

Artificial Intelligence in Human Talent Management and its Strategic Impact on Human Resources Decision-Making: A Systematic Literature Review

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Abstract

This study analyzes the impact of artificial intelligence (AI) on strategic decision-making in human resource management (HRM), based on evidence from the scientific literature. The research followed PRISMA guidelines and the PICOC framework, including 20 peer-reviewed studies retrieved from databases such as Scopus, Web of Science, and Science Direct. Findings indicate that the main applications of AI in HRM focus on recruitment, selection, performance evaluation, training, and employee retention, enhancing efficiency, accuracy, and agility in decision-making. The review highlights benefits such as the reduction of human bias and the strengthening of predictive analytics. However, significant challenges remain, particularly organizational resistance, algorithmic opacity, and the demand for new digital skills. From an ethical perspective, the results emphasize the urgency of governance frameworks that ensure transparency, fairness, and the active participation of employees in AI-based HR processes. The study concludes that AI is no longer a distant promise but a present reality that structurally reshapes the role of HR. Nevertheless, its strategic value can only be fully realized when integrated ethically, critically, and collaboratively, combining technological capabilities with human judgment. This review provides a useful framework for both researchers and practitioners seeking to implement AI solutions in HRM effectively and sustainably.

Keywords

Artificial intelligence, Human talent management, Strategic decision-making, Algorithmic ethics, Human resources, Organizational environments

1. Introduction

In today's world, societies are immersed in a constant process of transformation and technification, in which the different sectors that make up contemporary society generate significant advances and, consequently, demand greater levels of adaptability [1]. In particular, business management takes place in an environment characterized by high volatility, where organizations must respond quickly to technological, economic, and organizational changes to preserve their effectiveness, efficiency, and competitiveness in increasingly complex and variable markets [2].

In this context, human resources are one of the most complex and sensitive resources in any organization, because they involve people with diverse knowledge, skills, experiences, expectations and adaptive capacities. Unlike other organizational resources, human talent is continuously influenced by technological changes, work structures, organizational culture, and market demands. Therefore, its management cannot be reduced to standardized or exclusively technical processes, but requires the

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participation of specialists from different areas and the permanent development of new capabilities. As technology progressively transforms work and organizations, human resource management faces the challenge of adapting its practices without losing the value of human judgment and organizational knowledge [3].

In recent years, the accelerated development of artificial intelligence (AI) has profoundly transformed organizational processes and, specifically, the way in which human talent is managed. This transformation is related to advances in algorithms capable of mimicking certain cognitive functions, analyzing large volumes of data, automating complex processes, and generating predictions that can support more informed decision-making [3]. Consequently, organizations have begun to incorporate intelligent systems in areas such as recruitment, performance evaluation, talent development, and retention. However, this incorporation transcends the simple adoption of technological tools, since it is also reconfiguring traditional organizational structures and generating new challenges related to the way professionals interact with intelligent systems [2, 4].

Likewise, the increasing incorporation of AI in human resource management poses a particular challenge, because the relationship between professionals and intelligent technologies requires continuous updating. HR specialists need to progressively understand how algorithms work, how their results should be interpreted, and when their recommendations should be accepted, challenged, or supplemented by professional judgment. In this sense, the relationship between human resources and AI can be partially understood through the degree of human-AI integration in decision-making processes, understood as the level at which intelligent systems participate in the collection and processing of information, the generation of recommendations and the formulation of organizational decisions, while professionals maintain the responsibility of evaluating and acting on these recommendations. This perspective is consistent with the idea that technology can expand human capabilities rather than necessarily replace them [5].

However, incorporating AI into human resources also poses significant organizational and strategic challenges. While there is a growing body of research on AI and human resources, questions remain about their effects on organizational structures, decision-making processes, and the relationship between technological automation and human judgment. In particular, the paradox between automation and upskilling highlights the need to understand whether AI primarily replaces human activities or strengthens the capabilities of professionals, as well as the conditions under which the two possibilities can coexist [2]. These challenges become more relevant in organizational environments characterized by uncertainty, where people-related decisions require not only speed and analytical capacity, but also contextual understanding, professional experience, and ethical responsibility.

In this sense, organizations' ability to strategically integrate AI should be analyzed from a perspective where technology complements, rather than automatically replaces, human judgment. In view of this, [5] proposes the concept of human-AI symbiosis, suggesting that the value of AI lies in its ability to expand the cognitive capabilities of professionals without displacing their critical agency. Therefore, the effective interaction between human experience and technological capabilities requires continuous learning and the development of competencies that allow professionals to critically interpret the information generated by AI. At the same time, [6]. They highlight the need to consider the long-term implications of algorithmic decision-making and datafication, particularly as these processes can transform the way organizational decisions are produced and justified.

