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Article

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Digital human resource management influence on the organizational resilience

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Abstract

Purpose – Given the substantial challenges and disruptions that companies often encounter from within the organization and the broader market landscape – such as market turbulence, technological advancements and regulatory changes – developing robust organizational resilience and transitioning to digital business practices have become top priorities. This paper aimed to explore if digital human resource management (HRM) significantly influences the organizational resilience within the context of emerging economy.

Design/methodology/approach – To analyze data collected from HRM experts active in the business sector of Bosnia and Herzegovina, we utilized in this paper multiple regression analysis. This approach allowed us to explore the relationships and impacts within this specific regional context.

Findings – The study findings revealed that digital HRM significantly enhances organizational resilience, positively impacting its three key components: the ability to anticipate, the capacity to cope and the capability to adapt.

Practical implications – This study offers digital HRM strategies for enhancing organizational resilience, guiding HR professionals in using digital tools to boost employee adaptability, streamline crisis communication and improve flexibility and readiness for future disruptions.

Originality/value – This research adds to the existing literature and ensures practical implication on digital HRM and organizational resilience by empirically demonstrating how digital HRM strengthens organizational capabilities to foresee potential disruptions, respond effectively to crises and adapt to changing circumstances. These capabilities help organizations maintain stability and continue operations smoothly during unexpected events, thereby safeguarding their long-term sustainability and competitive edge.

Keywords Digital HRM, Human resource management, Artificial intelligence, AI, Organizational resilience

Paper type Research paper



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Introduction

Today, organizations face immense pressure to operate in dynamic environments characterized by constant and volatile changes. Firms often face heightened competition, internal challenges and difficulties with key external stakeholders, along with broader economic problems, adverse political changes, social and environmental pressures and severe pandemics like COVID-19 (Ahmić, 2022). The business operations, particularly in manufacturing, are adversely affected by these issues because manufacturing firms have numerous stakeholders, rely heavily on enhanced sales and products and encounter significant environmental risks (Hamidu, Boachie-Mensah, & Issau, 2023). Therefore, organizations need resilience to effectively foresee, evade and address risks, and ultimately overcome them (Kahn et al., 2018). The organization's ability to endure stress, respond effectively, stay stable and even flourish when confronting internal and external upheavals or disturbances is known as organizational resilience (Hillmann & Guenther, 2020).

Digitalization proved to be highly effective in helping organizations overcome challenges and mitigate additional harm during crises, particularly evident during the recent COVID-19 pandemic and its impact (Cybersecurity & Infrastructure Security Agency, 2020). This swift technological advancement has propelled the society's transition to digitalization, fundamentally altering HR practices, redefining workforce management and transforming recruitment strategies throughout all tiers of the organization. The digital era demands that firms and their employees quickly adjust to an ever-changing environment, adopt emerging technologies, rethink conventional methods, invest in continuous learning and consistently upgrade their digital competencies to remain competitive and pertinent in a technology-centric world. As stated in a 2024 report from Leoforce, 81% of firms surveyed across North America aim to allocate funds toward AI-driven solutions to streamline and improve the whole process in recruiting (Leoforce, 2024). Additionally, as revealed by a survey from Zolas et al., (2021), human resource management (HRM) holds the second position in terms of digital integration, with a significant portion of its data stored in digital form, just behind the finance division in organizations spanning multiple industries. Even though the incorporation of digitalization within HRM department brings myriad opportunities (such as achieving cost savings over time, enriched employee experience, better efficiency, creating time for essential [nonroutine] tasks and increased profitability), there are simultaneously many barriers to its adoption (for example, doubt in AI systems, inadequate tech expertise among HR personnel, data privacy concerns, threat of cyber attacks and data breaches) (Ahmić, 2023).

