.S.: An edge ai-enabled IOT Healthcare Monitoring System for smart cities, *Computers & Electrical Engineering*, Vol. 96, No. December, pp. 1-12, 2021.
- [38] ARSLAN, A., COOPER, C., KHAN, Z., GOLGECI, I., ALI, I.: Artificial Intelligence and human workers interaction at team level: A conceptual assessment of the challenges and potential HRM strategies, *International Journal of Manpower*, Vol. 43, No. 1, pp. 75-88, 2021.
- [39] GILBERT, A., MALIK, A.N.J., VINEKAR, A.: Artificial Intelligence for ROP screening and to assess quality of care: Progress and challenges, *Pediatrics*, Vol. 147, No. 3, 2021.
- [40] SADRIWALA, M.F., SADRIWALA, K.F.: Perceived usefulness and ease of use of artificial intelligence on Marketing Innovation, *International Journal of Innovation in the Digital Economy*, Vol. 13, No. 1, pp. 1-10, 2022.
- [41] ANTON, E., KUS, K., TEUTEBERG, F.: *Is ethics really such a big deal? The influence of perceived usefulness of AI-based surveillance technology on ethical decision-making in scenarios of public surveillance*, Proceedings of the 54th Hawaii International Conference on System Sciences, 2021.
- [42] KIM, J., MERRILL JR., K., COLLINS, C.: AI as a friend or assistant: The mediating role of perceived usefulness in social AI vs. Functional AI, *Telematics and Informatics*, Vol. 64, p. 101694, 2021.
- [43] ZHANG, L.-J., ZHOU, Q.: CCOA: *Cloud Computing Open Architecture*, 2009 IEEE International Conference on Web Services, Los Angeles, CA, USA, 2009, pp. 607-616, 2009.
- [44] CALHEIROS, R.N., RANJAN, R., BELOGLAZOV, A., DE ROSE, C.A., BUYYA, R.: CloudSim: A toolkit for modeling and simulation of cloud computing environments and evaluation of resource provisioning algorithms, *Software: Practice and Experience*, Vol. 41, No. 1, pp. 23-50, 2010.
- [45] HUSSAIN, S., ALSMAIRAT, M.A.K., ALMA'AITAH, N., ALMRAYAT, S.: Assessing quality performance through seven Total Quality Management Practices, *Uncertain Supply Chain Management*, Vol. 11, No. 1, pp. 41-52, 2023.
- [46] MCMILLAN, L., VARGA, L.: A review of the use of artificial intelligence methods in Infrastructure Systems, *Engineering Applications of Artificial Intelligence*, Vol. 116, No. November, pp. 1-21, 2022.
- [47] CHAUDHRY, J., PATHAN, A.-S.K., REHMANI, M.H., BASHIR, A.K.: Threats to critical infrastructure from AI and human intelligence, *The Journal of Supercomputing*, Vol. 74, No. 10, pp. 4865-4866, 2018.
- [48] KRÜGER, S., WILSON, C.: The problem with trust: On the discursive commodification of trust in AI, AI

Assisting artificial intelligence adoption drivers in human resources management: a mediation model

Eman Hassan AL Qahtani, Mohammad A.K Alsmairat

- & SOCIETY, 2022. <https://doi.org/10.1007/s00146-022-01401-6>
- [49] FERRARIO, A., LOI, M., VIGANÒ, E.: Trust does not need to be human: It is possible to trust medical AI, *Journal of Medical Ethics*, Vol. 47, No. 6, pp. 437-438, 2020.
- [50] GLIKSON, E., WOOLLEY, A.W.: Human trust in artificial intelligence: Review of empirical research, *Academy of Management Annals*, Vol. 14, No. 2, pp. 627-660, 2020.
- [51] MCALLISTER, D.J.: Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations., *Academy of Management Journal*, Vol. 38, No. 1, pp. 24-59, 1995.
- [52] WILSON, N., KENI, K., TAN, P.H.: The role of perceived usefulness and perceived ease-of-use toward satisfaction and trust which influence computer consumers' loyalty in China, *Gadjah Mada International Journal of Business*, Vol. 23, No. 3, pp. 262-294, 2021.
- [53] VENTRE, I., KOLBE, D.: The impact of perceived usefulness of online reviews, trust and perceived risk on online purchase intention in emerging markets: A Mexican perspective, *Journal of International Consumer Marketing*, Vol. 32, No. 4, pp. 287-299, 2020.
- [54] MOU, J., SHIN, D.-H., COHEN, J.: Understanding trust and perceived usefulness in the consumer acceptance of an E-service: A longitudinal investigation, *Behaviour & Information Technology*, Vol. 36, No. 2, pp. 125-139, 2016.
- [55] SYAHARANI, D.P., YASA, N.N.: The role of trust as mediation between perceived usefulness and perceived ease of use on repurchase intention, *European Journal of Development Studies*, Vol. 2, No. 3, pp. 36-40, 2022.
- [56] ALSMAIRAT, M.A.: Transformative supply chain drivers during COVID-19: A customer perspective, *Polish Journal of Management Studies*, Vol. 24, No. 2, pp. 9-23, 2021.
- [57] ALSMAIRAT, M.A.K., AL-MA'AITAH, N., ALRAFATY, I.: *Modelling of critical success factors affecting the adoption of Enterprise Resources Planning: A mediated model*, 2022 International Conference on Cyber Resilience (ICCR), Dubai, United Arab Emirates, 2022, pp. 1-10, 2022.
- [58] HAIR, J., HOLLINGSWORTH, C.L., RANDOLPH, A.B., CHONG, A.Y.: An updated and expanded assessment of PLS-SEM in Information Systems Research, *Industrial Management & Data Systems*, Vol. 117, No. 3, pp. 442-458, 2017.
- [59] ALSMAIRAT, M.A.K.: The nexus between organisational capabilities, organisational readiness and reverse supply chain adoption, *Acta logistica*, Vol. 9, No. 1, pp. 31-37, 2022. <https://doi.org/10.22306/al.v9i1.263>
- [60] SARSTEDT, M., RINGLE, C.M., HAIR, J.F.: *Partial least squares structural equation modeling*, In: Homburg, C., Klarmann, M., Vomberg, A. (eds) *Handbook of Market Research*, Springer, Cham., pp. 587-632, 2017. https://doi.org/10.1007/978-3-319-05542-8_15-1
- [61] HENSELER, J., HUBONA, G., RAY, P.A.: Using PLS path modeling in new technology research: Updated guidelines, *Industrial Management & Data Systems*, Vol. 116, No. 1, pp. 2-20, 2016.
- [62] ALSMAIRAT, M.A.K., AL-ADAILEH, R., AL-SHBOUL, M.A., BALFAQIH, H.: Assessing supply chain performance through the interplay among success drivers, *Uncertain Supply Chain Management*, Vol. 10, No. 3, pp. 789-796, 2022.

Review process

Single-blind peer review process.