Similarly, the ethical dimension represents another major challenge associated with the use of AI in human resource management. The literature has documented concerns related to the possibility that algorithmic systems reproduce existing forms of discrimination when trained with historical data that reflects unequal or discriminatory practices [7, 8]. Consequently, the implementation of AI cannot be evaluated solely on the basis of its technical functionality or efficiency. It is also necessary to consider whether their use is consistent with the principles of equity, inclusion, transparency and dignity at work. This aspect is particularly sensitive in human resources, because decisions related to recruitment, evaluation, promotion, development, and retention can directly affect people's career opportunities and working conditions.

AI is also redefining the traditional conception of strategic decision-making. In classic management

models, organizational decisions tend to rely heavily on experience, professional judgment, and collective deliberation. However, in AI-mediated environments, information can be filtered, hierarchized, and processed by systems that identify statistical patterns and generate recommendations capable of influencing managerial judgments. Consequently, the decision-making process progressively incorporates the interaction between human and non-human agents, which requires rethinking the way in which responsibility, experience and authority are distributed within these processes [6, 9]. This does not necessarily imply the disappearance of human decision-making; on the contrary, it highlights the need to understand how human judgment is transformed when it operates in conjunction with intelligent technologies.

In this context, there is still a significant gap in the scientific literature regarding the integrated understanding of how AI is being used in human talent management and how these applications are influencing strategic decision-making in human resources. Existing research has provided relevant insights into particular technology applications, worker lifecycle processes, ethical risks, automation, and human-AI interaction. However, the available evidence remains fragmented across different HR functions and dimensions of organizational decision-making. Therefore, it is necessary to develop a synthesis that allows articulating three dimensions that are often examined separately: the applications of AI in human talent management, the benefits and challenges associated with its integration, and the ethical and organizational conditions necessary for responsible strategic decision-making.

Consequently, the present systematic review seeks to make a differentiated contribution by integrating these dimensions into a single analytical framework specifically focused on the implications of AI for strategic decision-making within human talent management. Rather than considering AI solely as a technological innovation or as a tool aimed at automating HR activities, this study addresses its broader organizational relevance, considering the ways in which it can influence the quality, efficiency, and orientation of strategic decisions, while still recognizing the importance of human judgment, ethical responsibility and organizational conditions. In this way, the review aims to offer an integrated understanding of the current state of scientific knowledge and identify those areas in which the evidence remains fragmented or is insufficient. This perspective can contribute not only to the development of academic discussion, but also to organizations that seek to adopt AI without losing sight of the human dimension that continues to be fundamental to human resource management.

For all of the above, it is necessary to develop a systematic review of the scientific literature that allows identifying, analyzing, and synthesizing how artificial intelligence is being applied in human talent management and what strategic impacts it is generating in the decision-making processes of the human resources area. This type of study can contribute to addressing the identified academic gap and, at the same time, offer practical guidance for organizations seeking to implement technological solutions in an ethical, efficient, and sustainable manner.

From this perspective, the following general research question arises: How does artificial intelligence impact strategic decision-making within human talent management in human resources? Based on this, the following specific questions are raised: (i) What are the main applications of AI in human talent management and how do they contribute to strategic decision-making in human resources?; (ii) What are the benefits and challenges of integrating AI into strategic decision-making in human resources?; and (iii) What ethical and organizational considerations should be addressed in the implementation of AI in human resources to improve strategic decision-making?

In correspondence with the above, the general objective is to analyze the impact of artificial intelligence on strategic decision-making within the management of human talent in human resources, based on the evidence available in the scientific literature. The following specific objectives are derived from this: (i) to identify the main applications of artificial intelligence in human talent management processes and its contribution to strategic decision-making; (ii) to describe the benefits and challenges reported by the scientific literature regarding the integration of artificial intelligence in strategic decision-making in human resources; and (iii) to evaluate the ethical and organizational considerations raised in the literature on the implementation of artificial intelligence in human resources, aimed at improving strategic decision-making processes.

2. Methodology

The research presents a documentary review design, since it involves investigating, selecting and analyzing a set of scientific texts in electronic format [10]. Likewise, the PRISMA methodology was used, through which criteria were established for inclusion and exclusion for the selection process of the studies, which were subsequently analyzed through a systematized methodology that can be replicated in other research [11].

For the development of the article, based on the PRISMA statement, a series of phases were followed: First, the PICOC method was applied, in order to define the parameters for the development of the research, as can be seen in table 1.

Table 1
PICOC Methodology.

Component	Description
Population	Public and private organizations in which human talent management practices are developed, including human resources areas, strategic human capital management, and professionals in charge of strategic decision-making.
Intervention	Application of artificial intelligence (AI) systems in strategic processes of human talent management: recruitment, selection, performance evaluation, predictive analysis, retention, training and development, people analytics, among others.
Comparison	Comparison between strategic decision-making processes in human resources carried out with and without the use of AI tools, as well as between different approaches, algorithms or ethical implementation frameworks. In case of absence in the literature, it will be addressed as a cross-sectional thematic comparative analysis.
Outcomes	Documented evidence on the benefits (efficiency, speed, reduction of biases, improved prediction and retention of talent), challenges (resistance to change, lack of training, algorithmic biases) and ethical considerations (transparency, privacy, algorithmic justice) related to the use of AI in decision-making in human resources.
Context	Contemporary organizational environments, without geographical limitation, in the period between 2019 and 2025, considering studies published in indexed scientific journals.