In relation to past research, one of the limited prior studies demonstrated the substantial influence of E-HRM on organizational flexibility (Al-Husseini & Al-Thabhwawee, 2024). Organizational flexibility is mostly viewed as the capacity to swiftly adjust to shifting environmental factors (Chalab & Chraimukh, 2023) and represents only one part of the broader concept of organizational resilience. Other studies didn't take into consideration the IT, electronic or digital component within HRM and showed that strategic HRM impacts on the organization's ability to be resilient (Georgescu et al., 2024). Given the points discussed, companies need to create and advance human resource information systems that can fulfill the demands of organizational resilience. Nevertheless, a research gap exists in this domain, especially regarding the effects of digital HRM on organizational resilience which calls for additional research in this area. This article aims to enrich theoretical insights and showcase practical advantages at the intersection of digital HRM and organizational resilience by presenting robust empirical evidence from the case of Bosnia and Herzegovina as an emerging market. The state of digitalization in Bosnia and Herzegovina, as in many emerging economies, reflects a transitional phase where organizations are gradually and, in

recent years, increasingly adopting digital technologies to enhance business processes (such as HR practices). Therefore, the importance of digital HRM in this context lies in its ability to address specific challenges faced by businesses in emerging economies, such as limited resources, skill shortages, and the need for greater operational efficiency. The research concept for this study is built upon the principles of the dynamic capabilities theory and resource-based view (RBV). RBV highlights how leveraging resources is meaningful for developing key capabilities by improving processes (such as data analytics) (Helfat et al., 2023). Additionally, dynamic capabilities theory emphasizes a company's ability to quickly adapt and reconfigure its internal resources, such as human capital, technology and operational processes, to effectively respond to shifting market conditions and environmental changes.

Consequently, the next section includes a literature review examining digital HRM practices, organizational resilience and their interrelationship. Thereafter, the research design is established, hypotheses are crafted and methodologies and findings are detailed. The following phase involves a meticulous assessment of the main discoveries and essential conclusions. Finally, guidance for future research is offered.

Theoretical background

Digital human resource management practices

As digital technologies advance, HR's approach to managing information and data has been drastically revolutionized, changing traditional HR functions into proactive and data-driven activities. More specific, the adoption of digital technologies has profoundly revised HRM processes (Mosca, 2020), including workforce recruitment, assessment of employee performance and human resource (HR) employee training and development, elevating the standard of service offered to stakeholders by increasing efficiency, accuracy and engagement. Ketolainen (2018) outlines digital HRM transformation as a transition process where HRM evolves into a digital format to enhance data-centric and automated workflows. Digital transformation has streamlined and accelerated HRM processes, such as automating routine administrative tasks, allowing HR specialists to focus more effectively on strategic and impactful initiatives within their departments which foster a more innovative and responsive HR function. Furthermore, digital HRM has demonstrated its ability to strengthen decision-making accuracy (Gal, Jensen, & Stein, 2020), elevate employee performance (Schiemann, Seibert, & Blankenship, 2018) and advance organizational financial outcomes (Malik, Budhwar, Patel, & Srikanth, 2022).

Essentially, all established HRM functions and procedures can be adapted to digital formats, encompassing areas such as digital recruitment, onboarding activities, job design, employee engagement, performance management, appraisal and compensation, training and development and managing talents (Ahmić, 2023). The current study focused on four essential HRM practices: "digital recruitment/selection process, digital onboarding, digital training and development and digital performance management in HR."

Digital recruitment and selection. Within the scope of HRM, the recruitment and selection of employees is a crucial area increasingly shaped by digital technology advancements, such as the use of AI-driven candidate screening tools, sophisticated online recruitment platforms, and data analytics for optimizing hiring processes. Mazurchenko and Maršíková (2019) revealed that the integration of online recruitment platforms and AI algorithms has revolutionized these processes, enhancing both efficiency and exactness. For instance, The Applicant Tracking System (ATS) seamlessly integrates features such as overseeing applicant information, automating job postings, enabling efficient email and messaging exchanges with job seekers, scheduling interviews, accumulating feedback from

interviews, producing reports on job vacancy completions and assembling thorough recruitment analytics, all within a single platform. Generally, online recruitment platforms offer organizations access to an extensive pool of candidates, enabling a faster and more efficient search and selection process. Organizations can effortlessly connect with potential candidates who might have been overlooked by traditional approaches, paving the way for a more diverse and fair talent pool and improved recruitment outcomes. Moreover, algorithms can analyze proven patterns from past recruitment efforts, leading to a progressively refined and personalized selection process (Maheswari et al., 2023). Additionally, thorough analysis of applicant behavior and current employee contentment can yield crucial insights to bolster future strategies in recruitment (Fenech, 2022).

