



# Literature review: The impact of artificial intelligence on employee productivity and performance

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## ABSTRACT

This study aims to comprehensively examine the impact of Artificial Intelligence (AI) implementation on employee productivity and performance in various sectors. The method used is a narrative literature review that analyzes the results of empirical and theoretical studies related to AI and human resource performance, with data sources from relevant journals and recent research. The results of the study show that AI can increase operational efficiency through automation and fast data processing, as well as improve the quality of decision-making that has a positive impact on employee work performance. Psychological factors such as technology acceptance and readiness to adapt and employee digital literacy competencies are the keys to the success of AI implementation. In addition, employee involvement acts as a strategic mediator that optimizes AI's contribution to productivity. The implications of this study emphasize the importance of synergy between technological innovation and strengthening human capital to support sustainable organizational digital transformation. This study fills the research gap by integrating technical and social perspectives in measuring the impact of AI on employee performance and providing a more holistic and multidimensional research direction. This research also offers important practical contributions and policy implications for managers and policy makers in optimizing the implementation of AI to achieve better organizational performance.

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## 1. INTRODUCTION

The rapid development of Artificial Intelligence (AI) technology has brought significant transformations in various industrial sectors, including human resource management (HR). In the context of modern organizations, AI is not only an operational tool, but also has the potential to fundamentally change the way employees work, decision-making processes, and talent management strategies. Recent phenomena show that many global companies are starting to integrate AI technology into their daily activities, such as the use of chatbots in customer service, predictive analytics systems for recruitment, and automation of administrative processes. This raises fundamental questions about the extent to which AI impacts employee productivity and performance, two aspects that are key indicators of HR management effectiveness.

The research problem that emerged in this study is the unclear and inconsistent results of various previous studies related to the impact of AI on employee performance. Several studies

have shown that AI can increase employee productivity by reducing administrative workloads and facilitating faster and more accurate decision-making. For example, research by (Chowdhury et al., 2022; D'Attanasio et al., 2023) suggests that the integration of AI into the work environment can expand employee capabilities, allowing them to focus on more strategic and creative tasks. Conversely, there are also other studies that report concerns that AI can cause psychological stress, uncertainty, and employee resistance which ultimately reduces motivation and performance, as noted by (He et al., 2023; Loureiro et al., 2023). This complexity marks the importance of a comprehensive literature review to clarify the role of AI in the context of employee performance and productivity. Previous studies have attempted to examine the relationship between AI and HR performance from various perspectives. Some focus on the technology itself, such as the level of automation and analytical capabilities, while others focus on human factors, including employee adaptation to technological changes and the dynamics of work relationships. However, most studies are still fragmented and limited to a specific industry or cultural context, making the results difficult to generalize widely. There is also a tendency for a more technical approach rather than a multidisciplinary approach that combines work psychology, change management, and the ethical aspects of AI use. This research gap indicates the need for a more comprehensive and systematic study that connects the technical and human dimensions in evaluating the impact of AI on employee productivity and performance.

The rapid development of Artificial Intelligence (AI) technology has brought significant transformations in various industrial sectors, including human resource management (HR). In modern organizations, AI is not merely an operational tool but has the potential to fundamentally change how employees work, decision-making processes, and talent management strategies. Recent trends show that many global companies have begun integrating AI technologies into daily operations, such as chatbots in customer service, predictive analytics in recruitment, and automation of administrative tasks. This raises crucial questions about the extent AI impacts employee productivity and performance, which are key indicators of HR management effectiveness.