The second phase consisted of reviewing the research questions, general How does artificial intelligence impact strategic decision-making within human talent management in human resources?, and specific (i) What are the main applications of AI in human talent management and how do they contribute to strategic decision-making in human resources?, (ii) What are the benefits and challenges of integrating AI in strategic decision-making in human resources?, (iii) What ethical and organizational considerations should be addressed in the implementation of AI in human resources to improve strategic decision-making?, with which it was possible to define the keywords for information search, as can be seen in Table 2.

For the third phase, the inclusion criteria for the selection of articles are established, taking the elements that can be seen in table 3:

The fourth phase consisted of defining the databases for the search of the articles, taking into consideration the keywords and Boolean operators required for the search. Table 4 shows the selected databases and the search equations used.

In the fifth phase, the quality criteria were established to guide the selection or exclusion of the articles identified in the respective databases. The selection of studies and quality assessment were conducted independently by two reviewers, who evaluated each article according to the established criteria. In cases of disagreement, the reviewers discussed the discrepancies and reached a consensus before making the final decision. This procedure helped reduce individual reviewer bias and strengthen

Table 2

Keywords related to PICOC components.

Component	Original term (English)	Synonyms or Related Terms
P	Human Resource Management	HRM; Personnel Management
	Talent Management	Talent Administration; Human Capital Management
	Human Capital	Workforce; Strategic Human Resource
I	Artificial Intelligence	AI; Machine Learning; Intelligent Technologies
	Process Automation	Robotics; Task Digitalization; RPA
	People Analytics	Workforce Analytics; Predictive Analytics
C	Decision-Making	Strategic Decision-Making
O	Organizational Performance	Organizational Transformation
	Competitive Advantage	Strategic Impact; Value Creation
	Talent Retention	Staff Retention; Key Staff Retention
	Algorithmic Ethics	AI Transparency; Algorithmic Fairness; Algorithmic Bias
C	Digital Transformation	Business Digitalization
	Industry 4.0	Fourth Industrial Revolution

Table 3

Inclusion and exclusion criteria.

Criterion	Description
Inclusion	Studies published in English or Spanish will be considered.
	Documents published in the period between 2019 and 2025 will be included.
	Documents that analyse the role of AI in processes such as recruitment, selection, training, performance, work environment, etc.
	Research in public or private organizations, whether in corporate, educational, industrial or governmental environments.
	Studies that explicitly address the application of AI in human talent management and its impact on decision-making.
Exclusion	Only studies with full access to the text will be admitted to ensure rigorous analysis of the content.
	Documents published before 2019 will not be considered.
	Research focused solely on general AI or human resource management without clear evidence of integration between AI and HRM.
	Studies whose main focus is related to technological applications in other sectors such as manufacturing, e-commerce, etc.
	Posts not written in English or Spanish will be discarded.
	Documents that are not available in full text will be excluded.
	Studies that do not explicitly address the use of AI in human resources or its link to strategic decision-making will be excluded.
	Grey literature, such as theses, degree projects, technical reports, newsletters, editorials, opinion articles, patents, etc.

the consistency of the study selection and quality assessment process. The assessment scale considered the following scores: Yes, 1 point; Partially, 0.5 points; and No, 0 points. Based on this assessment scale, the maximum score per article and the cut-off point (3.5 points) were established, the latter determined according to the researchers' criteria (see Table 5).

The last phase consisted of filtering and filtering the articles that were analyzed in the next chapter, being distributed according to the provisions of the PRISMA methodology, as can be seen in Figure 1. In the identification stage, 70 records were recovered from the selected databases, of which 20 were eliminated due to duplicity, leaving 50 records for screening. Subsequently, 15 articles were excluded due to access restrictions or absence of full text, so 35 articles were evaluated for eligibility. Of these,

Table 4

Databases for searching information.

