International Journal of Applied Mathematics
Volume 38 No. 11s, 2025
ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

THE IMPACT OF ARTIFICIAL INTELLIGENCE AND AUTOMATION ON HUMAN RESOURCE PRACTICES: A COMPREHENSIVE RESEARCH STUDY ON FUTURE WORKFORCE TRENDS

Dr. R.Kalidasan[1*], Dr. Elaya Perumal Annamalai[2], Dr. Manoj P. K.[3], Dr Smitha S[4], B.Madhu Kumar[5], Dr. Vijaya Kumar, J[6], Surya Kant Sharma[7]

[1*]Associate Professor, School of Mechanical Engineering, Lovely Professional University, Phagwara, Punjab, India, Pin Code 144411,
ORCID ID: 0000-0001-5366-9822, Email ID: kalidasan.22180@lpu.co.in
[2]Associate Professor, Department of Aerospace Engineering, Lovely Professional University,
ORCID ID: 0000-0001-9361-1211, Email ID: elaya.26681@lpu.co.in
[3]Professor and Head, Department of Applied Economics, Cochin University of Science and Technology (CUSAT), Kochi, Kerala - 682 022. ORCID ID: 0000-0002-5710-1086
Email ID: manoj_p_k2004@yahoo.co.in
[4]Associate Professor, Christ University, ORCID ID:0009-0006-1803-5430
Email ID: smthsimi@gmail.com
[5]Research Scholar, Department of Business Administration, Kalasalingam Academy of Research and Education, ORCID ID: 0009-0004-2515-2841, Email ID: madhugopaldasjps@gmail.com
[6]Associate Professor, Dayananda Sagar College of Arts, Science and Commerce, Kumaraswamy Layout, Bengaluru – 560 078, India, ORCID ID : 0000-0003-3269-6674
Email ID: drvijayakumar@dayanandasagar.edu
[7]Doctoral Scholar, XLRI XAVIER SCHOOL OF MANAGEMENT,
ORCID ID: 0000-0003-3269-6674 Email ID: suryakantsharma@yahoo.com

Abstract

Artificial intelligence (AI) and automation are increasingly reshaping human resource (HR) practices, moving beyond efficiency tools to strategic drivers of organizational change. While much of the literature has focused on private-sector adoption, municipal governments remain underexplored despite their critical role in workforce management. This study investigates how AI is being integrated into local government HR functions, with attention to adoption levels, benefits and challenges, workforce trends, and governance mechanisms. A cross-sectional, mixed-method design was employed, combining a structured survey of HR professionals across 150 municipalities with qualitative case vignettes to provide contextual depth. Results show that payroll (78.0%) and recruitment (71.3%) are the most automated HR functions, while performance management (54.0%) and employee engagement (46.7%) lag behind. Efficiency gains and improved transparency were the most frequently reported benefits, whereas high implementation costs, ethical concerns, and resistance from employees were recurring challenges. Larger municipalities demonstrated significantly higher adoption rates, reflecting the importance of resource capacity, while fewer than half of respondents reported having AI ethics guidelines or oversight structures in place. Workforce-related findings emphasized reskilling, hybrid role redesign, and employee well-being as emerging priorities. These results highlight the opportunities and risks of AI adoption in public HRM and underscore the need for balanced, accountable, and sustainable strategies.

Keywords: Artificial Intelligence, Automation, Human Resource Management, Local Government, Workforce Trends, Governance

1. INTRODUCTION

The human resource management (HRM) has undergone a tremendous change due to the growing use of automation and artificial intelligence (AI). More and more researchers are coming to the agreement

Received: August 07, 2025

ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

that AI is not merely being experimentally applied in various fields, including hiring, training, workforce planning, and employee engagement, but being actively as well. In addition to the focus on how the application of AI and machine learning technologies is changing HR, making the process of decision-making smoother, decreasing administrative overhead, and predicting labor requirements, Basnet (2024) is anxious about the question of preparation concerning the technological revolution [1]. The increasing interest in the relationship between AI and HRM is the indicator of the fact that companies are desperately struggling to keep up with these active technological changes. Another significant work that has been added to the discussion is the systematic study by Vrontis et al. (2023) that tracks the way in which robots, advanced technologies, and artificial intelligence have changed the practices of global HRM in general [2]. Their findings show how AI has transformed into efficiency tools and strategic resources in international human resource systems. To reinforce this argument, Iancu and Oprea (2025) argue that AI use is transforming human resources towards a more strategic role, rather than an administrative one, which can influence the competitiveness of the organization [3]. These studies reflect the increasing agreement that AI is changing the nature of HR professionals rather than simply enhancing HR procedures.

