

Digitalization of Human Resource Management in MSMEs: An HRIS Systematic Review 2022–2025

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Abstract

Purpose: This study aims to systematically review and synthesize recent scholarly work on the digitalization of Human Resource Management (HRM) in Micro, Small, and Medium Enterprises (MSMEs), with an emphasis on key themes, trends, technologies, challenges, and the implications of digital HRM for organizational performance and sustainability.

Research Methodology: A Systematic Literature Review (SLR) was conducted in accordance with the PRISMA guidelines. Articles were retrieved from Scopus, Web of Science, and Google Scholar using keywords related to digital HRM, HR digitalization, HRIS, and MSMEs. The review covered studies published between 2022 and 2025. Based on predefined inclusion and exclusion criteria, 33 peer-reviewed articles were selected and analyzed through content analysis to identify the dominant themes and research gaps.

Results: The review shows that digital HRM improves HR efficiency, supports data-driven decision-making, enhances employee capability development, and increases organizational agility in MSMEs. Nevertheless, its effectiveness is strongly influenced by managerial competence, digital readiness, and organizational culture, and key challenges include limited digital skills, resistance to change, and data security issues.

Conclusions: Digital HRM is a strategic enabler of MSMEs' competitiveness and long-term sustainability when aligned with managerial commitment and organizational capability.

Limitations: This study was limited to English-language journal articles and secondary data within a defined period.

Contribution: This study enriches the HRM and digital transformation literature by offering an integrated perspective and practical insights for managers and policymakers

Keywords: *Digital HRM, Digital Transformation, Human Resource Management, MSMEs, Sustainability*

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1. Introduction

Digitalization has fundamentally transformed Human Resource Management (HRM) functions in various organizations, including Micro, Small, and Medium Enterprises (MSMEs) ([Sihombing et al., 2025](#)). The implementation of digital technology in HR functions, such as recruitment, selection, training, and performance evaluation, is now part of an organization's strategy to improve efficiency and competitiveness ([Judijanto, 2025](#)). Literature studies indicate that digital HRM, or digital

transformation in HRM, has a significant impact on HR process efficiency, for example, through the automation of administrative processes and the use of digital platforms that facilitate internal organizational interactions ([Herman et al., 2024](#); [Seipalla et al., 2024](#)).

In the context of MSMEs, HRM digitalization has urgency special because MSMEs face limitations source power, low digital competence, and challenges adaptation more technology big compared to company big. [Shiferaw and Birbisa \(2025\)](#) find that digitalization required for increase effectiveness management of MSME human resources in face market dynamics and global competition, but still there is a big gap in understanding about How HRM digitalization can implemented in a way effective on a large-scale business small.

Existing literature show that digital technologies such as Human Resource Information Systems (HRIS), Learning Management Systems (LMS), Artificial Intelligence (AI), and big data analytics is component the main driving force digital transformation in HRM ([Febrian, 2025](#)). Implementation technology the No only increase efficiency operational, but also allows taking decision data -driven, improvement skills employees, and experience more work adaptive to changes. However, studies still focus on large organizations, while empirical proof in the MSME context is limited ([Said & Soi, 2025](#)).

Various studies state that HRM digitalization is not just changing work processes administratively, but also has strategic implications for developing competence power work and capacity organization for innovation ([Ichdan & Maryani, 2024](#)). For example, digital HRM allows existence Helpful people analytics organization understand behavior employees and determine strategy further development right. With Thus, digitalization contribute to the formation of culture more work responsive to change technology and markets ([Bindra et al., 2025](#)).

However, digital transformation in the HRM sector faces several challenges. Challenges include resistance to change, digital skill gaps among employees, and privacy and data security issues ([Mulyadi et al., 2025](#)). The studies discussed in the SLR literature highlight how facth often becomes an inhibitor in adopting digital technology in HRM functions and needs special attention in the context of MSMEs with limited sources ([Said & Soi, 2025](#)).