The research problem addressed in this study stems from the unclear and inconsistent findings in previous studies regarding AI's impact on employee performance. While some research indicates that AI enhances productivity by reducing administrative burdens and enabling faster, more accurate decisions (X. Gao & Feng, 2023; Noy & Zhang, 2023), other studies highlight challenges such as psychological stress, uncertainty, and employee resistance that may diminish motivation and performance (He et al., 2023; Loureiro et al., 2023)(He et al., 2023; Prentice et al., 2023). This complexity underscores the importance of a comprehensive literature review to clarify AI's role in employee productivity and performance. Although many studies have explored work transformation through AI implementation, there remains a significant research gap regarding the psychosocial factors of users—such as digital readiness and employee engagement—that act as critical mediators in AI's effectiveness at work. Furthermore, most prior research has yet to explicitly examine the impact of AI transformation within the post-COVID-19 context, which has drastically altered work paradigms and technology adoption. This article aims to fill this gap by focusing on the relationships among AI, psychosocial mediators, and employee performance in this new era. Thus, it offers readers a comprehensive and fresh perspective on AI as a transformational technology alongside the human-organization interaction in a challenging contemporary environment.

The novelty of this article lies in its integrative approach that reviews current literature from various relevant fields to construct a holistic concept map of the impact of AI on employee productivity and performance. In addition to evaluating empirical findings, this study also seeks to identify mediating and moderating factors that influence the relationship, such as employee trust in technology, organizational readiness, and digital work culture. In addition, this article broadens the scope of research by considering the dynamics of post- COVID-19 pandemic changes, which accelerate the adoption of digital technology and AI in the workplace, resulting in a more actual and relevant context. The main objective of this literature review is to examine and synthesize previous research findings on the impact of Artificial Intelligence on employee productivity and performance, while identifying existing research gaps and providing recommendations for further research

directions. Thus, this article aims to help academics, HR management practitioners, and policy makers understand the implications of AI more deeply and strategically in the context of human resource management. This research is also expected to be the basis for developing an adaptive HR management model to the development of AI technology.

## 2. RESEARCH METHOD

The research approach in this study uses a narrative literature review as the main method to comprehensively examine the impact of Artificial Intelligence on employee productivity and performance. Narrative review was chosen because of its ability to present a holistic and critical thematic summary of various previous studies, so that it can describe the development and trends of research as a whole without strict quantitative limitations such as in meta-analysis. This method allows researchers to integrate findings from various sources and approaches, provide a rich theoretical context and explore managerial implications in depth (Ramachandran et al., 2022). This approach is very appropriate for technology-based studies such as Artificial Intelligence, which continues to develop rapidly and has multidimensional impacts in the field of human resource management. The sources and types of data used in this study come from scientific articles published from 2022 to the present, accessed through two main databases, namely Google Scholar. The selection of 2022 as the starting point for the time limit is based on the rapid progress and implementation of AI in the world of work during that period, which has a direct impact on employee productivity and performance, thus reflecting current and academically relevant phenomena. The data collected are empirical studies, theoretical studies, and meta-analyses that focus on the main keywords, namely "Artificial Intelligence," "Productivity," and "Employee Performance." This approach is designed to capture the most relevant and up-to-date literature, as well as ensure the validity and reliability of the data processed in the review (Goertel, 2023).