Digital onboarding. In a broad sense, digital onboarding involves transforming the traditional HR onboarding process by using digital technology to support new employees in acclimating to and becoming part of the company (Maurer, 2020). The increasing adoption of digital onboarding is believed to have considerable effects on individuals starting new roles or transitioning between jobs (Lund et al., 2021). Onboarding is a human resources practice designed to familiarize new employees to their roles while acquainting them with the organization's values, culture, processes and objectives (Cable, Gino, & Staats, 2013). The aim of digital onboarding is to provide a virtual space that helps employees swiftly immerse themselves in the organization, enabling them to add value toward the company's overarching goals. Furthermore, employing digital technologies for onboarding enables the development of various dynamic capabilities that are well-suited for handling challenging scenarios (Bharadwaj et al., 2013), including events like COVID-19 outbreak and economic recessions. To illustrate, digital onboarding amid the COVID-19 pandemic has reshaped organizational dynamics by continual refinement in resources and employee output via organizational learning, especially in how employers and workers interact and respond to one another (Lund et al., 2021). Likewise, the swift rise in digital onboarding driven by technological advancements and social-distancing protocols, such as remote and hybrid work models, suggests that digital onboarding has become the most practical solution for organizations to maintain operations and for employees to keep working effectively.

Digital training and development. A key aspect of digital training and development involve utilizing online resources and platforms, including adaptable and customizable e-learning modules, microlearning, virtual classrooms, AI-powered learning assistants, mobile trainings and engaging webinars, to support and drive employee learning and skill acquisition. As a result, e-learning platforms have revolutionized the way employees engage with training, offering them the freedom to access materials online and learn according to their own rhythm and convenience (Zhang & Chen, 2024). This approach not only boosts employee engagement and motivation but also fosters greater flexibility, accessibility and autonomy in learning, enabling individuals to tailor their educational experience to fit their own preferences and requirements. In addition to monitoring daily milestones, a robotic instructor fitted with visual scanning tools can reach a range of educational simulations with varying degrees of complexity and precisely gauge the amount of attention that workers dedicate to each (Ahmić, 2023). Webinars, online workshops and virtual classrooms serve as the powerful tools for delivering interactive training content, as digital technology enables organizations to conduct live online sessions that facilitate real-time, active engagement and two-way communication between instructors and attendees. The inclusion of interactivity fosters a more engaging learning environment and allows for the immediate idea sharing and discussion (Thite, 2022).

Digital performance management. The performance management paradigm undergoes significant transformation with the integration of digital technology, which fosters

interconnected systems, real-time insights, predictive analytics and leverages big data analysis to forecast, assess, and enhance overall organizational effectiveness. Embracing digital performance management has changed employees from mere recipients of assessments into proactive and integral contributors to their own performance. This shift has not only enhanced their engagement and productivity but also leveraged the benefits of digital work environments, including minimized commuting, reduced overhead costs, lower rates of sick leave and greater flexibility in work schedules (Aagman, 2019). Specifically, digital performance evaluation platforms that utilize 360-degree review processes, fuzzy multi-criteria decision process techniques or upward feedback mechanisms offer a comprehensive and equitable approach to assessing employees. These systems gather insights from a range of perspectives – including those of colleagues, subordinates, team leaders, self-assessments and sometimes project stakeholders and customer feedback – to ensure a well-rounded and precise evaluation. By leveraging these tools, managers can accurately pinpoint employees who need specific improvement strategies – such as tailored training, additional qualifications or upgraded professional growth schemes – and assess the level of advancing needed in particular domains (Manoharan, Muralidharan, & Deshmukh, 2011).