Especially in MSMEs, HRM digitalization is often still seen as challenge big because limitations investment technology, lack of digital knowledge, as well as lack of support adequate policies for accelerate digital transformation ([Prayetno & Mikkael, 2025](#)). This leaves MSMEs behind compared to larger companies in utilizing the potential optimal use of digital technology to support strategic human resource management ([Nurdiani et al., 2025](#)).

A systematic study of the digital transformation of MSMEs highlighted the important role of digital adaptation for power resilience and growth of MSMEs in general, but not many studies have focused specifically on digitalization of human resource management. SLR research in the context of MSMEs that explores mechanisms, challenges, and the impact of digital HRM is required to fill theoretical and practical gaps ([Hafizullah & Fadli, 2023](#)).

Remember development very digital technology fast in a number of year final including use of cloud computing, AI, and systems integrated information there is need urge for compile a comprehensive literature review about development study HRM digitalization especially in MSME context. Systematic study This expected can browse trends, research methodology, as well as empirical results that have been there in the 2022–2025 period to give a holistic description of this topic ([Said & Soi, 2025](#)).

Furthermore, systematic literature reviews allow the identification of research gaps that have not been answered in the study of HRM digitalization in MSMEs, such as the need for longitudinal methodology, evaluation model digital readiness, and contextual approaches to MSMEs in developing countries. Identifying this gap is important for providing direction for future empirical studies that are more in-depth and relevant ([Said & Soi, 2025](#)).

Accordingly, this study conducts a Systematic Literature Review (SLR) on the digitalization of human resource management in MSMEs, with a specific focus on Human Resource Information Systems (HRIS) during the period 2022–2025. The novelty of this review lies in its integrative synthesis of recent empirical and conceptual studies, which systematically map the emerging thematic clusters of digital HRM in MSMEs, including HRIS adoption drivers, organizational and technological mechanisms, and implementation outcomes. The findings reveal the key mechanisms through which HRIS supports operational efficiency, decision-making quality, and workforce agility, while also identifying persistent challenges related to digital capability gaps and resource constraints.

Moreover, this SLR advances the literature by developing a structured agenda for future research and highlighting underexplored contexts, methodological gaps, and theoretical opportunities in MSME digital HRM studies. By consolidating fragmented evidence into a coherent framework, this review contributes to both academic discourse and managerial practice, offering policy-relevant insights for designing targeted digitalization support programs and guiding MSMEs toward more agile and data-driven organizational models.

2. Literature Review and Hypothesis Development

2.1 Digitalization

Digitalization has become a major driver of organizational change and business models in the modern era. In a systematic literature review, [Calderon-Monge and Ribeiro-Soriano \(2024\)](#) explained digitalization as a broad process involving the use of digital technology to change business operations and strategy management and create opportunities in new functions of the main organization, such as marketing, management, and finance. These studies emphasize that digitalization is not just implementation technology, but also creates structural changes in operational processes and the mentality of an organization that fundamentally changes how a company operates and competes in the global market.

In perspective study latest, digitalization often differentiated from just digitalization that only refers to the conversion of analog data to digital format with greater understanding comprehensive as change strategic processes, business models, and the value generated by the organization through integration digital technology. A study confirmed that digitalization covers large structural changes in business and the creation of a competitive mark by utilizing digital technology and the resulting data; thus, organizations not only repair efficiency but also develop innovation services and operations in a strategic way ([Fähndrich, 2023](#)).

2.2 Human Resource Management

Human Resource Management (HRM) is a managerial function that focuses on how an organization acquires, develops, motivates, and retains human resources to achieve strategic objectives. In modern HRM literature, there is shift from role administrative traditional going to roll strategic contribution direct to Power competition organization and innovation. For example, Innovation and Human Resource Management: a systematic literature review reveals that HRM is not only related to standard HR management practices, but also emphasizes the role of HRM in supporting innovation organizations through integrating adaptive and innovative HRM practices that are aligned with the dynamics of the global business environment. Study this map trend HRM research and highlights how HRM plays a role in innovation organization as well as open direction future research in innovative HRM field ([Jotabá et al., 2022](#)).

