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**Milka Rimac Bilušić, MA spec.**

University of Zagreb, Faculty of Economics  
 and Business  
 Zagreb, Croatia  
 mrimacbil@efzg.hr

**Nina Pološki Vokić, PhD**

University of Zagreb, Faculty of Economics  
 and Business  
 Zagreb, Croatia  
 npoloski@efzg.hr

## **THE AGE OF HRM 4.0 – IS DIGITALIZATION OF HRM REQUIRED FOR THE STRATEGIC HUMAN RESOURCE MANAGEMENT ORIENTATION?**

### **Abstract:**

Strategic human resource management orientation (SHRM), as the company's philosophy of aligning human resource management (HRM) policies and practices with an organizational strategy for maximizing organizational results, is considered the highest level of the company's HRM development according to the contemporary HRM theory. At the same time, one of the trends in HRM is the digitalization of HRM activities, following the global trend of adoption of digital tools for increasing individual and organizational efficiency and effectiveness, leading to the age of HRM 4.0. However, it is interesting to reveal whether there is a relationship between HRM digitalization and SHRM orientation. Consequently, we developed two research questions: (1) Are digital HRM practices positively related to the SHRM orientation? and (2) Are some digital HRM practices more relevant for the SHRM orientation than others?

For providing empirically based answers to research questions, we utilized the CRANET 2021 dataset, covering 4495 organizations with more than 200 employees from 38 countries worldwide. We used nine indicators revealing the existence of digital HRM (manager self-service, employee self-service, HRIS, algorithm-based HRM, HR analytics, telework, digital learning, social media recruitment, social media selection) and five indicators for determining the SHRM orientation (HR manager's membership in the management board or equivalent; involvement of HR manager in the development of business strategy; existence of written HRM strategy; HR to employee ratio, the level of HR department performance evaluation) from the CRANET database. SHRM orientation was determined using K-Means cluster analysis, and relationships between variables were analysed using correlation and multiple logistic regression analysis.

The correlation analysis revealed that all indicators of digitalization of HRM processes have a positive and a significant relationship with SHRM orientation, implying that digital HRM practices are relevant for the SHRM orientation. The results of logistic regression indicated that the usage of manager self-service, algorithm-based HRM, HR analytics, telework, digital learning and social media selection increase the probability of organizations' SHRM orientation more than other explored indicators. The HR analytics, digital learning and social media selection were identified as the most relevant digital HRM practices for an organization's SHRM orientation.

Findings imply that HRM needs to pursue the global trend of digitalization to have the strategic leverage. To be on the optimal level of HRM development, organizations must not only employ their digital HRM assets to assure the maximum functionality for their internal customers, but keep the pace with technological advancements.

**Keywords:** strategic HRM, strategic HRM orientation (SHRM), digitalization of HRM, digital HRM practices, CRANET

# 1. INTRODUCTION

Strategic human resource management (SHRM), as the alignment of human resource management (HRM) goals, strategies and activities with organizational strategy to achieve organizational goals, is considered to be the ultimate stage in the evolution of HRM according to the contemporary theory (Pološki Vokić, 2016). Namely, the contribution of well-designed and implemented HRM activities to organizational performance has been documented numerous times (e.g., Collins & Clark, 2003; Jackson, Schuler, & Jiang, 2014; Schuler & Jackson, 2005). Simply, HRM combined with strategic orientation should be able to achieve strategic goals better (Chow, Teo, & Chew, 2013).

At the same time, technological development and information and communications technology (ICT), as components of the modern business environment, influenced the development of many business areas, including the HRM function which is “not ‘spared’ by new ways of performing activities and tasks” (Berber, Đorđević, & Milanović, 2018, p. 22). Nowadays, there is almost no HRM activity that has not been digitalized, leading to the age of HRM 4.0. HRM digitalization started with the digitalization of HR administration, data collection and analysis (on a higher level enabled by human resource information system – HRIS), HR planning and job analysis applications, internet recruitment, and e-learning. It continued with online testing and video interviewing, online performance goal setting and evaluation, and manager and employee self-service. Today, it is heading towards the algorithm-based HRM and the usage of artificial intelligence (AI) in HRM.