Organizational resilience

In today's volatile and rapidly evolving business landscape, organizations must be adept at anticipating, confronting and resiliently navigating both unforeseen external and internal hurdles – such as natural disasters, economic crises, pandemics like COVID-19, abrupt disruptions with major stakeholders and operational failures caused by staff or management – to ensure the continuity of their operations. In the face of catastrophic threats, companies respond in varied ways – some manage to adapt well and continue to succeed, while others falter and ultimately cease operations; thus, organizations aim to enhance their resilience by planning not only for survival but also for continued excellence and future prosperity (Ahmić, 2022). Certain organizations might favor centralized control mechanisms to handle uncertainties and risks, whereas others might adopt innovative approaches that enable them to adapt and evolve in response to shifting environmental demands (Georgescu et al., 2024).

In the context of defining organizational resilience, Annarelli and Nonino (2016) explained it as an organization's ability to adjust and react adeptly to unexpected shifts and crises, all while sustaining its core mission and operating efficiently. More closely, organizational resilience was characterized as the capability of an organization to foresee possible threats, respond to setbacks successfully and adjust to evolving circumstances (Duchek, 2020). Gaining insight into and building resilience can strengthen an organization's standing and ensure its survival, even amid the toughest challenges (Al-Ayed, 2019). This research paper centers on the three dimensions outlined by Duchek (2020), which are named: "anticipation capabilities, coping capabilities and adaptation capabilities." Anticipation capabilities encompass the proactive and preventive measures taken to address potential disruptions and crises that could arise within the organization or its surroundings, while coping capabilities include the organization's capacity to manage and respond to sudden critical events effectively once they emerge and arise (Ahmić, 2022). Further, coping mechanisms are split into "the ability to accept an existing problem and the ability to develop and implement solutions" (Duchek, 2020). The third phase of organizational resilience involves adapting to adverse conditions (through introspection, knowledge acquisition, innovative problem-solving skills and resource reallocation) and leveraging change for organizational advantage.

Digital human resource management and organizational resilience

A couple of studies have primarily examined how particular digital technologies or capabilities influence organizational resilience during the COVID-19 pandemic, frequently concentrating on specific elements like defensive measures (Ciasullo, Montera, & Douglas, 2022). Similarly, Robertson, Botha, Walker, Wordsworth, and Balzarova, (2022) showed that digital maturity greatly enhances an organization’s resilience. Regarding the research related to HRM, a few studies have underscored how E-HRM significantly boosts organizational flexibility (Al-Husseini & Al-Thabhawee, 2024). Organizational flexibility is primarily regarded as the ability to quickly adapt to changing external conditions (Chalab & Chraimukh, 2023), which is merely a component of the larger idea of organizational resilience. Other research overlooked the role of IT, electronic, or digital elements in HRM, instead demonstrating that strategic HRM influences the organization’s capacity for resilience (Georgescu et al., 2024). There is a noticeable research gap in this field, particularly concerning the impact of digital HRM on organizational resilience, highlighting the need for further investigation. This study explores sophisticated digital HRM practices and their relationship with organizational resilience in a developing economy context.

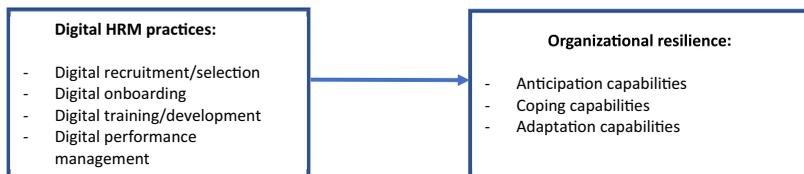
Conceptual model and study hypotheses

This work focuses on exploring how digital HRM practices contributes to developing organizational resilience for businesses across Bosnia and Herzegovina. In line with the primary goal, the conceptual model was crafted to provide a robust foundation for subsequent empirical analysis.