Besides function strategic and innovative, HRM is also seen as instrument important in create environment supportive work engagement and well-being employee. The Human Resource Management Strategy Study: Integrating Psychological Perspectives through Qualitative Description and Literature Review emphasizes the importance of synergizing psychological perspectives in HRM strategies to increase employee motivation, involvement, and performance. Integration aspects of psychological needs, such as autonomy, recognition, and fulfillment, in the workplace allow HRM to focus not only on structural aspects but also on the behavior of employees, who ultimately contribute to the overall effectiveness of the organization ([Hadjo et al., 2024](#)).

2.3 Digitalization of Human Resource Management for MSMEs

Digitalization in management source Power Human Resource Management has become aspect important in ability organization for increase efficiency and power competition through digital transformation. In the context of Micro, Small, and Medium Enterprises (MSMEs), HRM digitalization includes the use of digital technologies such as HRIS (Human Resource Information Systems), cloud-based systems, big data analytics, and other digital platforms that facilitate HR functions such as recruitment, training, management performance, and employee involvement. [Safrudin \(2024\)](#) showed that digitalization has transformed MSMEs HR practices by bringing opportunities to improve operational efficiency and quality decisions through sophisticated technology, although they still face challenges such as limited digital power sources and workforce readiness.

Furthermore, the latest quantitative research confirms that digital HRM systems (e.g., HRIS and other HR automation) play a significant role in increasing HR process efficiency and encouraging organizational transformation. [Mahmoud et al. \(2025\)](#) found that adopting digital HRM systems and initiatives for digital transformation positively contributes to HR efficiency, which is also influenced by the organization's ability to adapt quickly (organizational agility). This result implies that HRM digitalization is not only increase efficiency administration, but also supports taking more decisions fast and responsive to need business in dynamic context of MSMEs.

3. Research Methodology

This study uses a Systematic Literature Review (SLR) approach to comprehensively examine the digitalization of Human Resource Management (HRM) in Micro, Small, and Medium Enterprises (MSMEs). The SLR approach was chosen because it allows researchers to identify, evaluate, and synthesize previous research findings in a systematic, transparent, and replicable manner, thus providing a comprehensive overview of conceptual developments, research trends, and challenges of digital HRM implementation in the MSME context.

The SLR implementation process in this study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, which include the stages of literature identification, screening, eligibility, and inclusion. In the identification stage, an article search was conducted through reputable scientific databases, namely Scopus, Web of Science, and Google Scholar, using a combination of keywords such as "digital HRM," "human resource digitalization," "HRIS," and "MSMEs." The literature search was limited to articles published between 2022 and 2025 to ensure relevance to the latest developments in HRM digitalization.

The articles obtained were selected based on predetermined inclusion and exclusion criteria. The inclusion criteria were peer-reviewed scientific journal articles, articles discussing HRM digitalization or digital HRM transformation, and articles focused on the context of MSMEs. Articles were excluded if they were conference proceedings, books, non-academic reports, or did not explicitly examine digital HRM practices. The selection process was carried out in stages through title and abstract screening, followed by a full-text review to ensure alignment with the research objectives.

Data analysis was conducted using content analysis to identify key themes, relationship patterns, research trends, and research gaps related to HRM digitalization in MSMEs. The selected articles were coded based on their research focus, type of digital HRM technology used, research methodology, and identified impacts on MSME efficiency, performance, and competitiveness. The analysis results were then synthesized narratively to produce an integrated understanding of digital HRM practices and their implications in the context of small and medium enterprises.