Table 1. Analyzed journal data

No	Journal Identity
1	Arya Satya Pratama et al. (2023) "The Influence of Artificial Intelligence, Big Data and Automation on HR Performance in the Digital Era," <i>Journal of Management Science Publication</i> , 2(4), pp. 108–123. <a href="https://doi.org/10.55606/jupiman.v2i4.2739">https://doi.org/10.55606/jupiman.v2i4.2739</a>
2	Ferdinand & Chalimah (2024) "The Influence of ChatGPT-Based Artificial Intelligence (AI) on Government Employee Performance with Technology Acceptance as a Moderating Variable," <i>INOBIIS: Indonesian Journal of Business and Management Innovation</i> , 7.
3	Hamzah et al. (2024) "The Influence Of Artificial Intelligence And Teams' Effective Performance On Employee Productivity Mediated By Employee Engagement On Logistics Company Employees In Jakarta," <i>Journal of Sciencetech Research and Development</i> , 6(2). <a href="https://idm.or.id/JSER/index">https://idm.or.id/JSER/index</a> .
4	Made Diatmika et al. (2024) "The Effect of the Application of Artificial Intelligence and Intelligence on Employee Productivity at The Regional Development Bank (BPD) Bali," <i>Nusantara Hasana Journal</i> , 4(3).
5	Manunggal et al. (2022) "The Effect of Human Resource Information System (HRIS) and Artificial Intelligence on Defense Industry Performance," <i>Journal of Industrial Engineering &amp; Management Research</i> , 3(6). <a href="https://doi.org/10.7777/ijemar">https://doi.org/10.7777/ijemar</a> .
6	Mujtahidin et al. (2025) "The Relationship between Digital Literacy Mastery and AI Utilization with Employee Performance in the Economic Industry," <i>Primary Journal of Multidisciplinary Research [Preprint]</i> , (1).
7	Saputra et al. (2023) "Analysis of the Application of Artificial Intelligence to the Productivity of Information Media Companies," <i>Jurnal Pendidikan Siber Nusantara (JPSN)</i> , 1(2). <a href="https://doi.org/10.38035/jpsn.v1i2">https://doi.org/10.38035/jpsn.v1i2</a> .
8	Yunita et al. (2023) "The Influence of Human Resource Competence, Artificial Intelligence-Based Accounting Information System on Employee Performance," <i>Journal of Accounting Economics Research (JENSI)</i> , 7(2), pp. 495–503.
9	Zil et al. (2025) "The Effect of Job Satisfaction, Motivation, Organizational Commitment and Artificial Intelligence on Employee Performance," 4(2), pp. 2026–2034. <a href="https://doi.org/10.31004/riggs.v4i2.795">https://doi.org/10.31004/riggs.v4i2.795</a> .

Source: Google Scholar (2025)

The data collection process was carried out systematically starting with an initial search using predetermined keywords in the Google Scholar database. The search results were then selected based on strict exclusion and inclusion criteria, including topic relevance, year of publication, journal quality, and research focus. Articles that met these criteria were downloaded and reviewed in depth. The use of reference management software such as Mendeley was also applied to organize references and perform thematic coding of article content. The use of this software helps increase efficiency in managing literature data and provides a more systematic structure for the interpretation of findings (Fadlillah et al., 2023).

The data selection process focused on the validity and contribution of each article to the research. The selection was based on the initial abstract, research objectives, methods used, and the relevance of the results to the main variables in the study, namely the impact of AI on employee productivity and performance. After the initial selection, eligible articles were fully analyzed to explore key concepts and relationships between the variables studied. A critical approach was applied in this process by considering the strengths and limitations of previous research, in order to identify research gaps and open up opportunities for further literature development. Thus, systematic selection ensures that this narrative review has a strong and valid reference base (Sukhera, 2022).

The data interpretation process was carried out through a structured and reflective thematic analysis. The main themes related to the use of AI, its impact on employee productivity and performance, and other supporting factors were focused on to provide a comprehensive picture. The interpretation of the results of this literature also considers the organizational and social context as important moderating and mediating variables. This qualitative interpretation approach was honed by triangulating data from various studies to strengthen the reliability of the findings. The results of the narrative literature review aim to develop a new conceptual framework and provide relevant practical and theoretical recommendations in the field of HR management (Jenkins et al., 2022).

### 3. RESULTS AND DISCUSSIONS

Artificial Intelligence (AI) is one of the leading information technology concepts that is now increasingly being adopted in various aspects of human resource management (HR). In general, AI is defined as the ability of machines to perform tasks that require human intelligence, such as learning, decision-making, and problem-solving. In the context of HR management, AI refers to the use of algorithms, machine learning, and automation systems that support more efficient and effective employee management. Several theories that underlie the understanding of AI in organizations include the Technology Acceptance Model (TAM) developed by (Vogel et al., 2023), which emphasizes the importance of perceived ease of use and perceived benefits in the acceptance of new technology by individuals, including employees in the workplace. In addition, Rizzo & Columba (2020) Theory of Planned Behavior (TPB) also provides an important foundation by examining attitudes, subjective norms, and behavioral control of individuals that determine their intentions to accept and use AI technology. Research by (von Richthofen et al., 2022) further refined the TAM by including social and organizational context factors, which are relevant in understanding the adoption of AI in the workplace.