On the one hand, the SHRM literature emphasizes the importance of the integration between HRM and strategy to attain superior performance (Chow et al., 2013), and on the other hand digital economy has become a matter for HRM (Febrianti & Jufri, 2022). Therefore, it is interesting to analyse whether a digitalization of HRM is an important element of SHRM orientation. As Lepak and Snell (1998, p. 229) indicated two decades ago, “as firms continue to push the limits of IT to achieve organizational objectives, we would encourage SHRM researchers to examine how IT can function not only as a cost-reducing tool but as an asset that helps better control and coordination across organizational boundaries”. Similarly, Meijerink, Boons, Keegan and Marler (2021) recently suggested that future research should answer the question of what will happen to organizations that are still in the process of becoming digital. Consequently, we have set two research questions as follows: RQ1 = Are digital HRM practices positively related to the SHRM orientation? and RQ2 = Are some digital HRM practices more relevant for the SHRM orientation than others?

Moreover, studies on the consequences of digital HRM are limited and mainly focused on its influence on users’ attitudes and behaviours or on HRM-related outcomes such as HRM service quality and HRM effectiveness (Zhou, Liu, Chang, & Wang, 2021). Studies on the role of digital HRM for the SHRM orientation are even scarcer. Therefore, we strive to fill this research gap. Answers to our research questions are rooted in the theory of comprehensive SHRM perspective that integrates the best from universalistic, contingency, configurational and contextual approach to SHRM (see Martín-Alcázar, Romero-Fernández, & Sánchez-Gardey, 2005). Namely, Martín-Alcázar et al. (2005) suggest that the integrative explanation of SHRM could be useful as a reference framework for future research in the field of SHRM as it could foster the analysis of concrete HRM topics, such as certain policies or practices, in this case digital HRM practices.

In the theoretical background part of our paper, we shortly define concepts of SHRM orientation and HRM digitalization, as well as present the existing reflections and findings on the relationship between digital HRM and SHRM. In the empirical part of our paper, we explore the aforementioned relationship using variables from the CRANET 2021 database.

## 2. THEORETICAL BACKGROUND

### 2.1. SHRM orientation

According to Marler (2009), there are two overarching strategic perspectives related to SHRM. The first perspective indicates that SHRM contributes to an organizational competitive advantage when it fits or is in vertical alignment with firm-level business strategies – achieving a competitive advantage is contingent on whether HRM policies and practices fit the firm’s business strategy. The second perspective is based on the well-known Resource-Based View (RBV) which focuses on strategic resources and capabilities within the firm as sources of competitive advantage (see Barney 1991; Prahalad & Hamel, 1994) – the HR function has the potential to produce human resources and organizational capabilities critical to achieving competitive advantage.

As Chow et al. (2013) explain, not only that an organization’s strategic orientation is a vehicle that transforms the value of human capital into superior firm performance, but it also plays a critical role in linking HRM to performance. Consequently, the SHRM orientation encompasses three aspects needed for achieving coordination and integration between HRM systems and organizational goals achievement. It usually starts with HRM practices being designed to be strategic, meaning that they are critical for organizational outcomes. According to Wright and McMahan (1992), HRM practices are strategic when the pattern of planned human resource deployments and activities enables an organization to achieve its goals. The second aspect implies that HR professionals are becoming more aware and focused on strategic issues (Bissola & Imperatori, 2014). This requires from them to acquire new skills and capabilities – to master the theory and practice of forming and implementing strategy, in other words, to possess the knowledge and skills that enable them to engage in discussions of vision, values, purpose and intent (Ulrich, 1998). The final aspect indicates the strategic role of the HR department in the company, referring to its mandatory participation in strategic decision-making. As strategic

partners, as Ulrich named this potential role of the HRM function back in 1997 (see Ulrich, 1997; 1998), HR professionals have ‘a seat at the table’ when any kind of business decision is made (Jackson et al., 2014).

Unlike some topics (e.g., total quality management, business process reengineering) that have obtained faddish status in HRM over the years, SHRM has achieved staying power (Lengnick-Hall, Lengnick-Hall, Andrade, & Drake, 2009). Environmental turbulence increased the importance of SHRM, and the HR department is now considered to be a potent powerhouse for strategic management (Azmi, 2014). Moreover, SHRM orientation is particularly important for the organizational success (Karoliny, Bálint, & Tiszberge, 2015) in the time of changes in numerous HRM areas caused by strong digitalization and accelerated development of technology.