The impacts of AI are particularly apparent in the training and development of workforce. Ekuma (2024) states that AI-based tools have introduced adaptive assessment systems, a continuously developing model that is responsive to the needs and preferences of workers, and personalised training pathways [4]. This, however, raises the question of inclusion and equality of access. Even though Madancian and Taherdoost (2023) caution that, unless coupled with human interaction, AI-based HR practices are likely to supplant certain HR jobs, they also demonstrate that, overall, AI-based HR practices increase the use of workforce data analysis and decision support tools [5]. The statements above emphasize the paradox inherent in the usage of AI: on the one hand, it leads to efficiency and scalability; on the other hand, it causes concerns related to job stability and fairness. The contradiction that Mer (2023) has introduced as one of the key research directions of the future presupposes that to prevent the threat of eroding the trust that employees place in HR professionals, they should consider a method of balancing the efficiency of technologies and approaches that focus on people [6]. The other element of the issue is the aspect of trust, which the article by Panicker et al. (2025) reveals to be transforming the procedure of hiring and performance evaluation, yet the authors warn that workers may be unwilling to use emerging systems in case they think that they are not open enough [7].

Taking all these into consideration, these contributions explain why it is quite difficult to incorporate AI in HR in such a way that it improves output without jeopardizing the confidence of the employees. The debate continues in the governmental domain where governments are actively involving themselves in AI-based HR practices. Abdeldayem and Aldulaimi (2020) explore AI implementation in the Bahrainian government and come to a conclusion that the efficiency enhancement can be observed, yet the problems of accountability and transparency are still burning [8]. Johnson et al., (2022) also support this concern by giving attention to the ethical issues of open HRM, especially those involving bias and equity in AI-driven decision-making [9]. They observe that this is determined by the governance systems so that AI systems in employment situations in the government can be transparent and responsible. Most studies have also been conducted on adoption drivers. Nawaz et al. (2024) indicate that leadership support, corporate culture, and technological readiness can be the considerable factors facilitating implementation of AI in HRM [10]. Kaushal et al. (2023) confirm that such a method of searching topic clusters in the AI-HRM literature as bibliometric analysis proves that the area is quite fragmented and requires integrative frameworks that will assist in unifying the findings and determining the direction in the future [11]. These findings imply that there is still much space for methodical empirical investigation into the field of AI in HRM, which is still in its infancy. Applied research has more information in the form of real-life examples. To design a digitally savvy workforce, it is necessary to use machine learning as a part of HR processes [12]. Their findings also indicate that AI does not only enhance agility within organizations, but it also promotes creativity. Pavashe et al. (2023) claim that AI results in better resilience and adaptation, yet leads to job

ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

polarization and high levels of reskilling, which is why they examine labor changes in the post-pandemic era [13]. In case deliberate regulations are not established, it means that the changes in the labor force due to the adoption of AI can be biased, benefiting certain groups at the expense of others. Despite the fact that the literature has developed fast, there are a number of gaps that are evident. First, much of the research to date has focused on private-sector organizations, leaving public and municipal HR contexts relatively unexplored. Second, while efficiency and predictive capabilities are well documented, less empirical attention has been paid to the ethical and governance aspects of AI integration in HR, particularly in sub-national government settings. Finally, although scholars highlight reskilling and adaptability as critical future trends, limited research has investigated how local governments anticipate and prepare for such transformations under resource constraints. Addressing these gaps is crucial not only for advancing the academic debate but also for providing practical guidance to policymakers and HR practitioners.

Objectives

To respond to these challenges, the present study has three objectives.

1. To evaluate the extent of AI and automation adoption in key HR functions of local governments.
2. To analyze the perceived benefits and challenges associated with AI integration in municipal HR practices.
3. To identify future workforce trends and governance mechanisms necessary for ensuring responsible and sustainable adoption of AI in local government HR.

The research aims will add to the existing area of knowledge as well as create an empirical understanding of a situation that has not been extensively addressed in the literature on AI-HRM. The municipal governments may have a greater accountability standard than business ventures, their structure and resource limitations may be complex, and they are more prone to being complex. In this regard, understanding how AI is adopted and managed within such institutions is therefore crucial so that one can be able to develop sustainable workforce strategies and also to ensure equity. The findings will be employed to guide academic discourses as well as policy practices to correct the adoption patterns, benefits, and threats and governance policies that can be used to implement responsible ways of AI application in local HR practices.