To ensure the validity and reliability of the research, this study employed a transparent and well-documented literature selection procedure, including clear criteria and a systematic PRISMA approach. With this approach, this research is expected to produce credible, scientifically sound findings and serve as a reference for further empirical research and policy development related to the digitalization of human resource management in MSMEs.

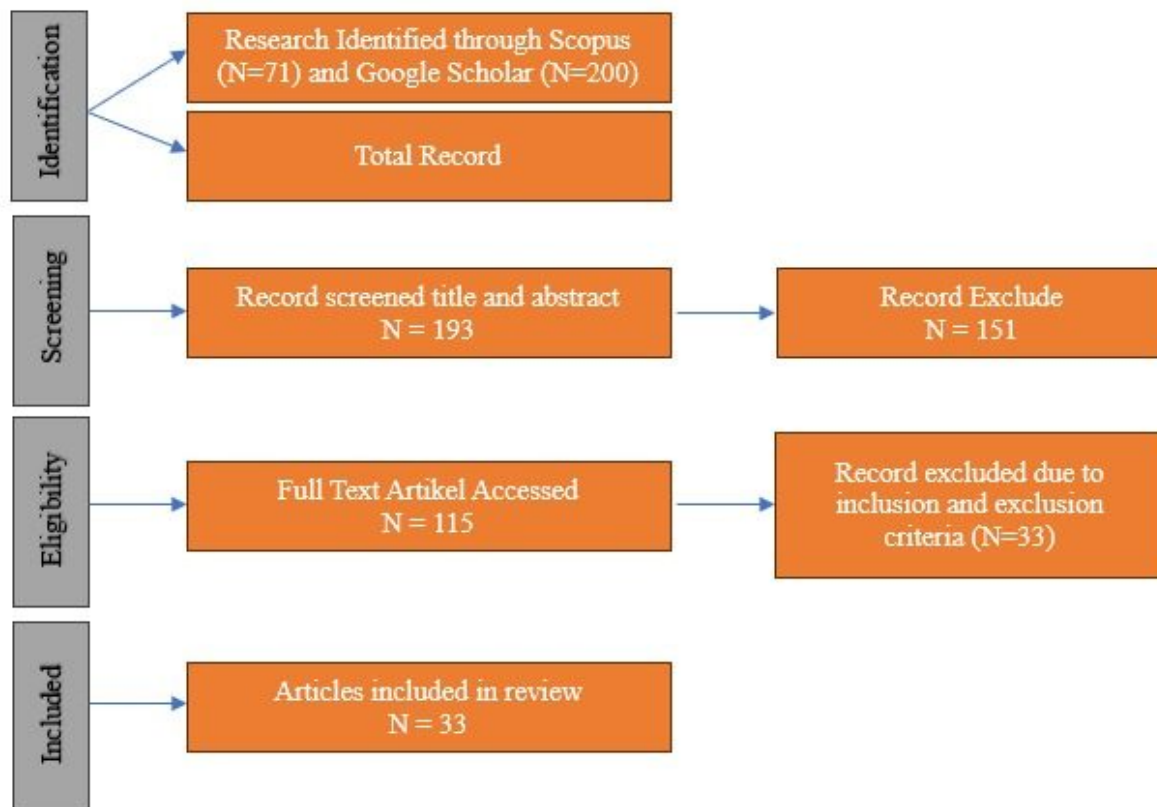


Figure 1. Prism model

Figure 1 presents the prism model of this study.

4. Results and Discussions

Table 1 highlights the key findings and research gaps identified from previous studies.