The implementation of AI in HR management is not only about automation, but also about augmenting employee capabilities. AI allows employees to focus on more value-added strategic and creative tasks, as outlined by (Huang & Rust, 2021). However, this change in role poses new challenges, especially regarding employee readiness and the dynamics of adaptation to ever-evolving technology. This change reflects the paradigm shift in job role theory, which states that technological change can change expectations, responsibilities, and social relationships within an organization (Abdul Hamid, 2022). The gap between technological readiness and human readiness is one of the critical points in the success of AI integration. Therefore, a theoretical foundation that focuses on the interaction between technology and humans is essential to understanding how AI can be optimized in HR management to support employee productivity and performance sustainably.

Employee productivity is one of the main indicators of the success of implementing AI technology in the workplace. Many empirical studies have shown that AI can increase productivity by automating routine and administrative tasks that are often time-consuming and laborious, so that employees can allocate their time to work that requires critical and innovative thinking (Brynjolfsson & McAfee, 2014). A study by Jain et al. (2022) emphasized that the combination of humans and AI, referred to as "collaborative intelligence," can produce higher productivity compared to human or machine work alone. However, not all studies provide a positive picture. Some studies, such as those conducted by Llewellyn et al. (2023), warn of the potential for

negative effects, such as technostress, anxiety due to role uncertainty, and resistance to change that can reduce overall productivity.

In addition to operational efficiency aspects, psychological and social factors also play an important role. For example, work motivation and job satisfaction are important mediators in the relationship between AI use and productivity. Motivation theories such as Self-Determination Theory emphasize the importance of feelings of competence and autonomy that can be threatened if employees feel replaced by technology (Huu, 2023). Therefore, the results of the study indicate that productivity generated by AI is greatly influenced by how AI is integrated in a humane manner and supported by an adaptive organizational culture. Thus, a holistic understanding that combines aspects of technology, work psychology, and human resource management is needed to optimize the impact of AI on employee productivity.

Employee performance in the context of AI implementation is not only seen from work output, but also the quality of decision-making, innovation, and adaptability in a dynamic work environment. Employee performance literacy shows that AI has the potential to improve performance outcomes by providing real-time analytical data and accurate decision support systems, allowing employees to make better and faster decisions (Q. Gao et al., 2023). However, the direct relationship between AI and performance is not linear and is influenced by various mediating and moderating factors. Employee trust in AI technology, for example, is an important mediator that determines whether the technology can be adopted effectively or instead causes uncertainty and decreased performance (Yu et al., 2023). In addition, organizational readiness and digital work culture are moderating factors that shape this interaction. Organizations with a strong digital culture tend to be more successful in integrating AI without disrupting the psychological and social balance of employees (Tang et al., 2023). Management support is also a crucial moderating variable, as visionary and communicative leadership can minimize resistance and accelerate AI adaptation. A multidisciplinary approach that combines organizational theory, work psychology, and change management is essential to describe the complexity of AI's impact on employee performance. Recent studies also highlight the need for innovative management models that consider the feedback loop between employees and AI so that performance can be continuously improved without sacrificing employee psychological well-being.

Based on this research, then For that the researcher took nine studies in the form of journals in the Google Scholar database. These eight studies are about the Impact of Artificial Intelligence on Employee Productivity and Performance. The researcher then categorized them according to the theme/topic of the research, research questions, research methods, results, and discussion of the research.

