Information Technology–Based Human Resource Management as a Strategic Response to Industry 4.0 and Society 5.0

Rabiatul Munawarah[1], Melky Retno Pasnijulita Br Hutapea[2], Salma Mellenia Medina[3], Khuzaini[4], Syahrial Shaddiq[5]

[1,2,3,4,] Universitas Islam Kalimantan (UNISKA) Muhammad Arsyad Al Banjari Banjarmasin, Indonesian
[5]Universitas Lambung Mangkurat (ULM) Banjarmasin
Email : rabiatulmwrh51@gmail.com

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ABSTRACT

The rapid advancement of digital technology has significantly transformed human resource management practices in modern organizations. The emergence of Industry 4.0 emphasizes automation, artificial intelligence, and data-driven systems, while Society 5.0 promotes a human-centered approach to technological development. This study aims to analyze information technology–based human resource management as a strategic response to the demands of Industry 4.0 and Society 5.0. A qualitative descriptive approach was employed using a literature review and document analysis of relevant academic sources. The findings indicate that IT-based HRM enhances efficiency, transparency, and strategic alignment in HR functions such as recruitment, performance management, learning and development, and workforce planning. Moreover, digital HRM supports employee engagement, well-being, and organizational agility when implemented ethically and strategically. However, challenges related to digital skill gaps, data security, and organizational readiness remain significant. This study concludes that information technology–based human resource management plays a crucial role in balancing technological advancement with human-centered values, thereby contributing to sustainable organizational competitiveness in the digital era.

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ABSTRAK

Perkembangan teknologi digital yang pesat telah membawa perubahan signifikan dalam praktik manajemen sumber daya manusia di organisasi modern. Munculnya Industry 4.0 menekankan otomatisasi, kecerdasan buatan, dan sistem berbasis data, sementara Society 5.0 mengedepankan pendekatan yang berpusat pada manusia dalam pengembangan teknologi. Penelitian ini bertujuan untuk menganalisis manajemen sumber daya manusia berbasis teknologi informasi sebagai respons strategis terhadap tuntutan Industry 4.0 dan Society 5.0. Penelitian ini menggunakan pendekatan kualitatif deskriptif melalui studi literatur dan analisis dokumen dari sumber akademik yang relevan. Hasil penelitian menunjukkan bahwa MSDM berbasis teknologi informasi mampu meningkatkan efisiensi, transparansi, dan keselarasan strategis dalam fungsi-fungsi MSDM seperti rekrutmen, manajemen kinerja, pengembangan kompetensi, dan perencanaan tenaga kerja. Selain itu, MSDM digital mendukung keterlibatan karyawan, kesejahteraan, dan kelincahan organisasi apabila diterapkan secara etis dan strategis. Namun, tantangan berupa kesenjangan keterampilan digital, keamanan data, dan kesiapan

organisasi masih menjadi perhatian utama. Penelitian ini menyimpulkan bahwa manajemen sumber daya manusia berbasis teknologi informasi memiliki peran penting dalam menyeimbangkan kemajuan teknologi dengan nilai-nilai kemanusiaan guna mendukung daya saing organisasi yang berkelanjutan di era digital.

Corresponding Author:
Rabiatul Munawarah
Universitas Islam Kalimantan
Email: rabiatulmwrh51@gmail.com

INTRODUCTION

The rapid advancement of digital technology has fundamentally transformed the way organizations operate across various sectors. Technological innovation no longer functions merely as a supporting tool but has become a core driver of organizational strategy and competitiveness. One of the most significant transformations can be observed in the field of human resource management. Traditional human resource practices are increasingly challenged by the demands of a dynamic and technology-driven environment. Organizations are required to adapt their human resource systems to remain relevant and sustainable. This transformation is closely linked to the emergence of Industry 4.0 and Society 5.0. Consequently, information technology–based human resource management has gained growing academic and practical attention (Rane, 2023).

Industry 4.0 represents a new industrial paradigm characterized by automation, digitalization, artificial intelligence, and data integration. This revolution has reshaped production systems, organizational structures, and workforce requirements. Human resources are no longer viewed solely as labor inputs but as strategic assets capable of innovation and problem-solving. The increasing use of smart technologies demands employees with advanced digital competencies. As a result, organizations must redesign their human resource management approaches. Conventional HRM models struggle to address these complex demands. Therefore, technology-based HRM emerges as a necessary response to industrial transformation (Poto, 2025).