Table 1. Synthesis table

Authors – Year	Context	Method	Key Findings	Implications
Bindra et al. (2025)	Organizations	Conceptual review	HRM shifts from administrative to strategic digital role	HRM must align with digital strategy
Comes et al. (2025)	SMEs, emerging market	Quantitative	Sustainability outcomes depend on capability alignment	Context-sensitive transformation needed
Costa Melo et al. (2023)	SMEs	Empirical survey	Digital transformation enhances performance and sustainability	Strategy-driven digital adoption matters
Cumba et al. (2024)	Firms post-COVID	SEM	Digitalization strengthens sustainability via analytics	Data capability mediates performance
Depaoli et al. (2020)	SMEs	Case study	Digital transformation is interaction-based	People–process–technology integration
Dutta et al. (2020)	Manufacturing SMEs	Conceptual	Industry 4.0 priorities focus on efficiency	Digital readiness is foundational

Authors – Year	Context	Method	Key Findings	Implications
Garzoni et al. (2020)	SMEs	Framework development	Four-level digital transformation model	Gradual capability development
Hansen et al. (2025)	SMEs	Qualitative	Technology alone does not ensure success	Human and managerial factors critical
Hein-Pensel et al. (2023)	Industry 5.0	Review	Existing maturity models lack flexibility	Adaptive maturity models needed
Herman et al. (2024)	HRM	Conceptual	Digital HRM enhances responsiveness	HR digital literacy is key
Judijanto et al. (2025)	HRM	Conceptual	Digital HR boosts productivity	Continuous upskilling required
(Bindra, Bhattacharya, & Bhattacharya, 2025)	SMEs	Qualitative	Digitalization increases cyber risks	Cyber readiness must accompany HRM
Mahmoud et al. (2025)	Organizations	SEM	Digital HRM improves efficiency via agility	Agility moderates HRM outcomes
Merín-Rodríguez et al. (2024)	Innovative SMEs	SEM	Business model innovation mediates performance	Strategic transformation required
Nurdiani et al. (2025)	MSMEs	Qualitative	HR strategies critical for digital adaptation	HR strategy alignment needed
Palumbo et al. (2022)	Organizations	Conceptual	Digitalization increases psychosocial risks	Well-being management is crucial
Pirola et al. (2019)	SMEs	Case study	Digital readiness varies widely	Tailored digital pathways
Prasetio et al. (2023)	Indonesian MSMEs	Conceptual	Digital talent enhances sustainability	Talent development is strategic
Safrudin (2024)	SMEs	Conceptual	Digital HRM improves flexibility	Change management essential
Sánchez-Ortiz et al. (2025)	Mining SMEs	Model-based	Digital maturity is multidimensional	Sector-specific assessment needed
Seipalla et al. (2024)	HRM	Empirical	Digital HRM improves effectiveness	HRIS adoption required
Steinlechner et al. (2021)	Industrial firms	Model development	Digital competency maturity predicts success	Competency-based HR models
Teoh et al. (2023)	SMEs	Empirical	Digital business models enhance value	Innovation-oriented HR needed
Thomas (2020)	SMEs	Conceptual	HR digital maturity is uneven	Structured HR digital roadmap
Williams et al. (2022)	SMEs	Conceptual + empirical	DMMs often misfit SMEs	SME-adapted models required
Yabanci (2023)	SMEs	Conceptual	Intelligent HRM improves agility	HRIS as strategic tool
Zolg and Herbig (2023)	Employees	Empirical	High autonomy can increase stress	Balance autonomy and support

4.1 The Evolution of Digital Transformation in MSMEs

Early literature on digital transformation in Micro, Small, and Medium Enterprises (MSMEs) generally viewed digitalization as the process of adopting Industry 4.0-based technologies aimed at improving operational efficiency and internal productivity. Pioneering studies have emphasized the use of technologies such as management information systems, business process automation, the Internet of Things (IoT), and accounting and production software to reduce costs, accelerate workflows, and improve decision-making accuracy ([Dutta et al., 2020](#); [Garzoni et al., 2020](#); [Pirola et al., 2019](#)). In this phase, the success of digital transformation is largely determined by the MSME's level of digital readiness, which includes the availability of information technology infrastructure, basic employee digital competencies, and the readiness of internal processes to integrate with new technologies. Digital transformation is understood instrumentally and technically, with a primary focus on the efficiency and optimization of existing processes.