Database	Search equation
Scopus	TITLE-ABS-KEY(("human resource*" OR "HRM" OR "personnel management" OR "talent management" OR "human capital management" OR "human capital" OR "workforce") AND ("artificial intelligence" OR "AI" OR "machine learning" OR "process automation" OR "robotic process automation" OR "people analytics" OR "workforce analytics" OR "predictive analytics") AND ("decision-making" OR "organizational performance" OR "organizational transformation" OR "competitive advantage" OR "talent retention" OR "staff retention"))).
Web of Science	TS(("human resource*" OR "HRM" OR "personnel management" OR "talent management" OR "human capital management" OR "human capital" OR "workforce") AND ("artificial intelligence" OR "AI" OR "machine learning" OR "process automation" OR "robotic process automation" OR "people analytics" OR "workforce analytics" OR "predictive analytics") AND ("decision-making" OR "organizational performance" OR "organizational transformation" OR "competitive advantage" OR "talent retention" OR "staff retention"))).
ScienceDirect	("human resource management" OR "talent management" OR "human capital management") AND ("artificial intelligence" OR "machine learning" OR "people analytics" OR "process automation") AND ("decision-making" OR "organizational performance" OR "competitive advantage" OR "talent retention").

Table 5

Quality criteria.

Code	Quality criteria
CC1	Are the objectives of the study clearly defined and aligned with the review topic?
CC2	Is the methodology used well described and appropriate for the objectives of the study?
CC3	Do the data presented allow the reported results to be evaluated?
CC4	Are the conclusions justified based on the data and analysis carried out?
CC5	Are there any limitations of the study and reflections on possible biases?
CC6	Does the study contribute significantly to the body of knowledge in the field analyzed?

15 were excluded because they presented unclear objectives or misaligned with the review ($n = 7$), undefined methodology ($n = 4$) or limited contribution ($n = 4$). Finally, 20 studies met the eligibility criteria and were included in the systematic review for analysis and synthesis. This process made it possible to guarantee the traceability of the selection and exclusion decisions adopted at each stage.

3. Results

Once the total number of articles to be analyzed was obtained, results associated with the database consulted, type of document analyzed, country of publication, years of publication, and keywords were obtained. Regarding the database consulted, 45% of the articles analyzed are hosted in the Scopus database, 40% came from Web of Science (WoS), and only 15% are hosted in ScienceDirect. This distribution guaranteed reliable scientific coverage, with a predominance of high-impact publications, therefore, having Scopus and WoS publications ensured the quality and validation of the information collected (see Figure 2).

Regarding the type of document analyzed, 50% of the sources consulted are original articles, 35% are review articles of the scientific literature, and 15% are conference proceedings. This allows us to

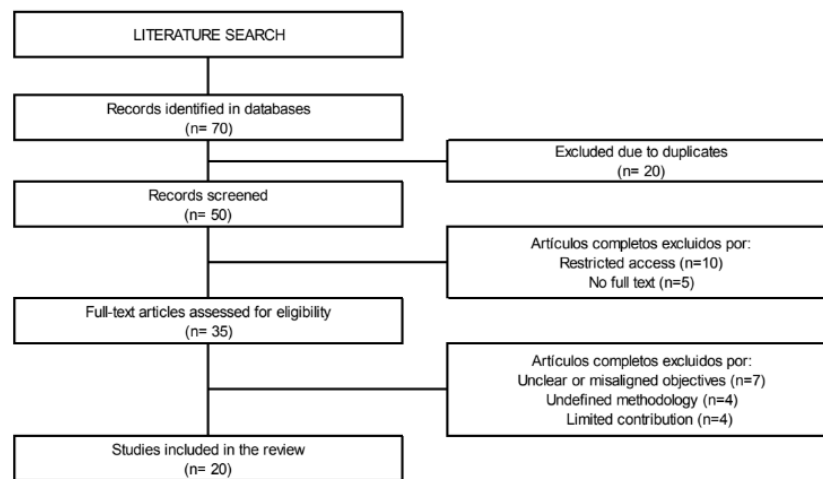


Figure 1: Prism Flowchart.

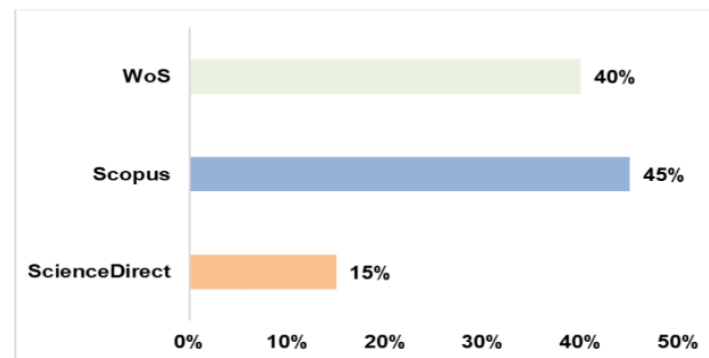


Figure 2: Database queried.

show that there is a high scientific production based on articles from recent empirical research, likewise, review articles have a prominent presence, which indicates that this field of study is consolidating knowledge as a result of existing research, and the conference proceedings provide an emerging and experimental vision within this area of knowledge (see Figure 3).