In parallel with Industry 4.0, the concept of Society 5.0 has introduced a human-centered approach to technological development. Society 5.0 emphasizes the integration of advanced technology into daily life to enhance human welfare. Unlike previous industrial paradigms, this concept places humans at the center of innovation. Technology is expected to support social problem-solving rather than merely increase efficiency. Human resource management plays a critical role in realizing these objectives. HRM must ensure that technological implementation aligns with ethical and social values. This shift reinforces the importance of strategic and responsible HRM practices.

Information technology–based human resource management refers to the application of digital systems to manage HR functions effectively. These systems include e-recruitment, digital performance appraisal, HR analytics, and online training platforms. IT-based HRM enables organizations to process large volumes of workforce data efficiently. This capability supports evidence-based decision-making in HR planning and development. Furthermore,

digital HR systems enhance transparency and accuracy in HR processes. The integration of technology also reduces administrative burdens on HR departments. As a result, HR professionals can focus more on strategic roles (Tsaramirsis et al., 2022).

The strategic role of HRM has evolved significantly in the digital era. HRM is no longer confined to administrative tasks such as payroll and attendance management. Instead, it is expected to contribute directly to organizational strategy formulation. Technology enables HR managers to align workforce capabilities with business objectives. Through HR analytics, organizations can predict workforce trends and skill requirements. This predictive capability enhances organizational agility and competitiveness. IT-based HRM therefore strengthens the strategic positioning of HR within organizations. This shift reflects a broader transformation in management philosophy.

One of the most critical implications of Industry 4.0 is the changing nature of work. Automation and artificial intelligence have altered job roles and skill requirements. Employees are increasingly required to perform complex cognitive tasks rather than routine activities. This transformation necessitates continuous learning and skill development. IT-based HRM supports this need through digital learning management systems. Online training platforms enable flexible and personalized learning experiences. Consequently, organizations can foster a culture of lifelong learning (Adel, 2022).

Recruitment and selection processes have also been transformed by digital technology. Traditional recruitment methods are often time-consuming and limited in scope. IT-based HRM introduces e-recruitment systems and artificial intelligence–driven selection tools. These technologies enable organizations to reach a broader pool of candidates. Data-driven recruitment improves the accuracy of candidate matching. Moreover, digital recruitment systems reduce bias and enhance fairness. This transformation improves the overall effectiveness of talent acquisition.

Performance management is another HR function significantly influenced by information technology. Conventional performance appraisal systems are often criticized for being subjective and infrequent. Digital performance management systems allow continuous monitoring and feedback. Real-time performance data supports objective evaluation and development planning. Employees receive timely feedback that enhances motivation and engagement. Technology also facilitates goal alignment between individuals and organizations. As a result, performance management becomes more transparent and effective (Ghobakhloo et al., 2024).

Employee engagement and well-being have become central concerns in Society 5.0. The human-centered approach emphasizes the importance of work-life balance and psychological health. IT-based HRM supports flexible working arrangements through digital platforms. Remote work systems enable employees to balance professional and personal responsibilities. HR analytics can also be used to monitor employee well-being indicators. Early detection of stress and burnout allows timely interventions. Thus, technology contributes to a more supportive work environment.

Despite its advantages, IT-based human resource management presents several challenges. One major concern is data security and employee privacy. The use of digital HR systems involves the collection and processing of sensitive personal data. Organizations must ensure compliance with data protection regulations. Ethical considerations become

increasingly important in the digital HR environment. Employee resistance to technological change also poses a significant challenge. Therefore, effective change management is essential for successful implementation.

Digital skill gaps among employees represent another critical challenge. Not all employees possess the competencies required to operate advanced HR systems. This disparity can lead to inequality and reduced system effectiveness. HRM must address this issue through targeted training programs. Continuous digital literacy development is essential for workforce readiness. IT-based HRM can facilitate this process through online learning tools. However, organizational commitment is required to ensure equitable access.

Leadership plays a vital role in the successful adoption of IT-based HRM. Leaders must demonstrate a clear vision for digital transformation. Strategic leadership encourages employee acceptance of technological change. Supportive leadership fosters a culture of innovation and learning. HR leaders are expected to act as change agents in digital transformation. Their ability to integrate technology with human values is crucial. This leadership approach aligns with the principles of Society 5.0.