2. METHODOLOGY

2.1 Research Design

This study design is a cross-sectional and mixed-method research design in that it will examine the impact of the Artificial Intelligence (AI) and automation on human resource practices within local governments. The survey was developed as a quantitative survey; it was directed to collect homogenous data on the degree of adoption, HR outcomes, and governance protection. To complement this data, qualitative case vignettes were introduced that would provide greater insight into the manner in which municipalities are responding to changes in workforce planning and administration as a result of AI. In this way, it is possible to perform a general statistical research and make a specific interpretation at the same time, which guarantees a detailed interpretation of the phenomenon being examined.

2.2 Population and Sampling

The study target population was the HR professionals and senior administrators within the local governments, the municipalities, counties, and the other sub-national governments. The sampling technique was a purposive stratified sampling to obtain diversification in terms of geographic geography, size of the municipality and, digital maturity. The municipalities were divided into small (non-more than 50,000), medium (50,000 to 250,000), and large (more than 250,000). The sample that was used consisted of 150 municipalities in an equal proportion of urban and rural municipalities

ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

and different levels of technological penetration. This sampling model was meant to be used to get various views and contexts where AI and automation are finding their ways into HR practices.

2.3 Data Collection

Structured online questionnaire was used to obtain the data that were collected and sent to municipal HR departments. The key respondents were the HR directors, managers or senior officers who are directly involved in workforce planning. The questionnaire was separated into five thematic categories (i) the adoption of AI and automation in recruitment and training, performance assessment and payroll, (ii) the perceived benefits, including the increase in efficiency, transparency, and workforce planning, (iii) the challenges, including ethical risks, costs of implementation, and staff resistance, (iv) the future trends in the workforce, including skill gaps, reskilling, and change in service delivery, and (v) the mechanisms of governance and oversight, such as the availability of AI ethics guidelines and accountability frameworks. The answers were evaluated on a five-point Likert scale where the options of strongly disagree (1), strongly agree (5) were used, which allowed quantitative analysis of the perceptions and experiences.

2.4 Data Analysis

Descriptive and inferential analysis of the collected data was done. The adoption rates, perceived benefits, and challenges were summarized with the help of the descriptive statistics, such as percentages, means, and standard deviations. Variations among the municipalities of different sizes and level of digital maturity were investigated by using Chi-square tests and one way ANOVA. In addition, regression analyses were performed to establish the relationship between AI adoption and such important HR factors as time-to-hire, turnover rate, and intensity of training. In addition to the quantitative analysis, a qualitative analysis of the responses of the case vignettes was coded and analyzed using thematic analysis. This dual approach to the subject allowed having a deeper understanding of the governing and ethical sides of introducing AI into the process of local government HR.

2.5 Reliability and Validity

In order to prove the reliability and validity of the study, various steps were followed. Cronbach alpha was used to determine internal consistency of the survey items and all the scales recorded value higher than the acceptable level of 0.70. The expert review was used in achieving the content validity; the questionnaire was reviewed by three academic experts in the field of public administration and two municipal HR directors before being distributed. Also, methodological triangulation was obtained through the combination of the survey data with case vignette data that revealed the strengths of findings and reduced the possibility of biases.

2.6 Ethical Considerations

Ethical standards were observed throughout the research process. Informed consent was obtained from all participants after they were briefed on the purpose and scope of the study. Anonymity and confidentiality were strictly maintained to protect municipalities and respondents from identification. Data were stored securely and used exclusively for academic purposes, in line with ethical research guidelines. The study also acknowledged the sensitivity of discussing automation in public employment and addressed this by framing questions in a neutral, non-threatening manner.

3. RESULTS

3.1 Adoption of AI in Municipal HR Practices

The survey revealed that the adoption of AI and automation tools varies across HR functions, with recruitment emerging as the most advanced area. Approximately 71.3% of municipalities reported using AI-driven tools such as applicant tracking systems, resume screening software, or chatbots for

International Journal of Applied Mathematics
Volume 38 No. 11s, 2025
ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

candidate inquiries. Training and development was the second most common domain, with 62.7% of respondents indicating the use of e-learning platforms and AI-supported skill assessment tools. Performance management saw moderate adoption (54.0%), while employee engagement functions, such as AI chatbots for feedback collection, were reported by 46.7% of municipalities. Payroll and administrative automation were widely prevalent, with 78.0% of respondents using automated systems for salary processing, attendance, and leave management. The distribution of adoption rates across different HR functions is presented in Table 1.