Figure 1 depicts the two core components of the conceptual framework being examined: digital HRM and its impact on elements of organizational resilience construct. In its role as an independent variable, digital HRM comprises four major practices: “digital recruitment/selection; digital onboarding; digital training/development; digital performance management” (Ahmić, 2023; Abu-Rumman, Al-Abbadi, & Alshawabkeh, 2020). Defined as the dependent variable, organizational resilience is composed of three dimensions identified as: “anticipation, coping and adaptation capabilities” (Duchek, 2020).

The research hypotheses were formulated based on the clearly outlined conceptual model, which illustrated the interrelationships among the variables and provided a clear basis for testing theoretical predictions and practical effects. The hypotheses are defined as:

- H1a. Digital HRM practices positively and significantly impacts anticipation capabilities.
- H1b. Digital HRM practices positively and significantly impacts coping capabilities.
- H1c. Digital HRM practices positively and significantly impacts adaptation capabilities.



Source: Authors’ work

Figure 1. Conceptual model

Methodology procedure

Sample description

This study adopted a quantitative methodology with a questionnaire to gather data from HR managers in companies across Bosnia and Herzegovina to investigate how digitalization is implemented across various functions in HR. Surveys were administered to HR managers via email and in-person visits, applying a convenience sampling method with nonrandom selection by choosing participants according to their accessibility and readiness. We distributed a total of 100 questionnaires and received 75 responses, resulting in a 75% response rate. The specifics of the HR managers taking part are detailed in [Table 1](#).

The majority of the sample was comprised of female HR managers, who constituted 63% of the total, compared to 37% for their male counterparts. Moreover, a significant portion of the respondents were middle-aged, with 44% of HR managers aged between 31 and 40 age range and 35% falling within the 41–50 age bracket. Within the analyzed sample, 14% consisted of young HR professionals aged 30 or younger, while only 7% were HR managers over the age of 50.

In terms of educational attainment, the majority of HR managers had university-level education, with 49% holding bachelor’s degrees, 35% earning master’s degrees and 16% possessing advanced vocational certifications. With respect to experience, nearly half (48%) had 11–20 years in HR, 39% had 1–10 years and 13% had over 21 years of experience.

Regarding the organizational features, [Table 2](#) provides the demographic profile of the organizations included in this study which reflects a diverse representation of firm sizes and business sectors, providing a well-rounded foundation for analysis.

With respect to firm size, nearly half of the sample (49%) comprised medium-sized enterprises with 51–249 employees, reflecting the prominence of this segment in the regional economy. Small enterprises, employing 1–49 workers, accounted for 20%, while large firms with over 250 employees made up a significant 31% of the sample, ensuring insights from organizations of varied operational scales.

Table 1. Features of the HR managers included in sample

Variables	Frequency (%)
<i>Gender</i>	
Male	37
Female	63
<i>Age brackets</i>	
30 or under	14
31–40	44
41–50	35
50 and above	7
<i>Number of years working in HR</i>	
1–10	39
11–20	48
Over 21 years	13
<i>Educational attainment</i>	
Postgraduate degree	35
Graduate degree	49
Highly qualified worker	16

Source: Authors’ work

Table 2. Features of the organizations

Variables	Frequency (%)
<i>Firm size (total workforce)</i>	
1–49	20
51–249	49
Over 250	31
Total	100 (n = 75)
<i>Business sector</i>	
Manufacturing sector	29
Commerce sector	38
Service sector	33
Total	100 (n = 75)

Source: Authors' work

On the subject of business sector distribution, the organizations belonged to the next three business sectors: 29% operated in the manufacturing sector, emphasizing production-oriented enterprises; 38% were active in commerce, showcasing trade and retail dynamics; and 33% belonged to the service sector, highlighting firms focused on nontangible offerings. This balanced sectoral composition enabled a nuanced exploration of digital HRM practices across diverse operational contexts.