From an academic perspective, the study of IT-based HRM remains a relevant research area. Rapid technological advancements continuously reshape HR practices. Existing theories must be re-evaluated in light of digital transformation. Empirical research is needed to assess the effectiveness of digital HR systems. Cross-disciplinary approaches can enrich HRM research. Studies integrating technology, management, and social sciences are particularly valuable. This research contributes to both theoretical and practical development (Poto, 2025).

In developing countries, the implementation of IT-based HRM presents unique challenges and opportunities. Infrastructure limitations and digital inequality may hinder adoption. However, digital HR systems also offer opportunities for organizational modernization. Governments and organizations play a crucial role in supporting digital transformation. Policy frameworks can facilitate technology adoption in HRM. Capacity building initiatives are essential to enhance workforce readiness. Thus, contextual factors must be considered in HRM research (Tsaramirsis et al., 2022).

In conclusion, information technology–based human resource management represents a strategic response to Industry 4.0 and Society 5.0. It enables organizations to enhance efficiency while maintaining a human-centered approach. The integration of technology into HRM transforms traditional practices into strategic functions. This transformation supports organizational competitiveness and sustainability. However, successful implementation requires careful consideration of ethical, social, and technological factors. Future research should explore innovative HRM models in digital contexts. Ultimately, IT-based HRM plays a critical role in shaping the future of work.

RESEARCH METHOD

This study adopts a qualitative research approach to explore the strategic role of information technology–based human resource management in responding to the challenges of Industry 4.0 and Society 5.0. A qualitative design is considered appropriate because it allows an in-depth understanding of complex organizational phenomena. The research focuses on interpreting meanings, patterns, and processes related to digital HRM practices.

Data are analyzed to capture perspectives from organizational actors involved in HR management. This approach emphasizes context and social reality rather than numerical measurement. Therefore, qualitative inquiry provides rich and detailed insights into HRM transformation.

The research design employed in this study is a descriptive qualitative method. This design aims to describe systematically the implementation of IT-based HRM and its strategic implications. The study does not seek to test hypotheses but to understand phenomena as they occur naturally. Descriptive qualitative research enables the exploration of practices, challenges, and opportunities within organizations. It also facilitates the identification of key themes related to digital HRM adoption. Consequently, this design supports comprehensive analysis aligned with the research objectives (Grosse et al., 2023).

Data collection techniques include a literature review and document analysis. Academic journals, books, and reputable online publications related to human resource management, Industry 4.0, and Society 5.0 are used as primary sources. Relevant policy documents and organizational reports are also examined. The literature review helps establish a theoretical foundation for the study. Document analysis provides contextual understanding of HRM practices in digital environments. These data sources ensure the credibility and depth of the research findings.

Data analysis is conducted using thematic analysis. The collected data are systematically organized and categorized based on emerging themes. Coding is applied to identify patterns related to digital HRM strategies and human-centered approaches. Themes are interpreted by linking empirical findings with relevant theories. This analytical process allows the researcher to draw meaningful conclusions. Thematic analysis supports flexibility and rigor in qualitative research.

To ensure research validity and reliability, several strategies are employed. Source triangulation is used by comparing findings from different literature and documents. Peer-reviewed publications are prioritized to maintain academic rigor. Clear documentation of data collection and analysis procedures enhances transparency. Consistency in coding and interpretation is maintained throughout the research process. These measures strengthen the trustworthiness of the study.

Ethical considerations are carefully addressed in this research. All data sources are properly cited to avoid plagiarism. The study respects intellectual property rights of authors and institutions. No confidential or sensitive organizational data are used. The research is conducted objectively without manipulation of findings. Ethical compliance ensures the integrity and academic credibility of the study.

RESULT AND DISCUSSION

Results

The results demonstrate that information technology–based human resource management has become an integral part of modern organizational systems. Digital HR platforms are increasingly embedded in daily HR operations. Organizations rely on these systems to improve efficiency and accuracy. Administrative processes are streamlined

through automation. HR departments experience reduced operational workload. This transformation reflects a shift toward technology-driven HR practices.

The adoption of digital recruitment tools is identified as a significant outcome. Organizations utilize online platforms to reach wider candidate pools. Automated screening systems support faster applicant selection. Recruitment timelines are shortened through digital processes. Data-driven filtering enhances candidate-job alignment. These practices improve overall recruitment effectiveness (Budhwar et al., 2023).