Table 1. Adoption of AI/Automation in Municipal HR Functions (N = 150)

HR Function	**Adoption Rate (%)**
Recruitment & Selection	71.3
Training & Development	62.7
Performance Management	54.0
Employee Engagement	46.7
Payroll & Administration	78.0

As shown in Table 1, payroll and recruitment functions demonstrate the highest adoption of AI technologies, while employee engagement remains the least automated domain.
Size-based comparison revealed that large municipalities reported significantly higher adoption in recruitment (82%) compared to small municipalities (61%) ($\chi^2 = 6.27$, $p < 0.05$). Similarly, payroll automation was nearly universal in large municipalities (91%), while only two-thirds (67%) of small municipalities had implemented such systems. Regression analysis further showed that municipality size significantly predicted recruitment AI adoption ($\beta = 0.32$, $p < 0.01$). These findings suggest that resource availability and organizational capacity strongly influence the pace of adoption. These differences in adoption levels across HR functions are further illustrated in Figure 1.

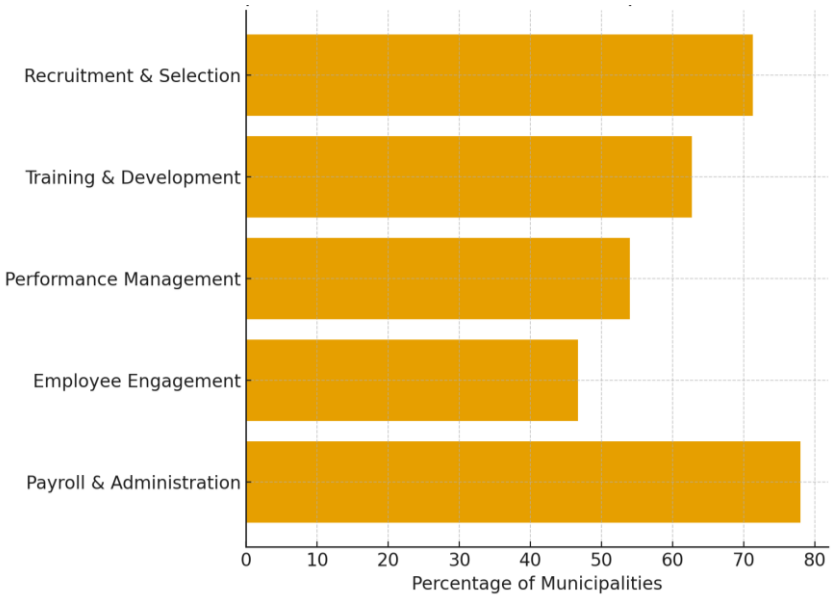

Figure 1. Adoption of AI/Automation in Municipal HR Functions (%)

Figure 1 shows that automation is firmly established in transactional areas like payroll, whereas strategic and people-centered domains such as engagement remain underdeveloped. The size-based variations further suggest that smaller municipalities face structural limitations in adopting advanced AI tools.

Received: August 07, 2025

International Journal of Applied Mathematics
Volume 38 No. 11s, 2025
ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

3.2 Perceived Benefits of AI Adoption

Respondents reported a range of perceived benefits associated with AI and automation. The most frequently cited was improved efficiency and time savings, with 68.0% of municipalities indicating a reduction in time-to-hire and faster processing of HR tasks. Transparency in recruitment and performance evaluation was noted by 57.3%, while strategic workforce planning benefits were highlighted by 49.3%. Notably, 42.0% of respondents reported enhanced employee satisfaction due to streamlined HR services. Mean values further supported these findings: on a 5-point scale, efficiency scored highest (M = 4.1, SD = 0.8), followed by transparency (M = 3.9, SD = 0.7), while satisfaction scored lower (M = 3.3, SD = 0.9). ANOVA tests showed no significant differences in benefit perceptions across municipality sizes ($F(2,147) = 1.21$, $p > 0.05$). A breakdown of these benefits is shown in Figure 2.