Questionnaire items, measurement methods and the research instrument's reliability

The components of digital HRM practices – such as “digital recruitment/selection, digital onboarding, digital training/development and digital performance management” – were defined to match the study's objectives, drawing on research by [Puspita \(2024\)](#) and other related studies. A five-point Likert scale was employed to design these items, where a rating of 5 represents “strongly agree” and a rating of 1 signifies “strongly disagree.” Three items were part of the digital recruitment and selection scale, such as: “We employ cutting-edge AI-enhanced digital tools to enhance candidate sourcing and evaluation”; “AI-assisted digital platforms boost our effectiveness in matching applicants' skills to job specifications.” The scale for digital onboarding practices consisted of four aspects, including “Through AI-powered digital onboarding, the paperwork and formalities are completed quickly and efficiently”; “AI-enhanced digital onboarding ensures a thorough introduction to the company's policies and cultural values.” Furthermore, four elements were part of the digital training and development practices, comprising: “Employee skills and competencies are substantially enhanced through our AI-supported digital training programs”; “AI-supported digital training content is regularly updated by the organization to ensure it remains current.” Finally, three aspects were part of digital performance management, for example: “Our AI-assisted digital performance management system successfully monitors and evaluates employee performance”; “Performance feedback tools are digital, user-friendly, and enhance understanding.”

The components of the organizational resilience scale – anticipation, coping and adaptation capabilities – were formulated and refined drawing from the measurement tool created by [Ahmić \(2022\)](#), which encompassed totally 16 items. Using a 5-point Likert scale, all items were assessed with numerical values representing (1 – strongly disagree, 5 – strongly agree). The scale for anticipation capabilities comprised six items, such as: “We have crafted detailed formal plans for responding to potential dangers and risks”; “Our

company is capable of identifying and anticipating critical future developments, potential crises, and their impacts.” Four items were part of the coping capabilities scale, including “We swiftly ensure business continuity by keeping the workforce and stakeholders informed on handling emerging issues”; “During a crisis, we successfully strike a balance between our established formal organizational structure and the integration of the crisis management and communications team.” The third subdimension – adaptation capabilities, included six items, for instance: “Our firm prioritizes sharing knowledge with employees on how to respond to sudden challenges”; “If key individuals are unavailable, there are always others ready to step in and effectively fill their roles.”

All scales’ reliability was evaluated by calculating Cronbach’s alpha, which demonstrated that all observed dimensions (the four elements of digital HRM and three aspects of organizational resilience) had alpha values surpassing 0.7., reflecting exceptional reliability and solid internal consistency throughout all parts (Table 3).

Testing the primary research hypothesis

Prior to applying multiple regression analysis to test the hypotheses, a correlation analysis was completed. Notable correlations between the digital HRM practices (as independent variables) and dependent variables of organizational resilience were revealed by this analysis. The coefficients, ranging from 0.262 to 0.484, demonstrated significance at the 1% and 5% thresholds.

In addition, multiple regression analysis was applied to investigate the effect of practices of digital HRM on organizational resilience elements, focusing on testing hypotheses *H1a*, *H1b* and *H1c*. In this connection, we designed three multiple regression models, incorporating all four elements of digital HRM practices serving as the independent variables in our analysis: “digital recruitment/selection; digital onboarding; digital training/development; and digital performance management,” and every dependent variable was modeled separately, with each model given a specific designation: “anticipation capabilities; coping capabilities; and adaptation capabilities.”

The analysis in Table 4 clearly illustrates the significant impact of digital HRM practices on organizational resilience, as indicated by the results in all three models of multiple regression approach.

Firstly, the initial multiple regression model revealed that digital HRM practices significantly influence anticipation capabilities, explaining 33.8% of the variance ($R^2 = 0.338$). The strongest predictors were digital performance management ($\beta = 0.47$) and digital training/development ($\beta = 0.44$) at a 1% confidence level, followed by digital recruitment/selection ($\beta = 0.30$) and digital onboarding ($\beta = 0.27$) at a 5% confidence level. These

Table 3. Reliability of data

Variables	Count of items	Cronbach’s alpha
Digital recruiting/selection	3	0.901
Digital onboarding	4	0.829
Digital training and development	4	0.857
Digital performance management	3	0.910
Anticipation capabilities	6	0.876
Coping capabilities	4	0.840
Adaptation capabilities	6	0.858