Table 2. Research themes/topics and research questions

No	Author (Year)	Research Theme/Topic	Research Questions
1	Arya Satya Pratama et al. (2023)	The Influence of Artificial Intelligence, Big Data, and Automation on HR Performance in the Digital Era	How do Artificial Intelligence, Big Data, and automation affect HR performance in the digital era?
2	Ferdinand, MN & Chalimah (2024)	The Influence of ChatGPT-Based AI on Government Employee Performance with Technology Acceptance as a Moderating Variable	Does the use of ChatGPT-based AI affect the performance of government employees, and what is the role of technology acceptance as a moderating variable?
3	Hamzah, YN et al. (2024)	The Influence of Artificial Intelligence and Team Effectiveness on Employee Productivity Mediated by Employee Engagement in Logistics Companies in Jakarta	How do Artificial Intelligence and team effectiveness influence employee productivity mediated by employee engagement in logistics companies in Jakarta?
4	Made Diatmika, I. et al. (2024)	The Impact of Artificial Intelligence Implementation on Employee Productivity at the Bali Regional Development Bank (BPD)	How does the implementation of Artificial Intelligence affect employee productivity at BPD Bali?
5	Manunggal, N. et al. (2022)	The Impact of Human Resource Information Systems (HRIS) and Artificial Intelligence on Defense Industry Performance	How do HRIS and artificial intelligence impact the performance of the defense industry?
6	Mujtahidin, Zulkifli & Hudaeri (2025)	The Relationship between Digital Literacy Mastery and AI Utilization with Employee Performance in the Economic Industry	Is there a relationship between digital literacy mastery and AI utilization with employee performance in the economic industry?
7	Saputra, R. et al. (2023)	Analysis of the Application of Artificial Intelligence to the Productivity of Information Media	How does the application of Artificial Intelligence affect the productivity of information media?

No	Author (Year)	Research Theme/Topic	Research Questions
8	Yunita, I., Meutia, T. & Azhar, I. (2023)	Companies The Influence of HR Competence and AI-Based Accounting Information Systems on Employee Performance	companies? How do HR competencies and AI-based accounting information systems affect employee performance?
9	Zil, B. et al. (2025)	The Influence of Job Satisfaction, Motivation, Organizational Commitment, and Artificial Intelligence on Employee Performance	How do job satisfaction, motivation, organizational commitment, and Artificial Intelligence affect employee performance?

Source: Research results (2025)

The table above comprehensively reviews a variety of current research themes that explicitly discuss the role of Artificial Intelligence (AI) in the context of improving employee productivity and performance, a central issue in human resource management (HR) in the digital era. These themes reflect the contemporary phenomenon where AI is not merely utilized as an operational support technology, but has become a transformational element to change the way employees work, their efficiency, and their overall performance. This is very relevant to research problems that target how AI directly and indirectly contributes to organizational performance through changes in employee behavior, work processes, and psychological aspects. Thus, this table accurately reflects the complexity and multidimensionality of AI research in HR management.

In terms of research gaps, this table reveals many topics that link AI to variables that have not been explored in depth, such as digital literacy, technology acceptance, employee engagement, and job satisfaction. For example, the theme raised by Ferdinand & Chalimah (2024) which examines technology acceptance as a moderating variable in the use of ChatGPT-based AI indicates the need to understand the internal mechanisms that influence the effectiveness of AI in improving performance. In addition, several themes propose mediation and moderation models that place AI not as a single variable, but as part of a system that interacts with psychosocial and organizational factors. This shows the shortcomings of previous studies that have looked at AI more from a technical and direct perspective, without paying attention to the dynamics of the relationship between HR variables. The novelty of the studies listed in the table is most evident in the integration of multidisciplinary approaches and the use of new variables that combine AI technology with contemporary management theory. For example, research by Manunggal et al. (2022) that combines HRIS and AI in the context of the defense industry shows innovation in AI applications in a very specialized field, and research by Zil et al. (2025) that combines psychological factors such as job satisfaction and motivation with AI as a variable that influences employee performance, adding depth and breadth to the research perspective. The emphasis on practical contexts and real-world implementations across multiple industry sectors marks a significant novelty in the AI and HR literature.