However, subsequent literature developments indicate a paradigm shift in the understanding of MSME digital transformation. Digital transformation is no longer understood simply as technology adoption but rather as a comprehensive strategic and organizational change process. Recent research emphasizes that digital transformation encourages MSMEs to reorient their business models, shifting previously centralized decision-making structures to more adaptive and data-driven structures, and increasing market orientation and customer engagement through digital platforms ([Depaoli et al., 2020](#); [Merín-Rodríguez et al., 2024](#); [Teoh et al., 2023](#)). In this context, technology serves as an enabler of organizational innovation, continuous learning, and value creation. Digital transformation in MSMEs is viewed as a long-term journey involving changes in work culture, leadership, and organizational capabilities, thus requiring the simultaneous integration of technology, people, and business strategy.

4.2 Digital Maturity, Capability, and Assessment Models

Research on digital maturity in MSMEs has shown significant progress in measuring an organization's readiness and ability to strategically adopt and utilize digital technology. Various Digital Maturity Models (DMMs) have been developed to map digital maturity levels based on technology, business processes, strategy, and human resources. [Williams et al. \(2022\)](#) emphasize that digital maturity models serve as diagnostic tools that help MSMEs understand their position in the digital transformation journey, from the initiation stage to full integration into business strategy. [Furthermore, Hein-Pensel et al. \(2023\)](#) developed a more contextual approach by adjusting digital maturity indicators based on the industry sector, allowing for a more realistic assessment of MSMEs' specific needs and challenges. [Sánchez-Ortiz et al. \(2025\)](#) emphasized that digital maturity reflects not only the level of technology adoption but also an organization's ability to align digital technology with strategic objectives, innovation, and long-term value creation.

However, the literature also identifies the fundamental limitations of most existing digital maturity models. [Hansen et al. \(2025\)](#) criticized that many DMMs are still dominated by the perspective of large companies, assuming the availability of financial resources, technological infrastructure, and a relatively established formal organizational structure. This approach is often less relevant for MSMEs operating with limited capital, digital competence, and simple managerial systems. Consequently, MSME digital maturity assessments are potentially inaccurate or overly normative. This situation drives the need for a more adaptive digital maturity assessment model that emphasizes internal capabilities such as managerial ability, human resource digital competency, organizational flexibility, and learning and innovation capacity. Internal capability-based models are considered more capable of reflecting the operational realities of MSMEs and providing applicable strategic guidance to support sustainable digital transformation.

4.3 The Role of Human Resource Management in Digital Transformation

The role of Human Resource Management (HRM) is increasingly recognized as a strategic element in the success of organizational digital transformation, including in the Micro, Small, and Medium Enterprises (MSMEs) sector. Digital transformation not only demands the adoption of new technologies but also requires human resource readiness to manage these changes effectively and

efficiently. The literature shows that digital HRM practices, such as digital-based recruitment, digital competency training, and technology-based performance appraisal systems, play a critical role in building adaptive and innovative employee capabilities ([Steinlechner, Schumacher, Fuchs, Reichsthaler, & Schlund, 2021](#); [Thomas, 2020](#)). Without the support of human resources with digital literacy, continuous learning capabilities, and an open attitude to change, technology investment risks do not provide optimal added value to the organization. Therefore, HRM serves as a key link between digital strategy and operational implementation by establishing an organizational culture that supports learning, collaboration, and continuous use of technology.

In the context of MSMEs, the role of HRM in digital transformation is increasingly crucial, given the limited resources available. Recent research shows that digital HRM practices contribute significantly to increased productivity, innovation, and business sustainability by optimizing the utilization of human capital ([Prasetio, Sary, Disastra, & Dudija, 2023](#); [Yabanci, 2023](#)). Effective HRM encourages employees to actively engage in the digital innovation process by developing new skills and participating in technology-based decision-making. Furthermore, [Sánchez-Ortiz, Hadfeg-Fernández, and Vidal-Silva \(2025\)](#) emphasized that integrating digital HRM with MSME business strategy can strengthen long-term competitiveness, especially in the face of market dynamics and uncertain business environments. Thus, HRM serves not only as an administrative function but also as a strategic capability that enables MSMEs to maximize the benefits of digital transformation sustainably.