## 2.2. HRM digitalization

HRM digitalization refers to the usage of digital technologies for supporting or conducting HRM activities. Lepak and Snell (1998) were the first to write about the role and impact of IT on structural integration within HRM, and developed their famous three-part typology: (1) operational aspect – IT streamlining HRM operations and alleviating much of the administrative burden, (2) relational aspect – IT increasing the timeliness and service levels by providing managers and employees with remote access to HR databases and information, and increasing their ability to connect with other parts of the corporation as well as outside service providers, and (3) transformational aspect – IT enabling people to communicate across geographic boundaries and share information, eliminating barriers of time and space. Afterwards, researchers (e.g., Berber et al., 2018; Bissola & Imperatori, 2014; Parry & Strohmeier, 2014; Ruël, Bondarouk, & Looise, 2004; Strohmeier & Kabst, 2014) used this typology as the basis for writing about different types of HRM processes that can be ICT-based, resulting in the terminology of operational, relational and transformational e-HRM<sup>1</sup>.

Today, many transactional (processing, controlling) and transformational (motivational, developmental) digital HRM solutions are employed. Transactional activities supported by digital HRM are for instance: (1) data administration, which consists of collecting (e.g., attendance registers, electronic work diaries), recording (e.g., personal data, work performance data), computing (e.g., payroll/benefits processing) and analysing data (e.g., HR analytics); (2) HR planning (e.g., workforce modelling), (3) job analysis (e.g., job analysis applications), and (4) recruitment (e.g., online recruitment through specialized and organizational websites, social media platforms, online applications). Transformational segments of digital HRM refer usually to the following HRM areas: (1) selection (e.g., online testing, video interviewing, chatbot interviewing, applicant tracking system, algorithmic selection decisions), (2) performance management (e.g., online performance goal setting, online performance evaluation, digital career management systems, digital talent management systems, onboarding chatbots), (3) training and development (e.g., video learning, online learning, e-learning, online assessment), (4) work design (e.g., algorithmic work distribution, remote work, online communication and collaboration, manager self-service, employee self-service), (5) internal communication (e.g., digital information provision, electronic newsletters, Intranet), and (6) employee well-being (e.g., online attitudes assessment, online psychological support, online workout programs).

As already revealed a decade ago (e.g., Parry, 2011, Parry & Tyson, 2010), a large proportion of transactional HRM activities is delivered exclusively or greatly by software solutions rather than HR administrators, making the transactional HRM ‘technology-intensive’ compared to its ‘labour-intensive’ characteristic from the past. Nowadays, algorithmic HRM and the usage of big data and AI in HRM (see Kurek, 2021; Meijerink et al., 2021) make the transformational HRM even more ‘technology-intensive’. Eventually, all this leads to either the reduction of the number of employees in HR departments or to the transformation of HR department’s role into a strategic partner one.

Abovementioned applications of HRM digital solutions imply that organizational investments in the digitalization of HRM processes could be grouped into efficiency- and effectiveness-based ones. Firstly, ICT was used for accelerating, simplifying and monitoring HRM activities, reducing HR administration costs and errors, as well as improving internal information sharing. Moreover, soon it became evident that the usage of ICT in HRM results in a better quality of services provided, improved work collaboration and smarter HRM decisions. Precisely, digital HRM solutions reduce administrative burden, increase the speed of realization, optimize procedures and lower costs (e.g., Berber et al., 2018; Strohmeier & Kabst, 2014). They also support HRM operations which leads to productivity increases (e.g., Berber et al., 2018; Parry, 2011; Parry & Tyson, 2010; Strohmeier & Kabst, 2014) and generates insights into crucial HRM issues that improve the quality of HR-related decisions (e.g., Bissola & Imperatori, 2014; Meijerink et al., 2021; Strohmeier & Kabst, 2014; Zhou et al., 2021). Positive outcomes of the adoption of digital HRM systems are as well increased transparency of HRM policies and greater trust in the HR department (e.g., Bissola & Imperatori, 2014; Burbach & Royle, 2014). As the final outcome, the digitalization of HRM processes supports organizational strategy, and consequently has an effect on organizational performance (e.g., Bondarouk & Ruël, 2013; Febrianti & Jufri, 2022; Parry & Tyson, 2010; Parry & Strohmeier, 2014; Ruël, Bondarouk, & Van der Velde, 2007; Strohmeier & Kabst, 2014; Zhou et al., 2021). It can be summarized that “HRM digitalization has the potential to simplify and enrich, steer and support, and shorten and speed up the pursuit of organizational and employee goal accomplishment” (Bondarouk, Parry, & Furtmueller, 2017, p. 114).