The results indicate that artificial intelligence is increasingly used in HR decision-making. AI supports resume screening and candidate ranking processes. Predictive algorithms assist in identifying high-potential talent. Organizations report improved objectivity in selection decisions. Bias reduction is perceived as a key benefit. However, monitoring algorithm accuracy remains necessary.

Digital performance management systems emerge as a core HR innovation. Organizations replace traditional annual evaluations with continuous performance tracking. Real-time feedback mechanisms are widely applied. Employees receive timely performance-related information. Performance data supports development planning. Transparency in evaluation processes is enhanced.

The findings show that learning and development functions are transformed by technology. Learning management systems are commonly implemented. Employees access training materials digitally. Self-paced learning opportunities increase participation rates. Digital platforms support reskilling initiatives. Continuous learning becomes embedded in organizational culture (Aheleroff et al., 2022).

HR analytics is identified as a strategic capability across organizations. Workforce data is systematically collected and analyzed. Analytics support workforce planning decisions. Skill gap identification becomes more accurate. Predictive insights guide talent development strategies. HR decision-making becomes evidence-based.

The results reveal improved organizational agility through digital HR systems. Workforce deployment becomes more flexible. HR systems support remote and hybrid work models. Organizations respond faster to environmental changes. Coordination across departments is enhanced. Technology facilitates adaptive organizational structures.

Employee engagement levels increase following IT-based HRM implementation. Digital communication tools strengthen internal interaction. Feedback channels become more accessible. Employees feel more involved in organizational processes. Transparency fosters trust between management and staff. Engagement emerges as a positive organizational outcome (Zizic et al., 2022).

The findings indicate that employee well-being is increasingly supported by digital HR systems. Flexible work arrangements are facilitated through technology. Work-life balance improves in digital work environments. HR analytics monitor workload and stress indicators. Early interventions become possible. Organizations demonstrate concern for employee welfare.

Despite positive outcomes, challenges are also identified. Digital skill gaps among employees are evident. Some employees experience difficulty adapting to new systems. Resistance to technological change occurs in certain contexts. Training needs increase significantly. These challenges affect system effectiveness.

Data security concerns emerge as a critical issue in digital HRM. Organizations manage large volumes of sensitive employee data. Risks related to cyber threats are recognized. Compliance with data protection regulations becomes essential. Ethical data management is emphasized. Trust depends on secure system governance (Ghobakhloo et al., 2023).

Leadership support is found to influence HR digital transformation success. Organizations with strong leadership commitment show smoother adoption. Leaders promote digital mindsets among employees. Clear communication reduces uncertainty. Leadership involvement increases acceptance levels. HR transformation benefits from strategic leadership.

Organizational culture significantly affects digital HRM implementation. Innovation-oriented cultures adapt more easily to change. Openness to technology facilitates system utilization. Collaborative environments enhance digital adoption. Rigid cultures experience greater resistance. Cultural alignment proves essential.

The findings show variation in IT-based HRM adoption across organizations. Organizational size influences technological investment capacity. Larger organizations adopt more advanced systems. Smaller organizations face financial limitations. Customization becomes necessary across contexts. Adoption levels vary accordingly.

Digital HR systems support strategic alignment between HR and organizational goals. Workforce planning aligns with business strategy. Performance indicators reflect strategic priorities. HR activities support organizational competitiveness. Strategic consistency improves through technology. HR becomes a strategic partner.

The results indicate that communication efficiency improves through digital HR platforms. Information dissemination becomes faster and clearer. Employees access HR information independently. Administrative inquiries decrease significantly. Transparency improves organizational communication. Technology enhances information flow.

Employee autonomy increases through self-service HR systems. Employees manage personal data digitally. Access to HR services becomes more flexible. Dependence on HR staff decreases. Self-service systems improve satisfaction. Empowerment emerges as a benefit.

The findings show that digital HRM supports diversity and inclusion initiatives. Online recruitment reaches diverse candidates. Bias reduction mechanisms are implemented. Data analysis monitors inclusion metrics. Inclusive practices gain institutional support. Technology promotes equitable HR processes.

Technology adoption also affects HR professional roles. HR staff focus more on strategic tasks. Administrative responsibilities decline. Analytical competencies become essential. HR professionals act as consultants. Role transformation is evident.

The results reveal improved coordination between HR and other departments. Integrated systems facilitate data sharing. Cross-functional collaboration increases. Decision-making becomes synchronized. Organizational coherence improves. Technology enables integration (Zhang & Chen, 2023).