The theories that support these various themes are mainly the Technology Acceptance Model (TAM) which is used to explain how individuals accept and adopt AI technology, Engagement Theory which places employee engagement as a mediator, and Resource-Based View (RBV) which establishes AI as a strategic asset for organizations that can strengthen capabilities and competitive advantages. These theoretical approaches are solid and in line with the need to understand the interaction between technology and human and organizational factors, providing a strong conceptual basis for further research interpretation and development.

In summary, this table provides a broad and detailed overview of the research landscape on the impact of AI on employee productivity and performance, identifying intersections between cutting-edge technological phenomena and HR management theory, while highlighting the need for research that integrates psychosocial variables, competencies, and organizational culture in the context of AI adoption. The narrative approach that is open to mediating and moderating variables also reflects the growing research trend from direct impact measurements to more complex and contextual understanding of cause-and-effect relationships.

Table 3. Research methods

No	Author (Year)	Research methods
1	Arya Satya Pratama et al. (2023)	Quantitative (Survey study on HR in the digital era)
2	Ferdinand, MN & Chalimah (2024)	Quantitative (Survey with moderating variables)
3	Hamzah, YN et al. (2024)	Quantitative (Survey on logistics company employees)

No	Author (Year)	Research methods
4	Made Diatmika, I. et al. (2024)	Quantitative (Analysis of the influence of AI on BPD Bali)
5	Manunggal, N. et al. (2022)	Quantitative (Study on defense industry)
6	Mujtahidin, Zulkifli & Hudaeri (2025)	Quantitative (Analysis of the relationship between digital literacy & AI)
7	Saputra, R. et al. (2023)	Qualitative (Analysis of AI implementation in media companies)
8	Yunita, I., Meutia, T. & Azhar, I. (2023)	Quantitative (Survey on employees with competency and AI variables)
9	Zil, B. et al. (2025)	Quantitative (Analysis of the influence of job satisfaction, motivation, commitment, and AI)

Source: Research results (2025)

Interpretation of the results of the research method table covering various studies related to the impact of Artificial Intelligence on employee productivity and performance shows the dominance of quantitative approaches in this study with the survey method being the main choice. This indicates the orientation of the research on testing hypotheses and measuring the relationship between variables empirically through quantitative data, which is relevant to obtain a strong statistical picture and correlation pattern in the context of human resource management. The survey model allows researchers to collect data directly from employees in various sectors and organizations, so that the results are more representative in understanding how AI is adopted and contributes to productivity and performance broadly. Several studies also add more complex dimensions by including moderating and mediating variables, for example, Ferdinand & Chalimah (2024) research which uses moderating variables to measure the influence of technology acceptance dynamics on AI effectiveness. This approach indicates an intention to investigate the internal mechanisms that influence the final results of employee performance, rather than simply looking at the direct impact of AI alone. On the other hand, research conducted by Saputra et al. (2023) using qualitative methods enriches the research results with an in-depth analysis of the application of AI in a practical context in media companies, proving the importance of exploring qualitative aspects to understand the nuances and challenges that are not quantified in the technology adoption process.

The research methods used in the studies included in this table are highly relevant to the article title because the primary focus is on the impact of AI, which requires measurable measurements both statistically and in real organizational contexts. The use of quantitative survey methods offers a systematic framework for capturing perceptions and the effects of AI on performance, while qualitative methods add depth to the interpretation of the results of technology implementation. This demonstrates a multidimensional understanding of a complex and evolving topic, where AI impacts not only easily measurable performance indicators, but also aspects of motivation, job satisfaction, and digital literacy capacity, which are critical factors in the success of AI adoption. The uniqueness and criticality of the chosen methodology lies in the ability of a number of studies to integrate quantitative approaches with mediating and moderating variables and the presence of qualitative research that provides rich contextual insights. This marks an improvement and deepening of research from simply measuring direct impacts to a detailed understanding of the factors that influence and strengthen the effects of AI on productivity and performance. In theory, this approach combines the Technology Acceptance Model, Engagement theory, and a comprehensive Resource-Based View perspective, thus providing a comprehensive understanding of how AI interacts with human resources and organizations.