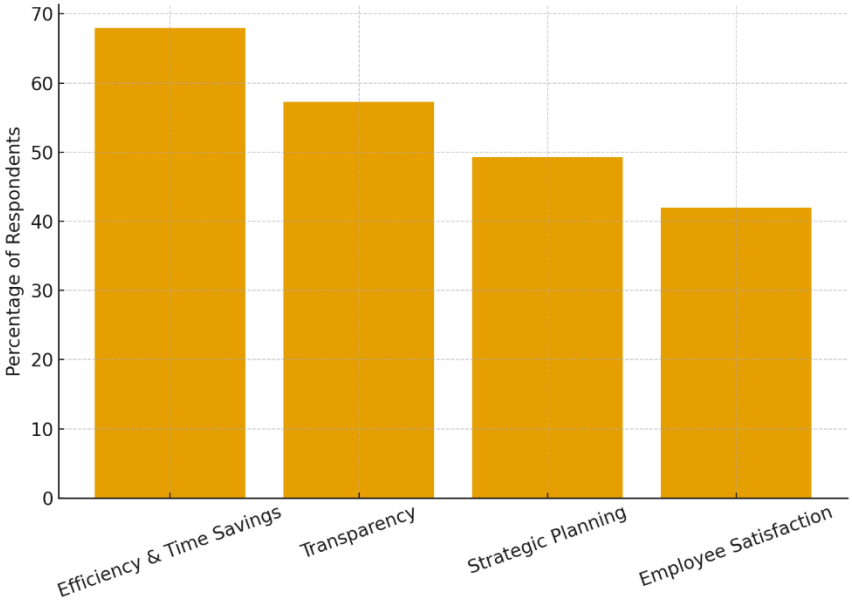

Figure 2. Reported Benefits of AI Adoption in Municipal HR (%)

Figure 2 highlights that efficiency is the most widely recognized benefit of AI adoption, followed by improved transparency. However, relatively fewer respondents reported gains in strategic planning and employee satisfaction, indicating that municipalities are still learning how to leverage AI beyond administrative efficiency.

3.3 Challenges and Risks Identified

While adoption rates are growing, municipalities also expressed concerns about challenges linked to AI integration. The most significant challenge was high implementation costs (63.3%), particularly in smaller municipalities with limited budgets. Ethical risks, including algorithmic bias and privacy concerns, were reported by 55.3% of respondents. Resistance from employees and unions was another major challenge, cited by 51.3%, reflecting fears of job displacement and reduced human oversight. A smaller proportion (38.0%) identified technical expertise and lack of digital literacy as barriers to effective implementation.

3.4 Workforce Trends in Local Governments

The results indicate that AI and automation are reshaping workforce expectations in local governments. A majority of respondents (66.0%) emphasized the need for reskilling and upskilling programs to prepare employees for hybrid roles that combine administrative, analytical, and digital competencies. 58.7% of municipalities anticipated significant job redesign in the next five years, while 47.3% predicted greater reliance on flexible or remote work arrangements supported by digital

Received: August 07, 2025

International Journal of Applied Mathematics
Volume 38 No. 11s, 2025
ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

platforms. Interestingly, 52.0% of respondents noted that employee well-being and work-life balance have become more central to HR policies in the context of automation. These anticipated trends are summarized in Table 2.

Table 2. Anticipated Workforce Trends in Municipal HR

Trend	Response Rate (%)
Reskilling/Upskilling as priority	66.0
Job redesign towards hybrid roles	58.7
Flexible/remote work adoption	47.3
Increased focus on well-being	52.0

Table 2 demonstrates that reskilling and hybrid job redesign are emerging as the most significant workforce shifts, reflecting the growing demand for adaptable skill sets in municipal governments. The same trends are visually represented in Figure 3, which emphasizes the dominance of reskilling as a policy priority.

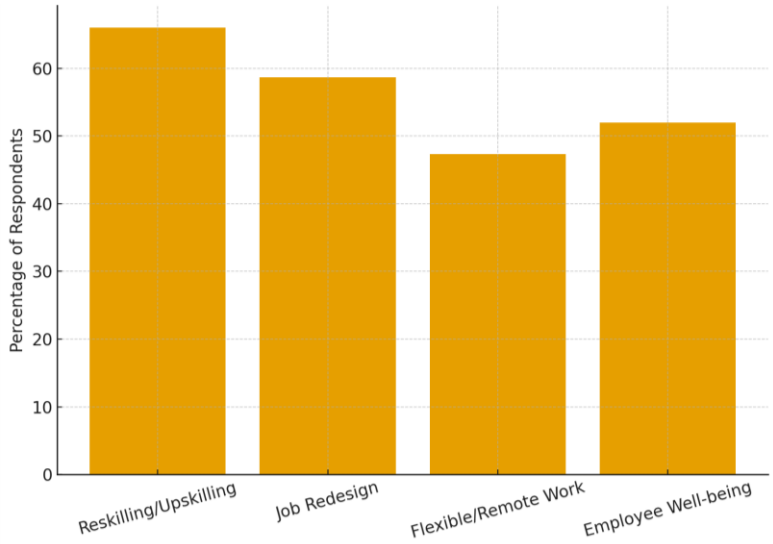

Figure 3. Anticipated Workforce Trends in Municipal HR (%)

Figure 3 shows that municipalities anticipate workforce restructuring, with reskilling and job redesign ranking highest. The increasing focus on well-being also suggests a gradual shift from purely efficiency-driven HR to a more holistic, employee-centered approach.