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<sup>1</sup> Although the term e-HRM is largely used as a synonym for digital HRM, the concept of digital HRM is broader as it refers to any kind of digitalization of HRM, while e-HRM involves the use of web-based technologies for providing services regarding HRM (Berber et al., 2018).

### **2.3. HRM digitalization for the strategic leverage of HRM**

As already mentioned, studies relating digitalization of HRM to SHRM are rare, especially empirical and quantitative ones, and have not yet provided solid evidence that digital HRM solutions have a part in the SHRM orientation of an organization. For example, upon the literature, Ruël et al. (2004) highlight that improving HRM's strategic orientation is one of the three types of e-HRM goals, together with improving administration and efficiency, and improving client orientation and service. However, after exploring five large international companies they concluded that links between the e-HRM content and the overall HRM strategy are not clear. Nevertheless, authors stressed that the most important e-HRM effect seemed to be the strategic integration of HRM with the company strategy, structure and culture.

Afterwards, Ruël et al. (2007) analysed the relationship between e-HRM assessment and HRM effectiveness through a quantitative study conducted in the Ministry of Internal Affairs of the Netherlands. Their e-HRM assessment included job relevance, quality of applications and ease of use, while HRM effectiveness was measured by more efficient HRM processes, higher level of service delivery and better strategic contribution. The results showed that the quality aspect of an e-HRM application has a positive and significant effect on HRM effectiveness, which according to authors, will lead to decreased costs, improved HRM service level and the elevation of the HR department to the role of a strategic partner. However, this study has been conducted in one public organization, and it is debatable if HRM effectiveness can be used as a proxy of SHRM orientation.

By composing a theoretical model, Marler (2009) concluded that a primarily administrative HR function is unlikely to become more strategic with the addition of e-HRM. However, only one year after, using ten case studies from a range of UK organisations, Parry and Tyson (2010) provided some evidence for the strategic impact of e-HRM through enabling HRM to support the organisation in achieving its strategic goals by improving efficiency and effectiveness. As evidence of the transformational impact of e-HRM, they offer the finding that HR staff had more time and information to support the organisation in achieving its organizational strategy when e-HRM was used. One year after, Parry (2011), using 2003 CRANET data, supported the hypothesis that organizations in which the HR function played a more strategic role would be more likely to implement e-HRM. However, this was supported for the 'use of e-HRM' but not for the 'sophistication of e-HRM'. Based on previous research, she argues that the use of e-HRM has been linked with a transformation of the HR function into a more strategic one (as it enables spending more time on delivering the organizational strategy by changing the focus from administrative to HRM activities that have a strategic relevance), but her empirical data was not suitable for testing this premise.

Finally, results from the exploratory study conducted by Bondarouk and Ruël (2013) in a governmental organization indicated that e-HRM alone is not sufficient to transform the HR function into a strategic partner. The research revealed that e-HRM could lead to strategic reorientation if certain conditions such as the integration of modules and the willingness and readiness of users to acquire new skills are met. However, the research was conducted as a single case study in which HRIS has been implemented only 15 months before the analysis. Additionally, the strategic orientation was measured only by the perception of HR roles by different employee groups, not by any objective SHRM indicator.

Presented findings signal that there is still much to be revealed about the role of digitalized HRM processes in the SHRM orientation of an organization, which encouraged us to empirically assess the issue on a large-scale data set.

## **3. METHODOLOGY**

### **3.1. Data and sample**

In our analysis we used global data from the 2021 CRANET research. The CRANET research is the largest and most representative research of HRM practices in the world. It is a multi-country, multi-time-point survey undertaken regularly over the past 30 years by a collaborative network of scholars from over 40 countries (Parry, Farndale, Brewster, & Morley, 2021). It analyses developments in HRM in a national, cross-national, and quasi-longitudinal way to extend the range of internationally comparable evidence about policies and practices in the field (Parry, Stavrou-Costea, & Morley, 2011). The CRANET research enables the comparison of HRM policies and practices in a large number of countries across the globe and allows the examination of trends and changes in HRM over the years (Lazarova, Morley, & Tyson, 2008).