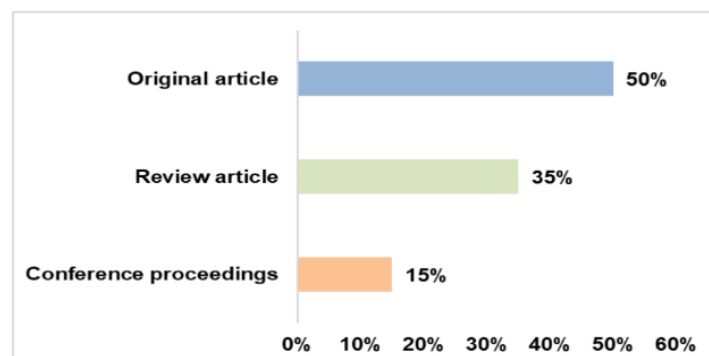


Figure 3: DType of document analyzed.

Regarding the years of publication, the highest scientific production in relation to the subject of study was recorded in 2024, reaching 35% of the total publications. The first records identified correspond to 2019 with 5%. Subsequently, during the period between 2021 and 2023, production remained constant with a participation of 15% in each of the years (2021, 2022, and 2023). Finally, so far in 2025, the volume

of publications records 15%, equaling the annual percentage observed individually in the years prior to 2024 (see Figure 4).

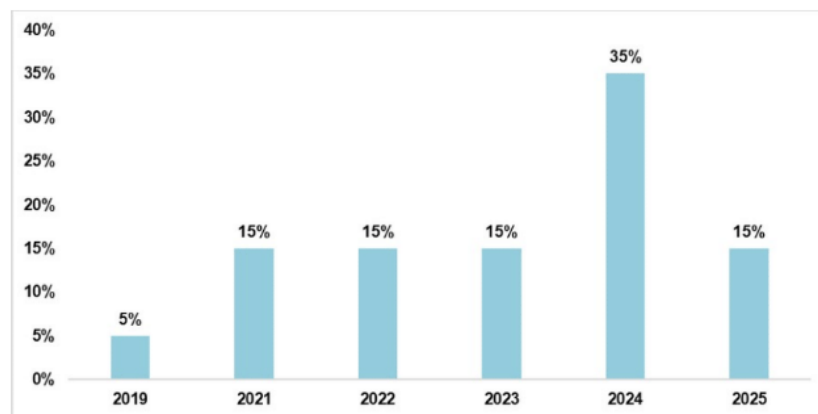


Figure 4: Publication years.

Regarding the keywords identified in the analyzed sources, the 16 keywords reported in the analyzed sources, divided into three blocks, the first of them with an appearance in 5 scientific articles "AI-Based Solutions" and "AI Transparency", in the second block with an appearance in 4 scientific articles "Strategic Impact", "Process Automation", "Organizational Transformation", "Human Resources" and "HR Professionals". Finally, with an appearance in 3 scientific articles "Talent Optimization", "Talent Management", "Recruitment", "Organizational Settings", "Human-AI Collaboration", "Human Capital", "Explainable AI", "Decision Efficiency", and "Algorithmic Ethics". This shows that the most recurrent keywords reflect the existence of strategic and technical approaches within the recent literature, reaffirming the core of the study, as well as there are keywords that suggest a combined interest in operational efficiency, algorithmic ethics and organizational transformation, finally it is shown that predictive technologies are increasingly integrated in human talent management (see Figure 5).

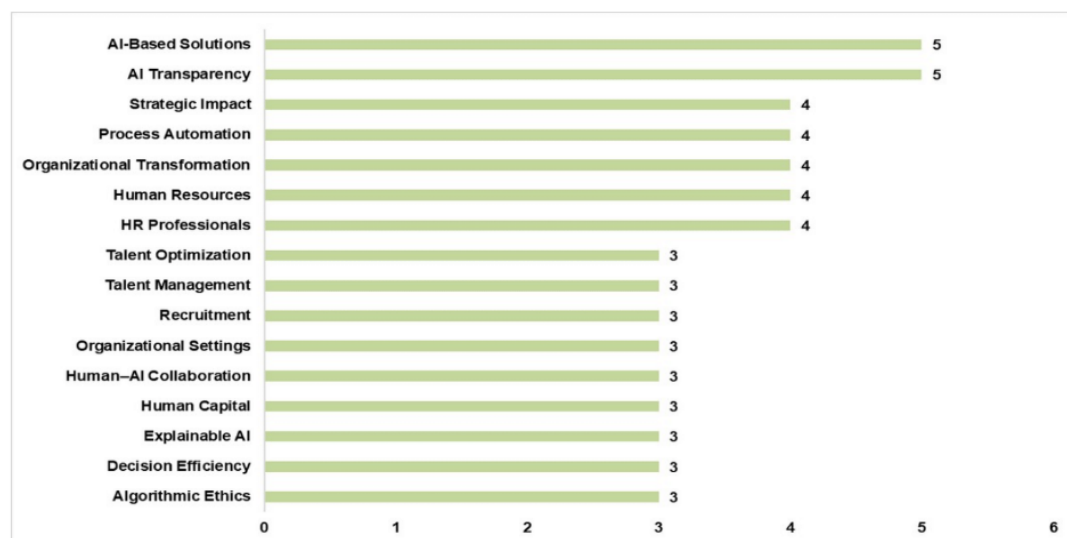


Figure 5: Featured keywords.