Overall, this table systematically maps out the various methodological approaches that are highly suitable for studying the technical and humanistic aspects of the impact of AI in the workplace. With quantitative dominance, support for moderating/mediating variables, and qualitative data supply, the studies referred to are able to meet the needs of cutting-edge research in exploring the impact of AI on employee productivity and performance in various contexts and industry sectors. The selection of these methods and variables underlines the importance of a critical and contextual integrative approach in future studies on technology and HR management.

Table 4. Analysis of research results

No	Author (Year)	Research result
1	Arya Satya Pratama et al. (2023)	Artificial Intelligence, Big Data, and Automation have a positive and significant impact on HR performance in the digital era.

No	Author (Year)	Research result
2	Ferdinand, MN & Chalimah (2024)	& ChatGPT-based AI has a positive effect on government employee performance, and technology acceptance strengthens this effect as a moderating variable.
3	Hamzah, YN et al. (2024)	Artificial Intelligence and team effectiveness have a positive effect on employee productivity, with employee engagement as a significant mediator in a Jakarta logistics company.
4	Made Diatmika, I. et al. (2024)	The implementation of Artificial Intelligence significantly increases employee productivity at BPD Bali.
5	Manunggal, N. et al. (2022)	HRIS and artificial intelligence have a positive impact on the performance of the defense industry.
6	Mujtahidin, Zulkifli & Hudaeri (2025)	& Mastery of digital literacy and utilization of AI have a positive relationship with employee performance in the economic industry.
7	Saputra, R. et al. (2023)	The application of Artificial Intelligence increases the productivity of information media companies.
8	Yunita, I., Meutia, T. & Azhar, I. (2023)	& HR competencies and AI-based accounting information systems have a positive impact on employee performance.
9	Zil, B. et al. (2025)	Job satisfaction, motivation, organizational commitment, and Artificial Intelligence have a positive effect on employee performance.

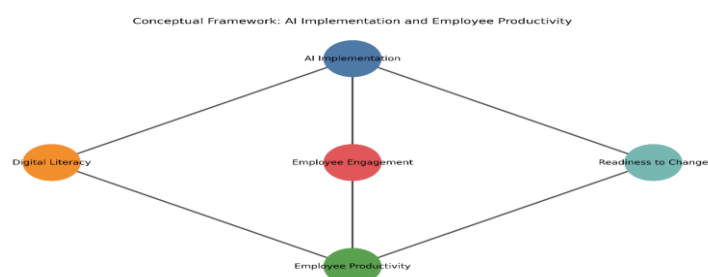
Source: Research results (2025)

The results of the study show that the implementation of Artificial Intelligence (AI) technology has a significant positive impact on employee productivity and performance in various sectors. The studies analyzed indicate that AI not only improves operational efficiency through automation and faster data processing, but also contributes to improving the quality of decision-making that has a direct impact on work performance. For example, research by Arya Satya Pratama et al. (2023) confirms that the combination of AI, big data, and automation significantly strengthens human resource performance in the digital era. Ferdinand & Chalimah (2024) research adds an important dimension by highlighting the variable of technology acceptance as a moderation that strengthens the positive influence of ChatGPT-based AI on government employee performance. This finding underlines that the success of AI adoption is highly dependent on the psychological and social aspects of users, especially readiness and openness to new technologies.

Furthermore, the results of the study by Hamzah et al. (2024) emphasize the role of employee engagement as a crucial mediator in optimizing the impact of AI on productivity, especially in the context of logistics companies in Jakarta. This is consistent with the engagement theory that links employee motivation and commitment to effective use of technology.