In the CRANET research, a unit of analysis is an organization, and the highest-positioned individual in the HR department is responsible for answering the questionnaire. The CRANET questionnaire inquires into HRM policies and practices through a set of common questions and covers all important areas – general HRM characteristics, resourcing practices, employee development, compensation and benefits, and employee relations and communication. For this analysis, parts of the questionnaire related to the digital HRM and SHRM orientation were used.

Our analysis includes 4,495 organizations with more than 200 employees from 38 countries worldwide. 67.4% of organizations in the sample are from the private sector, 20.5% from the public sector, 4.8% from the non-for-profit sector and 3.5% with mixed ownership. Regarding the number of employees, 37.8% of organizations in the sample have between 200 and 500 employees, 22.5% from 500 to 1000 employees, 18.7% from 1000 to 2500 employees, and 21.0% have more than 2500 employees.

### **3.2. Measures**

*Digital HRM indicators.* To reveal the existence of digital HRM, nine indicators from the CRANET database were used: (1) usage of manager self-service, (2) usage of employee self-service, (3) usage of HRIS, (4) usage of algorithm-based

HRM, (5) usage of HR analytics, (6) presence of telework, (7) existence of digital learning, (8) social media recruitment and (9) social media selection. All digital HRM variables were ordinal (variables 1 to 5 and variable 7 were measured on a scale from 0 = 'not at all used' to 3 = 'used to a very great extent'; variable 6 was measured on a scale from 0 = 'not used' to 4 = 'used for more than 50% of employees; variables 8 and 9 were recoded to the scale from 0 = 'not used for any group of employees' to 2 = 'used for both managers/professionals and clericals').

*SHRM orientation indicators.* For the analysis, five variables were extracted from the CRANET database as indicators of an organization's SHRM orientation: (1) membership of HR manager in the management board or equivalent, (2) involvement of HR manager in the development of business strategy, (3) existence of written HRM strategy, (4) HR to employee ratio, and (5) existence of HR department performance evaluation. All SHRM variables were binary variables (0 = not the case / not present, 1 = the case / present), including the HR to employee ratio (1 = if the value was 1% or higher).

### 3.3. Data analysis

The first step of the analysis was the cluster analysis, which was performed by using SHRM indicators to differentiate two groups of organizations according to their SHRM orientation. K-means clustering was used, as one of the most common non-hierarchical, partitioning techniques which attempts to minimize the within-cluster sums-of-squares error and finds clusters that are externally isolated and internally cohesive (Cormack, 1971; Steinley & Brusco, 2008). Cluster analysis resulted in 56.3% of organizations in cluster 1 (organizations which do not have the SHRM orientation) and 43.7% of organizations in cluster 2 (organizations which do have the SHRM orientation). Clusters were used as a binary variable of SHRM orientation. Next, correlation analysis (Spearman's rank correlation coefficients) and multiple logistic regression were performed for revealing the relationship between various digital HRM indicators and the SHRM orientation. Statistical analysis was performed with IBM SPSS Statistics 25.

## 4. RESULTS

Table 1 presents correlations between nine indicators of digital HRM and the existence of SHRM orientation within the organization.

**Table 1:** Correlations between digital HRM practices and SHRM orientation

	1	2	3	4	5	6	7	8	9	10
1. Manager self-service		.658**	.427**	.408**	.390**	.244**	.319**	.080**	.144**	.247**
2. Employee self-service	.658**		.440**	.380**	.359**	.282**	.345**	.094**	.155**	.229**
3. HRIS	.427**	.440**		.394**	.504**	.221**	.318**	.036*	.127**	.204**
4. Algorithm-based HRM	.408**	.380**	.394**		.571**	.163**	.290**	-.023	.226**	.224**
5. HR analytics	.390**	.359**	.504**	.571**		.164**	.328**	.004	.188**	.261**
6. Telework	.244**	.282**	.221**	.163**	.164**		.340**	.132**	.105**	.237**
7. Digital learning	.319**	.345**	.318**	.290**	.328**	.340**		.122**	.156**	.281**
8. Social media recruitment	.080**	.094**	.036*	-.023	.004	.132**	.122**		.198**	.077**
9. Social media selection	.144**	.155**	.127**	.226**	.188**	.105**	.156**	.198**		.157**
10. SHRM orientation	.247**	.229**	.204**	.224**	.261**	.237**	.281**	.077**	.157**	

Note: \*\* p < .01; \* p < .05

The correlation analysis revealed that all indicators of digital HRM processes are positively and significantly related with the existence of SHRM orientation. In other words, digital HRM practices are more present in organizations with the SHRM orientation compared to organizations without it.