4.4 Leadership, Culture, and Dynamic Capabilities

The role of Human Resource Management (HRM) is increasingly positioned as a strategic element determining the success of an organization's digital transformation, including in the Micro, Small, and Medium Enterprises (MSMEs) sector. Digital transformation is not solely related to the adoption of new technologies but is a complex and continuous process of organizational change that is highly dependent on the readiness of human resources. The literature confirms that digital HRM practices, such as technology-based recruitment, digital competency training and development, and digitally integrated performance appraisal systems, play a crucial role in shaping employee capabilities that are adaptive, innovative, and responsive to change ([Steinlechner et al., 2021](#); [Thomas 2020](#)). Through these practices, HRM contributes to improving digital literacy, continuous learning capabilities, and employees' proactive attitudes towards technology utilization. Without the support of human resources with adequate digital competencies and mindsets, technology investments may fail to generate optimal added value. Therefore, HRM serves as the key link between digital transformation strategy and operational implementation by building an organizational culture that encourages tech-based learning, collaboration, and innovation.

In the context of MSMEs, the strategic role of HRM in digital transformation is becoming increasingly crucial, given the limitations of financial, structural, and technological resources. Recent research shows that digital HRM practices can contribute significantly to increasing MSME productivity, innovation, and sustainability by optimizing the utilization of human capital ([Prasetio et al., 2023](#); [Yabanci, 2023](#)). Effective HRM encourages active employee involvement in the digital innovation process, whether through the development of new skills, increased work flexibility, or participation in technology-based decision making. Furthermore, [Judijanto, Anggoro, Farawowan, Suroso, & Prihadi, 2025](#) emphasized that integrating digital HRM with MSME business strategy can strengthen long-term competitiveness, especially in the face of rapidly changing market dynamics and uncertain business environments. Thus, HRM is no longer understood solely as an administrative function but rather as a strategic capability that enables MSMEs to maximize the benefits of digital transformation in DT sustainably.

4.5 Digital Transformation, Performance, and Sustainability

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4.6 Challenges, Risks, and Psychosocial Dimensions

Digital transformation in MSMEs not only presents opportunities for increased efficiency and competitiveness but also raises various complex challenges and risks. One major obstacle is the limited digital competence of human resources, both at the employee and business owner levels, which often leads to suboptimal technology utilization. Furthermore, resistance to change is a crucial issue, particularly in MSMEs with an informal work culture that rely on traditional operational practices. Changes to digital-based work processes are often perceived as threats to employees' job stability or professional identity. Furthermore, the adoption of digital technology increases exposure to cybersecurity risks, such as data breaches, digital fraud, and cyberattacks, which pose a serious challenge for MSMEs, given their limited security systems and low information security literacy ([Palumbo et al., 2022](#); [Zolg & Herbig, 2023](#)).

In addition to technical and structural challenges, digital transformation has significant psychosocial implications for MSMEs. The increased use of digital technology is often accompanied by higher workloads, demands for continuous learning, and pressure to remain responsive to market and technological changes. These conditions can trigger work stress, digital fatigue, and work-life imbalance, particularly in MSMEs with limited human resources ([Bamidele et al., 2024](#)). Therefore, the literature emphasizes that successful digital transformation cannot be understood solely as a technological project but rather as a socio-technical process involving the dynamic interaction of technology, people, organizational culture, and social context. An approach that integrates competency development, change management, and attention to employees' psychological well-being is key to ensuring the sustainability of MSME digital transformation.