Employee perceptions of fairness improve with digital systems. Standardized processes reduce subjective judgment. Transparency enhances trust. Performance evaluations are perceived as objective. Fair treatment becomes more visible. Employee satisfaction increases.

The findings indicate that digital HRM supports sustainability goals. Paperless processes reduce environmental impact. Remote work reduces commuting needs. Resource efficiency improves. Sustainable practices are reinforced. Technology supports organizational responsibility.

The implementation of IT-based HRM contributes to long-term competitiveness. Organizations adapt better to technological change. Workforce readiness improves. Strategic resilience increases. Innovation capability is strengthened. Competitive advantage is supported.

Overall, the results confirm that IT-based HRM transforms HR practices comprehensively. Efficiency, transparency, and strategic value improve. Human-centered outcomes are supported. Challenges remain manageable with proper strategies. Technology becomes indispensable in HRM. Digital HRM emerges as a strategic necessity.

Discussion

The findings reinforce the role of IT-based HRM as a strategic response to Industry 4.0. Automation and digitalization redefine HR functions. HRM evolves from administrative support to strategic contribution. These results align with contemporary HRM theories. Technology enhances organizational competitiveness. Strategic HRM becomes technology-driven.

The widespread use of digital recruitment reflects global HR trends. Technology improves recruitment efficiency and effectiveness. Broader talent access supports workforce diversity. Automated systems reduce selection bias. These outcomes align with prior empirical studies. Ethical oversight remains essential.

The integration of artificial intelligence supports data-driven HR decisions. AI enhances objectivity and predictive accuracy. These findings support analytics-based HRM frameworks. However, algorithm transparency is critical. Human oversight remains necessary. Balanced AI use is recommended.

Digital performance management addresses traditional appraisal limitations. Continuous feedback enhances employee development. Transparency improves perceived fairness. These results support performance management theory. Technology aligns individual and organizational goals. System design influences acceptance.

The emphasis on digital learning reflects Industry 4.0 skill demands. Continuous learning supports workforce adaptability. E-learning platforms enhance accessibility. This aligns with human capital theory. Skill development strengthens organizational performance. Learning becomes strategic.

HR analytics strengthens evidence-based management practices. Data-driven insights support proactive planning. Predictive capabilities enhance workforce optimization. These findings align with strategic HRM models. Analytical competence is essential. Data literacy must be developed.

Improved organizational agility confirms technology's enabling role. Flexible work systems enhance responsiveness. Digital HRM supports adaptive structures. These outcomes align with organizational agility theory. HR contributes to resilience. Technology enhances coordination.

Employee engagement improvements reflect positive social impacts. Digital communication enhances participation. Transparency builds trust. These findings align with engagement theories. However, excessive digitalization may reduce personal interaction. Balance is necessary.

The focus on employee well-being aligns with Society 5.0 values. Human-centered technology enhances quality of work life. Flexible arrangements support balance. HR analytics enable preventive interventions. Sustainable HRM is reinforced. Well-being supports productivity.

Digital skill gaps highlight inclusion challenges. Unequal access affects system effectiveness. Training becomes critical for equity. These findings align with digital divide literature. HR must ensure inclusive transformation. Capacity building is essential.

Data security concerns emphasize ethical responsibility. Digital HRM increases privacy risks. Trust depends on responsible governance. These findings align with HR ethics frameworks. Compliance ensures legitimacy. Ethical leadership is required.

Leadership commitment confirms change management theory. Leaders influence technology acceptance. Visionary leadership reduces resistance. HR leaders act as change agents. Transformational leadership supports success. Strategic direction matters.

Organizational culture's influence supports sociotechnical perspectives. Technology interacts with social systems. Cultural readiness determines outcomes. Innovative cultures adapt faster. Resistance emerges in rigid environments. Cultural alignment is crucial.

Variations across organizations reflect contextual HRM theory. One-size-fits-all solutions are ineffective. Organizational resources shape adoption. Customization enhances relevance. Context sensitivity improves outcomes. Flexibility is required.

Strategic alignment between HRM and organizational goals supports strategic HRM theory. Digital systems integrate HR with strategy. Coordination enhances value creation. HR contributes directly to performance. Strategic consistency improves. HR becomes a business partner (Kayser, 2023).

Improved communication efficiency supports organizational transparency. Technology reduces information asymmetry. Employees gain faster access to information. These findings align with communication theory. Trust is enhanced. Engagement increases.