Digital literacy also emerged as a key competency that supports the optimization of AI utilization in organizations, as evidenced by the research of Mujtahidin et al. (2025). This competency is not only a technical aspect, but also an indicator of an individual's readiness to adapt and innovate in a work environment integrated with advanced technology. On the other hand, studies by Manunggal et al. (2022) and Zil et al. (2025) broaden the horizon by linking AI as a strategic asset that influences job satisfaction, motivation, and organizational commitment. This multidimensional approach explains that AI not only impacts technical productivity, but also psychosocial aspects that underlie the sustainability of organizational performance as a whole.

a deeper analysis regarding this study on the mediation and moderation mechanisms in the relationship between Artificial Intelligence (AI) implementation and employee productivity. Specifically, this study highlights how psychosocial factors, such as digital literacy, employee engagement, and organizational readiness for change, act as mediators that mediate the influence of AI technology on employee performance outcomes.



Based on the conceptual diagram presented above, it describes AI as an independent variable that influences the psychosocial mediator variable, which in turn influences the outcome in the form of employee productivity and performance. This diagram clarifies the mediation mechanisms that are the focus of exploration in this study. In addition, this study also compares the impact of AI implementation in two main sectors based on the literature reviewed, namely the government and logistics sectors. The implementation of AI-based ChatGPT in the government sector shows significant improvements in communication efficiency and public services, supported by high levels of employee adaptation and engagement. Conversely, in the logistics sector, the use of predictive analytics significantly improves supply chain management, but faces challenges in the form of employee resistance and varying digital readiness, so that psychosocial moderating factors are very important in the success of AI implementation in this sector. Exploring causal mechanisms suggests that while AI automation can directly increase productivity, the effectiveness of this influence is highly dependent on how employees and organizations interpret and respond to the adoption of this new technology. Understanding these mediating processes is essential for designing effective change management strategies and enhancing the success of AI implementation in diverse and dynamic work environments. Overall, the results of this study solidify AI's position as a key driver in improving employee productivity and performance. The synergy between technological, psychological, and digital competency aspects is the key to the success of sustainable AI implementation in today's digital transformation era.

#### 4. CONCLUSION

This literature review reveals that the implementation of Artificial Intelligence (AI) has a significant impact on increasing employee productivity and performance in various sectors and organizations. AI not only accelerates work processes through automation and efficient data processing, but also improves the quality of decision-making that has a direct impact on individual and team work results. In addition, the success of AI implementation is greatly influenced by the psychological aspects of users such as technology acceptance and readiness to adapt, as well as employee digital literacy competencies as the main supporting factors. Engagement theory explains that employee motivation and involvement play a central role in optimizing the benefits of AI. This finding answers the research gap related to the integration of technology and human factors dimensions in measuring the impact of AI on workforce performance, while also confirming the novelty of the study in combining technical and social perspectives holistically.

Suggestion further research is suggested to expand the approach by conducting empirical studies that test an integrative model between technology, psychosocial, and digital competency variables simultaneously. Companies need to develop digital literacy and technology acceptance training programs to maximize AI adaptation by considering the organizational context and employee characteristics. In addition, the development of user-friendly and responsive AI systems to employee needs is essential to support engagement so that productivity improvements can be sustained. Research is also suggested to explore moderating and mediating factors that influence the relationship between AI and performance to gain deeper insights.

Limitations this article is limited to a literature review of the research available to date, which is mostly quantitative and focused on a specific organizational context, so generalization of the findings needs to be done with caution. The narrative literature review approach also depends on the quality and variety of sources that may not cover the latest developments in AI technology or innovations in performance measurement methods. In addition, another limitation is the lack of longitudinal studies that can reflect the long-term impact of AI on productivity and performance, so these results are more reflective of current conditions without broader dynamics of change.

Implications, the findings of this review have important implications for human resource managers and organizational policy makers in developing digitalization and work transformation strategies. The implementation of AI must be accompanied by strengthening the human capital aspect, especially in increasing digital literacy and adaptive culture so that technology can be integrated effectively and sustainably. The academic implications encourage the development of theories that combine the dimensions of technology and human factors in performance management, and provide new research directions that are more comprehensive and

multidisciplinary. In practice, organizations can improve competitiveness and performance by utilizing AI not only as a technical tool but also as a catalyst for organizational change that is oriented towards employee empowerment.

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