4.7 Research Gap

Despite significant research on digital transformation and human resource management, the existing literature remains limited in integrating key variables into a comprehensive conceptual framework, particularly in MSMEs. Most studies tend to examine digital HRM, managerial capabilities, or MSME performance separately, thus failing to fully explain their causal relationships. However, in practice, the success of MSME digital transformation is determined not only by the adoption of digital-based HR technologies or policies but also by managerial capabilities in orchestrating resources, building a learning culture, and translating digital initiatives into sustainable competitive advantages. The

absence of this integrative model leaves our understanding of the internal mechanisms driving MSME performance partial and fragmented.

Furthermore, the existing literature is still dominated by studies conducted in developed countries, which do not reflect the dynamics of MSMEs in developing countries, which have distinct social, cultural, and institutional characteristics. The role of organizational culture, local values, public policy, and government support is often overlooked, even though these factors significantly influence the readiness and success of MSME digital transformation. Furthermore, there is limited research using mediation and moderation approaches to explain how and under what conditions digital HRM and managerial capabilities affect MSME performance. Variables such as innovation, creativity, and organizational agility have the potential to be crucial explanatory mechanisms (*mediating mechanisms*), but have not been explored in depth. Therefore, further research is needed to develop empirical models based on the context of developing countries to bridge the theoretical and practical gaps in the MSME digital transformation literature.

5. Conclusions

5.1 Conclusion

This study systematically reviews the literature on the digitalization of Human Resource Management (HRM) in Micro, Small, And Medium Enterprises (MSMEs) using a Systematic Literature Review (SLR) approach. The findings indicate an increasing research focus on digital HRM as a strategic tool that goes beyond administrative efficiency to enhance workforce capabilities, support data-driven recruitment and HR decisions, and improve organizational agility, competitiveness, and sustainability. The review also identifies Human Resource Information Systems (HRIS) as a dominant mechanism enabling HR digitalization in MSMEs, while revealing persistent challenges related to limited digital skills, financial constraints and managerial readiness. Furthermore, this study maps key thematic clusters and research gaps, emphasizing the need for future research to employ stronger theoretical frameworks, longitudinal perspectives and broader contextual coverage. Overall, the successful implementation of digital HRM in MSMEs is enabled by aligning technological adoption with human resource readiness, managerial capability, and an organizational culture that supports learning, innovation, and strategic integration.

5.2 Research Limitations

This study had several limitations. First, the study relied exclusively on secondary data from international journal articles published between 2022 and 2025, making the findings dependent on the quality and scope of available literature. Second, the restriction to English-language articles potentially excludes relevant research published in local languages, particularly those that address the unique context of MSMEs in developing countries. Third, as a conceptual synthesis of the literature, this study does not provide direct empirical evidence of the causal relationship between digital HRM adoption and MSME performance.

5.3 Suggestions and Directions for Future Research

Based on these limitations, several directions for future research are proposed in this section. First, further research is recommended to develop empirical studies employing both quantitative and qualitative approaches to test the conceptual model of digital HRM in MSMEs in greater depth. Second, longitudinal research is needed to understand the long-term dynamics of the digital transformation of HR. Additionally, future studies should explore the role of mediating and moderating variables, such as innovation, creativity, organizational agility, and public policy support, in strengthening the impact of digital HRM on the performance and sustainability. This is particularly important in the context of developing countries such as Indonesia, where unique socioeconomic factors may influence the adoption and outcomes of digital HRM practices.

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Author Contributions

ML contributed to the conceptualization of the study, development of the research design, systematic literature search, data analysis, and drafting of the original manuscript. BM contributed to data screening, content analysis, and interpretation of findings, as well as reviewing and editing the manuscript. YM contributed to methodological design, validation of the systematic review process, and critical revision of the manuscript for intellectual content. ARW supervised the research process, provided theoretical guidance, and reviewed the final version of the manuscript. All authors have read and approved the final manuscript and agree to be accountable for all aspects of this work.

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