Table 6 summarizes the 20 included studies by author, year, context, type of AI, HR function, and HR function. HR, Findings, and Ethical Implications. Evidence shows that AI applications, such as machine learning, predictive analytics, automation, LLM, and XAI, focus on recruitment, selection, performance evaluation, training, and talent retention, marking a transition to strategic support. The main benefits identified include increased efficiency, time optimization, predictive capacity and decision

support. However, studies warn of critical risks of algorithmic bias, discrimination, privacy, lack of transparency, and limited explainability. Therefore, the literature underscores the need to maintain human oversight, develop digital competencies, and establish robust governance mechanisms.

Table 6

Databases for searching information.

Author/year	Background	AI Type	HR Function	Main finding	Ethical Implication
Gan et al. (2024)	Recruitment	Generative LLM/AI	Selection	Automation and faster CV screening	Oversight and transparency
Nosratabadi et al. (2022)	Employee life-cycle	ML/AI	Recruitment–Retention	AI applicable to all stages of the work cycle	Data protection
Mohture (2022)	HR	AI	Good game.	Various applications of AI in HR	Human control
Vrontis et al. (2022)	Organizations	AI/robotics/advanced technologies	Good game.	Transforming HR practices	Organizational adaptation
Kulal et al. (2025)	Recruitment	AI	Selection	Greater efficiency, but risks of bias	Fairness and transparency
Van Rooy (2024)	Governance	IA/HM collaboration	Decision-making	Human-machine complementarity	Human control
Madanchian (2024)	Employee life-cycle	AI	Hiring–retention	Efficiency, Customization, and Scalability	Responsible use of data
Radonjić et al. (2024)	Organizations	AI	Managerial decision	Improved decision-making capacity, with adoption challenges	Trust and competences
Chen (2023)	Recruitment	Algorithmic AI	Selection	Improved efficiency, but risk of discrimination	Algorithmic Justice
Madanchian et al. (2023)	HR	AI	Recruitment /performance/engagement	Identification of tools and techniques	Governance
Ekuma (2024)	HR Development	AI/automation	Training and development	HRD Practice Transformation	Work Reconfiguration
Nawaz et al. (2024)	Organizations	AI	HR Internship	Feature adoption and transformation	Digital skills
Schemmer et al. (2022)	Human-AI decision	XAI	Decision-making	XAI can improve decisional performance	Explainability
Rodgers et al. (2023)	HRM	Algorithmic AI	Ethical decisions	Framework for Algorithmic Ethical Decisions	Responsibility and accountability
Taslim et al. (2025)	Organizations	AI	HR Decision	Importance of employee engagement	Transparency and participation
Sakka et al. (2022)	HRM	AI	Strategic Management	New competencies and legal implications	Compliance and Privacy
Tursunbayeva et al. (2025)	Recruitment	AI/Digital Data	Selection	Impact on candidate perception	Privacy and justice
Votto et al. (2021)	Tactical HR Management	AI	Talent Management	Systematization of AI applications	Human judgment
Patterson & Whitaker (2025)	HRM	AI	People Management	Ethical Benefits and Risks	Bias, privacy, transparency
Andrieux et al, (2024)	HRM	Generative AI	Decision-making	AI acts exclusively as an assistant; The ultimate responsibility is 100% human	Algorithmic Bias and Discrimination

4. Discussion

Regarding the first specific objective that proposed to identify the main applications of artificial intelligence in human talent management processes and its contribution to strategic decision-making, it has been shown that the use of AI within human talent management has grown in variety, depth and sophistication. Some authors indicate that this tool is being used for the analysis of sentiments in interviews and algorithms that predict employee turnover, which has led organizations to bet on the

implementation of technological solutions aimed at optimizing the efficiency and quality of strategic decisions [12, 13].

Likewise, the literature consulted shows that AI applications in human talent management are being used especially in functions such as recruitment, selection and performance evaluation [14, 15, 16]. An example of this is systems based on machine learning, which are being used to filter resumes, detect patterns of behavior in candidates and conduct automated interviews [17], highlighting the fact that with the automation of these processes, not only is time saved, but also much more strategic decision-making based on objective data is achieved. Likewise, technologies such as LLM agents are used for the assessment of competencies beyond keywords, their focus is directed at the semantic aspects of language that were previously unnoticed [12], highlighting then that this ability to capture semantics is particularly useful in processes such as the evaluation of soft skills, which is difficult to standardize through the use of traditional means. Thus, AI is not only optimizing operational tasks, but also raising the quality of analysis over human potential [18].