Employee self-service systems support empowerment theory. Autonomy enhances satisfaction. Technology enables independence. HR workload is reduced. Empowerment supports motivation. Positive behavioral outcomes emerge.

Digital HRM supports diversity and inclusion strategies. Technology expands access opportunities. Bias monitoring improves fairness. These findings align with inclusive HRM literature. Technology supports equity goals. Responsible implementation is required.

The transformation of HR professional roles reflects competency theory. Strategic and analytical skills become essential. HR evolves into consultancy roles. Administrative functions decline. Professional identity shifts. Skill development is necessary.

Improved interdepartmental coordination supports systems theory. Integrated platforms enhance coherence. Data sharing improves decision quality. Organizational silos are reduced. Collaboration increases. Technology enables integration (Santhi & Muthuswamy, 2023).

Perceived fairness improvements support organizational justice theory. Standardization reduces bias. Transparency enhances legitimacy. Fair processes improve satisfaction. Trust strengthens commitment. Justice supports performance.

Digital HRM contributes to sustainability objectives. Environmental impact is reduced. Remote work supports sustainability. Resource efficiency increases. These outcomes align with sustainable HRM theory. Responsibility is reinforced (Maulana et al., 2024).

Long-term competitiveness benefits align with resource-based theory. Human capital becomes a strategic asset. Technology enhances capability development. Adaptability strengthens resilience. Innovation capacity increases. Competitive advantage is sustained.

Overall, IT-based HRM bridges Industry 4.0 and Society 5.0 demands. Technology enhances efficiency and human well-being. Strategic and ethical implementation is essential. HRM transformation requires balance. Future research should expand empirical validation. IT-based HRM shapes the future of work.

CONCLUSION

Information technology–based human resource management has proven to be a strategic response to the challenges posed by Industry 4.0 and Society 5.0. The findings indicate that digital transformation in HRM significantly enhances efficiency, transparency, and strategic alignment within organizations. HR functions are no longer limited to administrative roles but have evolved into strategic partners that contribute to organizational competitiveness. Technology enables data-driven decision-making and supports adaptive workforce management. This transformation reflects a fundamental shift in how organizations manage human capital. IT-based HRM therefore plays a critical role in modern organizational systems.

The study demonstrates that digital HR practices improve key HR functions, including recruitment, performance management, and learning and development. The use of digital platforms expands access to talent, enhances objectivity in evaluation, and supports continuous skill development. HR analytics strengthens evidence-based planning and predictive workforce strategies. These practices help organizations respond effectively to rapid technological and environmental changes. As a result, workforce readiness and organizational agility are improved. Digital HRM contributes directly to sustainable organizational performance.

From a human-centered perspective, IT-based HRM supports the principles of Society 5.0 by prioritizing employee well-being, engagement, and empowerment. Flexible work arrangements and digital communication tools enhance work-life balance and participation. Technology facilitates transparency and fairness in HR processes, strengthening trust between employees and management. Employee self-service systems increase autonomy and satisfaction. These outcomes indicate that technology can enhance, rather than diminish, human values. Human-centered digital HRM becomes a key organizational objective.

Despite its benefits, the implementation of IT-based HRM also presents significant challenges. Digital skill gaps, resistance to change, and data security concerns remain critical issues. Unequal access to technology may reduce system effectiveness if not properly addressed. Ethical considerations related to data privacy require strong governance

frameworks. Leadership commitment and organizational culture play decisive roles in overcoming these challenges. Successful digital HRM implementation therefore requires comprehensive change management strategies.

The findings also highlight the importance of contextual factors in digital HRM adoption. Organizational size, resources, and cultural readiness influence the level and effectiveness of technology implementation. One-size-fits-all approaches are insufficient in addressing diverse organizational needs. Customization and flexibility are necessary to maximize the benefits of IT-based HRM. HR professionals must develop strategic, analytical, and technological competencies. Context-sensitive implementation enhances relevance and sustainability.

In conclusion, information technology–based human resource management represents a crucial bridge between technological advancement and human-centered development. It enables organizations to balance efficiency, innovation, and social responsibility in the digital era. Strategic and ethical integration of technology into HRM is essential for long-term competitiveness. This study contributes to the growing body of knowledge on digital HRM in the context of Industry 4.0 and Society 5.0. Future research should focus on empirical validation and sector-specific analysis. Ultimately, IT-based HRM will continue to shape the future of work and organizational management.

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