To investigate which digital HRM practices predict the SHRM orientation better, we conducted a multiple logistic regression, and the results are presented in table 2.

**Table 2:** Logistic regression analysis of digital HRM practices as predictors of SHRM orientation

Predictors	$\beta$ (SE)	Wald	Exp ( $\beta$ )	Model summary	
Constant	-1.08 (0.12)	13.387	0.341**	Omnibus test of model coefficients – $\chi^2$ , df	498.62**, 9
Manager self-service	0.22 (0.06)	0.877	1.247**	Hosmer and Lemeshow test – $\chi^2$ , df	14.69, 8
Employee self-service	0.06 (0.06)	1.281	1.057	Cox and Snell $R^2$	0.17
HRIS	0.06 (0.05)	8.283	1.061	Nagelkerke $R^2$	0.24
Algorithm-based HRM	0.19 (0.07)	36.297	1.214**	-2 log likelihood	2679.70
HR analytics	0.36 (0.06)	39.779	1.433**		
Telework	0.24 (0.04)	40.716	1.277**		
Digital learning	0.32 (0.05)	1.128	1.379**		
Social media recruitment	-0.06 (0.06)	15.256	0.942		

Social media selection	0.28 (0.07)	80.276	1.318**
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Note: \*\*  $p < .01$

The Omnibus test of model coefficients and the Hosmer and Lemeshow test indicate a good model fit. The Omnibus test of model coefficients indicates that the logistic regression model performed to determine the effects of various HRM digitalization indicators on the likelihood that an organization has a SHRM orientation was statistically significant ( $\chi^2 = 498.68$ ;  $df = 8$ ;  $p < .01$ ). The Hosmer and Lemeshow test that assesses whether predictions made by the model fit with observed group memberships was insignificant ( $\chi^2 = 14.69$ ,  $df = 8$ ;  $p = .066$ ), which indicates that the data fit the model well. Cox and Snell  $R^2$  and Nagelkerke  $R^2$  reveal that the model is explaining between 17.0% and 24.5% of the variance in the SHRM orientation. Finally, the -2 log likelihood for the model is high (2679.70), which as well indicates that the model fits a dataset.

Results of the logistic regression, precisely significant odds ratio values ( $1.247 < \text{Exp}(\beta) < 1.433$   $p < .01$ ), are demonstrating that manager self-service, algorithm-based HRM, HR analytics, telework, digital learning and social media selection predict an organization's SHRM orientation more than other digital HRM indicators explored. When looking at odds ratios, it is visible that the most relevant digital HRM practices for the SHRM orientation are HR analytics ( $\text{Exp}(\beta) = 1.433$ ), digital learning ( $\text{Exp}(\beta) = 1.379$ ) and social media selection ( $\text{Exp}(\beta) = 1.318$ ). In other words, organizations which use HR analytics to a greater extent have 43.3% more probability of having a SHRM orientation, those that use digital learning to a greater extent have 37.9% more probability of having a SHRM orientation and those that use social media selection for selecting a wider range of employees have 31.8% more probability of having a SHRM orientation.

## 5. DISCUSSION

### 5.1. Theoretical implications

Previous research suggested that the use of digital HRM can help the HR function to increase its value by becoming more strategic (e.g., Bondarouk & Ruël, 2013; Parry, 2011; Parry & Tyson, 2010, Ruël et al., 2004; Ruël et al., 2007). However, the empirical evidence on the relationship between digital HRM practices and SHRM orientation is still inadequate, as emphasized by Boundarouk et al. (2017). Moreover, there is a lack of quantitative and larger-scale empirical research in the field. Finally, previous studies showed that the digitalization of HRM could have transformational outcomes (e.g., Parry 2011; Parry & Tyson, 2010; Ruël et al., 2007), but opposite conclusions are as well present in the literature (e.g., Boundarouk & Ruël, 2013; Marler, 2009; Ruël et al., 2004). All this raises the need for further exploration of the topic. Our research therefore adds to the discussion by empirically positioning digital HRM practices as an important element of SHRM orientation. Our results, based on a large-scale global data set, revealed that each digital HRM practice explored (manager self-service, employee self-service, HRIS, algorithm-based HRM, HR analytics, telework, digital learning, social media recruitment, social media selection) is positively and significantly related with an organization's SHRM orientation (RQ1).