3.5 Governance and Oversight Mechanisms

The presence of governance and ethical oversight mechanisms for AI adoption varied across municipalities. Only 39.3% reported having formal AI ethics guidelines in place, while 28.7% had established oversight committees or review boards for monitoring automated decision-making processes. Larger municipalities (>250,000 residents) were significantly more likely to have such mechanisms compared to smaller ones ($p < 0.05$).

Thematic analysis of case vignettes suggested that while some municipalities viewed governance structures as essential for maintaining public trust, others saw them as costly and bureaucratic, leading to uneven adoption. This finding underscores the importance of institutional capacity in shaping responsible AI integration.

Received: August 07, 2025

International Journal of Applied Mathematics
Volume 38 No. 11s, 2025
ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

3.6 Reliability and Validity of the Instrument

To ensure the robustness of the findings, the survey instrument was subjected to reliability and validity tests. Cronbach's alpha coefficients indicated high internal consistency across all scales: AI adoption in HR functions ($\alpha = 0.82$), perceived benefits ($\alpha = 0.84$), challenges and risks ($\alpha = 0.79$), and workforce trends ($\alpha = 0.81$). All values exceeded the recommended threshold of 0.70, demonstrating acceptable reliability.

In terms of validity, content validity was established through expert review by three academic specialists in public administration and two municipal HR directors, who confirmed the relevance and clarity of survey items. Further, construct validity was established using factor analysis, which showed distinct loading patterns that were in line with the intended dimensions of adoption, benefits, challenges, and trends of workforce. The findings indicate that the tool was reliable and valid to measure the AI adoption in the municipal HR practices.

4. DISCUSSION

The findings of this research indicate that AI is most likely to be used in municipal HR in payroll and recruitment operations, and relatively worse in performance and employee engagement management. This point indicates that the municipalities are focusing on automation in areas that have the highest efficiencies and lowest costs can be realized the most. In comparison, functions that are relational in nature, like engagement, seem to be less digitizable, which is a sign of trying to be cautious with the substitution of human communication with automation. The trend is based on the opinion of Rathi (2018) who assumes that the initial implementation of AI in HR has been limited to routine management functions, but strategic and people-focused practices are transforming at a slower pace [14]. Efficiency and transparency were identified as the most valued benefits of AI implementation, and the high costs, ethical concerns, and employee resistance were the most prevalent challenges, according to the survey. This two-sidedness reflects the contradiction between the promise of technology and facts of its practice. Since municipalities know the time-saving and data-driven benefits of AI, they are mindful of the unintended impact of the same. The same tension is also raised by Budhwar et al. (2023) regarding the era of generative AI where such tools as ChatGPT are providing new efficiencies, yet raising the issue of fairness, trust, and eliminating traditional HR roles [15].

Most of the municipalities have become weak in their governance systems with fewer than half of them providing formal rules of ethics or ethics committees. This means that adoption and accountability may be disconnected, which will permit the risks of being biased or clouded by the impossibility of seeing the decision-making process. Palos-Sanchez et al. (2022) suggest that one of the most common themes in AI-HRM research is the theme of efficiency and ethical protection [16]. The findings of current study have confirmed this by showing that governance has been lagging behind in regards to adoption particularly in small municipalities. Also there were some differences in terms of size: the greater cities had a significant greater automation of the recruitment and the payroll. This aligns with the reality that access to resources such as finances, technical, and human resources will remain a major determinant of the uptake of AI. According to George and Thomas (2019), companies that have more robust technological infrastructure can afford to adopt AI into HRM [17]. In this connection, the municipal governments are reflective of the trends in the private sector, with resource-endowed organizations being the first to adopt them and small entities facing obstacles.

The performance of the workforce is showing a dramatic shift. The interviewees concentrated mainly on the reskilling and job redesign, and they emphasized that AI will transform the job skills and roles of the workers. Hamouche et al. (2025) also discover that HRD during the age of AI is increasingly about being flexible in which continuous learning is becoming a workforce requirement [18]. The study also revealed the growing importance of employee well being in HR policies that suggest that efficiency oriented focus is shifting to more inclusive ones. Shaukat et al. (2020) cautioned that automation might increase job insecurity without a complimentary HR approach [19]. Municipal

ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

concern of well-being in this study seems to be a proactive measure to this concern. The broader implications of these findings suggest that municipalities are not only automating routine HR processes but also preparing for significant workforce transitions. Johnson et al. (2021) stress the need for workforce roadmaps that align AI adoption with labor market strategies [20]. Our evidence supports this, as municipalities anticipate hybrid roles that combine digital, analytical, and administrative tasks. At the same time, international comparisons highlight similar patterns. Chilunjika et al. (2022) found that public sector HR in South Africa faces both opportunities and institutional challenges when integrating AI [21]. Kshetri (2021) further emphasizes that adoption in emerging economies is uneven, reflecting disparities in resources and governance frameworks [22]. These studies underscore the universality of the challenges observed in our municipal sample.