In areas such as employee development and training programs, AI has made it possible to offer personalized training programs that are aimed at responding to the individual needs of workers and in turn to the strategic objectives that the organization has set itself [19]. Another advantage of AI in the training function is predictive analysis through which it is possible to anticipate skills gaps and propose specific learning paths, transforming this function into a competitive advantage [20]. This is perceived as a key strategic alignment to strengthen decision-making within the human resources area, since it allows for the advance planning of employee development scenarios adjusted to changes in the environment [21].

The authors consulted also highlight advances in performance and succession analytics, as well as in the dynamic configuration of work teams [14, 22]. In this sense, the value that AI provides within the human resources area derives from the fact that it is not acting in isolation, but on the contrary, there is an integration with the different management ecosystems that allow continuous feedback, improving adaptability and organizational resilience [23]. On the other hand, performance management and talent retention have also benefited greatly from the use of AI, especially in the analysis of productivity, organizational climate and workplace well-being data, thus achieving the identification of early signs of demotivation or risk of talent drain, which facilitates preventive and strategic decision-making [23]. Another advantage found in the analysis of the literature consulted is the use of advanced analytics within these processes, which empowers human resources leaders with actionable and real-time information, seeing AI as an operational tool to become an ally that transforms data into decisions with strategic impact [2].

In reference to the second objective that proposed to describe the benefits and challenges reported by the scientific literature on the integration of artificial intelligence in strategic decision-making in human resources, it has been found that one of the most outstanding benefits in the literature is the ability of AI to reduce human errors and cognitive biases within personnel selection and evaluation processes. The studies analyzed highlight that human oversight (HO), when automated and standardized with the criteria used in these two processes, allows decision-making to be more consistent and less influenced by personal prejudices [21]. Likewise, it is highlighted that the efficiency and accuracy of decisions has increased, since with the use of AI, tasks that previously required weeks of human analysis are now solved in minutes and with a level of depth and prediction that was previously unthinkable [19, 24, 25].

Another key benefit highlighted by the studies is associated with the improvement in the speed and quality of strategic decisions within the human resources area, because with the implementation of this technology, work teams can access intelligent dashboards that integrate information from different sources in real time, which streamlines resource planning, performance management and internal mobility [12]. Therefore, the author highlights that this rapid response capacity allows organizations to easily adapt to changes within the context where they operate, without losing the north of their strategy.

However, there are great challenges within organizations when implementing AI, and most of the studies analyzed identify that an inadequate implementation of AI can generate adverse effects, such as loss of trust on the part of employees, especially when decisions seem arbitrary or inexplicable

[21, 23, 26]. In addition to the above, there are organizational challenges inherent to the implementation of this type of technology, the most outstanding of which is the resistance to change, the need for new digital skills, and the reconfiguration of roles within human resources departments [20, 27]. Therefore, to achieve a successful integration of AI, a profound transformation in the organizational mindset is required, in addition to investment, training and adaptive leadership, because it is not enough to just incorporate technology, the organizational culture must also be redesigned [25, 26].

Regarding the third specific objective, which established to evaluate the ethical and organizational considerations raised in the literature on the implementation of artificial intelligence in human resources, aimed at improving strategic decision-making processes, the existence of a relevant ethical debate around the use of AI in human resources was evidenced. One of the most frequent concerns is the possibility that algorithms reproduce or even amplify historical biases present in training data [21]. Likewise, the sources consulted agree that strategic decisions supported by AI must be guided by clear ethical principles; In this sense, aspects such as transparency, explainability and algorithmic justice are considered indispensable conditions for responsible implementation [21, 26, 28], otherwise, AI risks becoming a black box whose criteria are opaque even to those who manage it, generating mistrust both inside and outside the organization [29]. For this reason, different authors emphasize the need to periodically audit these systems and promote principles of algorithmic fairness.

In the organizational field, the literature makes a clear call not to lose sight of the human role in the midst of technological development. Artificial intelligence should not replace experience or empathy, but complement them and act as an ally of professional judgment [16, 30]. Therefore, the combination of human intuition and algorithmic models tends to generate more complete and accurate decisions [15, 18]. Along the same lines, transparency emerges as an ethical concern, because many employees do not understand how or why automated decisions are made that directly affect them, which can generate feelings of distrust, uncertainty or even frustration [19]. For this reason, several studies propose actively involving workers in the design and supervision of AI systems, in addition to establishing clear communication channels.

Another relevant aspect of the sources consulted is that the introduction of this tool in an ethical and strategic manner requires redesigning processes, training teams and establishing governance mechanisms that ensure the responsible use of information [2, 12, 31]. According to different authors, many organizations still do not have clear policies on data privacy, bias control, or algorithmic accountability, which could lead to reputational and even legal risks in the future. Therefore, it is necessary for the human resources area to collaborate closely with specialists in ethics, data and law to build solid frameworks for action.