Source: Authors’ work

Table 4. The findings from the regression analysis on how digital HRM practices impact organizational resilience

Models and variables	Organizational resilience		
	Anticipation capabilities	Coping capabilities	Adaptation capabilities
<i>R</i>	0.585	0.552	0.511
<i>R</i> ²	0.338	0.304	0.261
df	75	75	75
Sig.	0.000	0.001	0.001
	Coef.	Coef.	Coef.
Constant	1.217	1.423	2.289
Digital recruiting/selection	0.305*	0.220*	0.232*
Digital onboarding	0.271*	0.331**	0.285*
Digital training and development	0.443**	0.452**	0.344**
Digital performance management	0.470**	0.390**	0.403**

Notes: *n* = 75; *statistically significant at 5%; **statistically significant at 1%

Source: Authors' work

findings underscore the pivotal role of digital HRM in enhancing an organization's ability to foresee and prepare for future challenges.

The second model in the regression series detailed that digital HRM practices significantly impact coping capabilities, explaining 30.4% of the variance ($R^2 = 0.304$). The strongest predictor was digital training/development ($\beta = 0.45$), followed by digital performance management ($\beta = 0.39$), and digital onboarding ($\beta = 0.33$) which were significant at the 1% level, while digital recruitment/selection ($\beta = 0.22$) was significant at the 5% level.

For additional insights, the third regression model uncovered that digital HRM practices significantly influence adaptation capabilities, explaining 26.1% of the variance ($R^2 = 0.261$). The strongest predictors were digital performance management ($\beta = 0.40$) and digital training/development ($\beta = 0.34$) which were significant at the 1% level, followed by digital onboarding ($\beta = 0.28$) and digital recruitment/selection ($\beta = 0.23$) that were significant at the 5% level.

In summary, digital HRM practices exert a substantial and positive influence on all three aspects of organizational resilience ("anticipation capabilities; coping capabilities; and adaptation capabilities"). As a result, hypotheses *H1a*, *H1b* and *H1c* are confirmed in their entirety.

Discussion and conclusion

This study aimed to assess whether digital HRM practices have a meaningful and favorable impact on organizational resilience. Regression analysis displayed that digital HRM practices exert a significant and favorable influence on organizational resilience and its three component areas "anticipation capabilities, coping capabilities and adaptation capabilities." Therefore, embracing digital HRM practices is key to building organizational resilience, allowing for swift adaptation and smarter, data-driven decisions in times of disruption. It also nurtures an engaged and agile workforce, ready to navigate challenges with well-being and continuous growth at the forefront. Although previous research has explored the role of

e-HRM in fostering organizational flexibility (Al-Husseini & Al-Thabhawee, 2024) and examined the impact of strategic HRM on organizational resilience (Georgescu et al., 2024), the potential of AI-assisted digital HRM in enhancing resilience – specifically through anticipation, coping and adaptation capabilities – hasn't been fully addressed and explored. Two digital HRM practices, AI-supported digital performance management and digital training/development showed the greatest impact on the anticipation capabilities by offering tailored, ongoing skill enhancement, real-time tracking of performance and decisions grounded in data, cultivating in this way a workforce that is more skilled, engaged and adaptable. In conjunction with digital onboarding and digital recruiting/selection, these AI-enhanced digital HRM practices together improve proactive monitoring, detecting future developments, maintaining stakeholder contacts and crafting detailed formal plans for responding to potential dangers and risks. More specifically, AI-assisted digital recruitment and selection simplify and significantly enhance the identification and acquisition of candidates with the precise skills and expertise required to meet both immediate organizational needs and future challenges. This is achieved through using AI-powered algorithms to analyze data, forecast workforce demands, and equip employees to proactively identify trends and disruptions. Meanwhile, AI-assisted onboarding surpasses traditional integration by providing new hires with real-time access to predictive analytics, personalized learning modules and dynamic dashboards, while simultaneously aligning them with organizational goals, risk management protocols and adaptive processes, thereby fostering a culture of vigilance and readiness to navigate market trends and potential risks. Furthermore, AI-enhanced digital recruitment/selection and AI-assisted onboarding together contribute to crafting detailed formal risks plans by aligning the organization's talent acquisition and readiness processes with predictive analytics and risk management strategies. Recruitment identifies candidates skilled in analytical thinking and crisis management, while onboarding equips them with real-time data, simulations and organizational risk frameworks, enabling teams to collaboratively develop comprehensive, actionable plans for addressing potential dangers and risks.