This study, however, is not without limitations. Its cross-sectional design restricts the ability to capture changes in adoption over time. Reliance on self-reported data may introduce bias, as HR managers may present their practices in an overly favorable or cautious light. Furthermore, while the inclusion of qualitative case vignettes provided valuable context, the limited number restricts the depth of insights. Future research should employ longitudinal designs, integrate objective performance indicators, and expand qualitative evidence across diverse local contexts. Looking ahead, several research avenues appear promising. Comparative studies across national contexts would clarify how institutional and cultural settings shape AI adoption in local governments. More work is also required on governance and ethics, particularly the design of standardized oversight frameworks that municipalities of different sizes can adopt. Finally, future investigations should examine the long-term workforce effects of AI, including the evolution of hybrid roles, skill transitions, and impacts on well-being. These efforts would ensure that AI adoption is not only efficient but also equitable and sustainable.

The study proves that AI and automation are already at the center of municipal HR, and they will lead to efficiency and at the same time, enhance governance and workforce concerns. The bigger cities are at the frontline and the small cities struggle to make ends meet due to the disparities in capacity. The notion of reskilling and well-being have been taken to the forefront of concern as an indicator of the need to discover the balance between efficiency and human values. As these findings were located within the wider body of literature, this research will contribute to a more elaborate understanding of AI and its role in shaping HRM in the public sector and provide recommendations to the policymakers and practitioners who will have to face the future of work.

5. CONCLUSION

This paper has investigated the impacts of artificial intelligence and automation on human resource practices in local governments, the rate of adoption, benefits, challenges, workforce trends, and governance. The results show that automation is not equally used: the most automated spheres are payroll and recruitment, and the least developed are employee engagement and performance management. It means that the local governments would first have to concentrate on the efficiency-based services that could introduce short term gains. Although the most widespread gains were efficiency and transparency, the fear of high implementation costs, the risk of ethical implications, and opposition among the staff members remain salient. A smaller proportion of the surveyed municipalities also reported the absence of ethics guidelines or ethics oversight committees with a mention of lack of accountability to adoption. Small cities were always following big ones, and one can mention that the accessibility to resources was a key factor in the adoption of AI. The results obtained in the context of the workforce named reskilling, job redesign, and employee well-being as the priorities. These changes are an indication that cities are aware of the disruptive nature of AI and they are educating employees to perform hybrid jobs that will require digital and people-interactive skills. The rise of interest in well-being signifies the shift towards a more balanced HR practice, which integrates efficiency and humanist principles. This study would add to a literature base that is essentially focused on the experiences of the private sectors by offering empirical evidence of

ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

municipal governments. It points out the predicaments and prospects of resource limited government agencies and the significance of governance structures that are characterized by fairness, responsibility, and transparency. Overall, AI and automation are transforming the municipal HR practice in both promising and complicated ways. Municipalities need to integrate technological innovation with ethical protection and employee development in order to maximize their advantages. The future studies are advised to monitor such dynamics in time and context in order to contribute to more fair and sustainable results.