Finally, in response to the general objective of the study that focused on analyzing the impact of artificial intelligence on strategic decision-making within the management of human talent in human resources, based on the evidence available in the scientific literature, it was possible to demonstrate that AI is no longer an emerging tool, but an active force that is shaping how organizations recruit, develop, and retain human talent [19]. In the same way, it has not only been limited to automating operational tasks, as the incorporation of intelligent technologies is enhancing strategic decision-making, allowing greater agility, accuracy and future projection in areas such as predictive analysis, performance evaluation and workforce optimization [23, 24].

It has been shown that this impact is not homogeneous or linear, since studies such as that of [17], demonstrate that AI has drastically reduced time to hire and improved the quality of selected candidates, revealing a clear improvement in strategic HR indicators. Other authors emphasize the ethical risks and algorithmic inequalities that can arise if criteria of equity and transparency are not integrated [21, 26]. This is a key aspect, since while decisions become more efficient thanks to the use of predictive models, it is also essential to consider the human and organizational implications.

Based on the above, the true impact of AI on human talent management is not limited to its ability to speed up processes or reduce human errors; There is also a strategic value within the human resources area, to the extent that it allows for more informed, timely decisions to be made that are aligned with its objectives and those of the organization in the long term. However, this value is only fully achieved when combined with ethical governance, a digital culture open to change, and intelligent integration

between people and technology [15, 31]. In this way, AI does not replace human judgment, but rather enhances, questions and transforms it.

As for the implications of the study, the findings are directly related to the academic and practical fields. From an academic perspective, an updated and structured view of the state of the art on AI in strategic human resource management is offered, with an emphasis on its applications, benefits, risks, and challenges. Likewise, the analysis carried out allows us to identify emerging patterns and gaps in the literature that can guide new research agendas.

From a practical organizational perspective, the results invite us to rethink the role of human resources departments, which should no longer be limited to operational functions, but evolve towards strategic functions that integrate data intelligence, ethical thinking and human vision. The incorporation of AI has become a catalyst for change, as long as it is accompanied by clear governance policies, collaborative processes, and a culture open to innovation.

Finally, decision-makers, both in the public and private spheres, will find in this review a basis for designing regulatory and normative frameworks that promote a responsible and fair use of AI in work environments. Therefore, the implications transcend efficiency, as they are also related to aspects of inclusion, equity, transparency and human well-being, which cannot be left out of technological development.

5. Conclusion

The study allows us to conclude that artificial intelligence has become a relevant element for strategic decision-making within human talent management. The 20 studies analyzed, which comprise quantitative and qualitative approaches and literature reviews and focus mainly on private sector organizations, show that AI is increasingly applied in processes such as recruitment, selection, performance evaluation, employee development and talent retention. These applications show a transition from automating operational tasks to data-driven strategic decision-making.

In relation to the specific objectives, the findings indicate that AI contributes to improving efficiency, speed, analytical capacity and predictive support in human resources processes. However, its implementation also poses challenges related to resistance to change, digital skills, role reconfiguration and worker confidence. Likewise, the evidence highlights ethical concerns related to algorithmic biases, transparency, explainability, fairness, data privacy, and accountability. Therefore, the strategic value of AI does not depend solely on its technological capabilities, but on its integration with professional judgment, organizational knowledge, human oversight, and appropriate governance mechanisms. In practical terms, organizations should embrace AI adoption as a transformation process that articulates technology, continuous training, adaptive leadership, organizational culture, and ethical responsibility.

In terms of limitations, the review was restricted to 20 studies published in English and retrieved from recognised scientific databases, which may exclude relevant research in other languages or from non-indexed sources. Likewise, the greater presence of studies from contexts such as India, the United States and Malaysia, together with the predominance of private organizations, may limit contextual diversity and the transfer of findings to other organizational realities. Finally, because this is a systematic review, the conclusions depend on the evidence reported by the selected studies and do not constitute original empirical evidence.

Based on these limitations, future research should prioritize empirical studies on real AI implementations, especially in regions with less evidence, such as Latin America, Africa, and the Middle East, as well as in public and non-profit organizations. It is also pertinent to promote interdisciplinary research that integrates ethics, organizational psychology, software engineering and sociology of work. Finally, it is recommended to deepen human-machine collaboration in strategic decision-making, in order to determine the conditions in which hybrid decisions can outperform those based exclusively on human judgment or algorithmic systems, contributing to the development of fairer, more transparent and effective systems for the future of work.

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Declaration on Generative AI

During the preparation of this manuscript, the authors used ChatGPT (OpenAI) as a supplementary tool to support English-language writing and improve clarity, grammar, coherence, and academic style. All AI-assisted content was critically reviewed, edited, and validated by the authors, who assume full responsibility for the final content, accuracy, originality, and scientific integrity of the manuscript. Generative AI was not used as a substitute for the authors' academic judgment, critical analysis, or authorship.

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