Regarding the coping capabilities, AI-supported digital training/development had the highest impact on coping capabilities since it is crucial in enabling employees with the necessary skills to manage and adapt during times of crisis or change. Ongoing learning and upskilling equip the workforce to stay adaptable, skilled, and resilient, directly strengthening their ability to manage unforeseen challenges with effectiveness. This aligns partly with earlier research findings, which emphasized that strategic HRM practices, especially employee training and development, are crucial for enhancing an organization's ability to cope with obstacles and shifts in its dynamic environment (Kooij & Boon, 2018). Further, digital performance management represents the second most influential factor on the coping capabilities. It enables real-time monitoring and management of employee performance, crucial during disruptions, by offering data to identify stress points, allocate resources and maintain productivity, thereby enhancing the organization's ability to swiftly adapt and cope with challenges. There is also significant and favorable impact of digital onboarding and digital recruitment/selection on the coping capabilities. AI-enhanced digital onboarding ensures that new employees are quickly integrated and capable of contributing during challenging times, while digital recruiting/selection focuses more on the long-term resilience rather than immediate crisis management. In relation to adaptation capabilities, AI-assisted digital performance management affected the most adaptation capabilities by providing real-time data to identify stress points, allocate resources, and maintain productivity, thereby enhancing the organization's ability to swiftly adapt to diverse challenges. Thus, it is of a great importance to use technology to streamline processes, deliver continuous data-driven

insights, and foster real-time feedback, goal alignment and proactive improvement, all critical for swift organizational adjustment.

This research deepens the comprehension of digital HRM practices by offering empirical insights into their pivotal role in enhancing organizational resilience, particularly in how they influence anticipation, coping, and adaptation abilities in companies within developing economies. Regarding practical implications, this research underscores that AI-supported digital HRM practices represent a strategic tool for building resilience (organization's capacity to anticipate risks, sustain operations during crises and adapt to evolving market demands) in volatile environments, particularly in emerging economies. More specifically, by adopting digital recruitment and selection tools, companies can efficiently source and evaluate talent, ensuring the right skillsets are in place to manage disruptions. Digital onboarding platforms enable rapid and thorough integration of employees, fostering alignment with organizational values and preparedness for change. Digital training programs enhance employee competencies with up-to-date skills, ensuring adaptability to new challenges. Finally, digital performance management systems provide real-time feedback and monitoring, enabling swift course corrections and optimal workforce performance.

Potential limitations and future study directions

The potential limitation includes the relatively modest sample size and scope because the data collection was limited to 75 HRM professionals in a single region (Bosnia and Herzegovina), which might not fully represent the breadth of experiences and practices within the diverse landscape of organizational structures.

For future research, it would be valuable to examine longitudinal studies to assess how digital HRM practices influence organizational resilience over extended periods and across various industries and cultural settings to assess the broader applicability of the findings. Additionally, exploring moderating factors, like organizational size, organizational culture, regulatory environment and industry context, could reveal important nuances in how digital HRM influences resilience across different organizational types. Moreover, future studies should delve into which specific digital tools and technologies most effectively enhance resilience and explore the impact of leadership and employee involvement on the successful adoption of these practices. Comparative research between organizations in emerging and developed markets could also shed light on how these practices should be adapted to different economic contexts.

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Further reading

Asgari, E., & Nasr, M. A. (2022). Revisiting the resource-based view: Emerging insights and future research directions. *Strategic Management Review*, 12(2), 45–63.

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