REFERENCES

1. Basnet, S. (2024). Artificial Intelligence and machine learning in human resource management: Prospect and future trends. *International Journal of Research Publication and Reviews*, *5*(1), 281-287.
2. Vrontis, D., Christofi, M., Pereira, V., Tarba, S., Makrides, A., & Trichina, E. (2023). Artificial intelligence, robotics, advanced technologies and human resource management: a systematic review. *Artificial intelligence and international HRM*, 172-201.
3. Iancu, C., & Oprea, S. V. (2025). AI and Human Resources in a Literature-Driven Investigation Into Emerging Trends. *IEEE Access*.
4. Ekuma, K. (2024). Artificial intelligence and automation in human resource development: A systematic review. *Human Resource Development Review*, *23*(2), 199-229.
5. Madancian, M., & Taherdoost, H. (2023). The impact of artificial intelligence on human resource management: opportunities and challenges. In *International conference interdisciplinarity in engineering* (pp. 406-424). Cham: Springer Nature Switzerland.
6. Mer, A. (2023). Artificial intelligence in human resource management: Recent trends and research agenda. *Digital transformation, strategic resilience, cyber security and risk management*, 31-56.
7. Panicker, A., Krishna, S. H., Garg, S., Biswas, P. C., Lourens, M., & Kumar, K. S. (2025, February). Future Trends in HRM: The Role of Artificial Intelligence and Automation in Shaping the Workplace. In *2025 International Conference on Pervasive Computational Technologies (ICPCT)* (pp. 933-937). IEEE.
8. Abdeldayem, M. M., & Aldulaimi, S. H. (2020). Trends and opportunities of artificial intelligence in human resource management: Aspirations for public sector in Bahrain. *International journal of scientific and technology research*, *9*(1), 3867-3871.
9. Johnson, B. A., Coggburn, J. D., & Llorens, J. J. (2022). Artificial intelligence and public human resource management: questions for research and practice. *Public Personnel Management*, *51*(4), 538-562.
10. Nawaz, N., Arunachalam, H., Pathi, B. K., & Gajenderan, V. (2024). The adoption of artificial intelligence in human resources management practices. *International Journal of Information Management Data Insights*, *4*(1), 100208.
11. Kaushal, N., Kaurav, R. P. S., Sivathanu, B., & Kaushik, N. (2023). Artificial intelligence and HRM: identifying future research Agenda using systematic literature review and bibliometric analysis. *Management Review Quarterly*, *73*(2), 455-493.
12. Okatta, C. G., Ajayi, F. A., & Olawale, O. (2024). Navigating the future: integrating AI and machine learning in hr practices for a digital workforce. *Computer science & IT research journal*, *5*(4), 1008-1030.
13. Pavashe, A. S., Kadam, P. D., Zirange, V. B., & Katkar, R. D. (2023). The impact of artificial intelligence on employment and workforce trends in the post-pandemic era. *International Journal for Research in Applied Science and Engineering Technology*, *11*(11), 154-157.
14. Rathi, R. A. (2018). Artificial intelligence and the future of hr practices. *International Journal of Applied Research*, *4*(6), 113-116.

Received: August 07, 2025

ISSN: 1311-1728 (printed version); ISSN: 1314-8060 (on-line version)

15. Budhwar, P., Chowdhury, S., Wood, G., Aguinis, H., Bamber, G. J., Beltran, J. R., ... & Varma, A. (2023). Human resource management in the age of generative artificial intelligence: Perspectives and research directions on ChatGPT. *Human Resource Management Journal*, *33*(3), 606-659.
16. Palos-Sánchez, P. R., Baena-Luna, P., Badicu, A., & Infante-Moro, J. C. (2022). Artificial intelligence and human resources management: A bibliometric analysis. *Applied Artificial Intelligence*, *36*(1), 2145631.
17. George, G., & Thomas, M. R. (2019). Integration of artificial intelligence in human resource. *International Journal of Innovative Technology and Exploring Engineering*, *9*(2), 5069-5073.
18. Hamouche, S., Rofa, N., & Parent-Lamarche, A. (2025). Systematic bibliometric review of artificial intelligence in human resource development: insights for HRD researchers, practitioners and policymakers. *European Journal of Training and Development*, *49*(1-2), 43-62.
19. Shaukat, K., Iqbal, F., Alam, T. M., Aujla, G. K., Devnath, L., Khan, A. G., ... & Rubab, A. (2020). The impact of artificial intelligence and robotics on the future employment opportunities. *Trends Comput. Sci. Inf. Technol*, *5*(1), 050-054.
20. Johnson, M., Jain, R., Brennan-Tonetta, P., Swartz, E., Silver, D., Paolini, J., ... & Hill, C. (2021). Impact of big data and artificial intelligence on industry: developing a workforce roadmap for a data driven economy. *Global Journal of Flexible Systems Management*, *22*(3), 197-217.
21. Chilunjika, A., Intauno, K., & Chilunjika, S. R. (2022). Artificial intelligence and public sector human resource management in South Africa: Opportunities, challenges and prospects. *SA Journal of Human Resource Management*, *20*, 1972.
22. Wang, W., & Siau, K. (2019). Artificial intelligence, machine learning, automation, robotics, future of work and future of humanity: A review and research agenda. *Journal of Database Management (JDM)*, *30*(1), 61-79.
23. Kshetri, N. (2021). Evolving uses of artificial intelligence in human resource management in emerging economies in the global South: some preliminary evidence. *Management Research Review*, *44*(7), 970-990.

Received: August 07, 2025