Moreover, to the best of our knowledge, up to date there were no studies which compare the contribution of various digital HRM practices to an organization's SHRM orientation. Our study revealed that six out of nine practices explored – manager self-service, algorithm-based HRM, HR analytics, telework, digital learning and social media selection – are more relevant for having a SHRM orientation (RQ2). Organizations which have those practices have a higher probability of strategically oriented HRM.

Three practices – HR analytics, digital learning and social media selection – turned to be the most relevant for the SHRM orientation. The revealed importance of HR analytics is in line with the newest research on HR professionals' competencies (see Ulrich, Ulrich, Wilson Burns, & Wright, 2021). Namely, HR professionals are nowadays required to make decisions and solve problems based on the most relevant information. HR analytics, as the supreme stage of the transactional HRM activity of data manipulation, is therefore indispensable. Next, in the last few years, and additionally accelerated by the COVID-19 pandemic, the usage of digital tools for selection and learning is increasing. As accentuated by Kurek (2021), digital HRM technologies support organizations to manage vital HRM activities, such as selection and learning, more objectively and easily.

### 5.2. Managerial implications

Given the rapid development of technology, organizations must be informed about the importance of HRM digitalization for the positioning of HR function as a strategic partner. The findings of our research indicate that organizations need to pursue the latest trends in the field of digital HRM to obtain or retain the SHRM orientation. However, to enhance the SHRM orientation through the digitalization of HRM processes, organizations must be ready for digital HRM solutions, and managers and employees should acquire new technical and analytical skills (e.g., Bondarouk & Ruël, 2013; Parry, 2011). Therefore, the role of HR department is to foster the HRM digitalization, which includes training managers and employees to use e-HRM solutions, encouraging them to engage in further HRM digitalization, and ensuring that HRM digitalization processes are aligned with organizational needs. With such a comprehensive approach, HRM digitalization will have a transformational impact, observable through the existence of SHRM orientation and its gains.

Furthermore, our results imply which HRM digitalization processes organizations should focus on to achieve the maximal SHRM orientation. Manager self-service, algorithm-based HRM, HR analytics, telework, digital learning and

social media selection are the best options to begin with while digitalizing HRM practices, as those practices are the most relevant ones for the HR function to have a strategic position and strategic results.

### 5.3. Limitations

Limitations of our analysis arise from the CRANET data specifics. First, although CRANET data was used previously for the assessment of HRM digitalization (e.g., Berber et al., 2018, Parry, 2011, Strohmeier & Kabst, 2013) and SHRM orientation (e.g., Rimac Bilušić, 2022; Szierbowski-Seibel, Wach, & Kabst, 2019), the CRANET questionnaire collects selected digital HRM and SHRM indicators. Moreover, CRANET measures are relatively simple (Parry, 2011). A further limitation of the CRANET methodology is the problem of common method variance, as variables are collected from a single source (a representative of the organization). However, Berkery, Morley, Tiernan, Purtill and Parry (2017) argued that the CRANET methodology is following all techniques which are suggested to minimize common method bias, such as psychological and methodological separation of criterion and predictor variables. Precisely, as the validity of single-source measures depends on the expertise of the source responding to the questions and the clarity of items comprising the survey (see Berkery et al., 2017.; Huselid & Becker, 2000), the CRANET questionnaire was asked to be completed by the most senior HR professional in the organization (the presumption of the strongest expertise), and only factual (not subjective) data was collected. To assure that questions were specific and clear, questionnaires were piloted in each country of data collection. Despite numbered limitations, our analysis contributes to the both fields explored – digital HRM and SHRM orientation, as it was conducted on a large-scale international dataset.

## 6. CONCLUSION

The objective of our study was to shed further light on the relationship between HRM digitalization and SHRM orientation. The results indicate that HRM digitalization is important for achieving the ultimate stage in the evolution of HRM – the SHRM orientation. For that, the most relevant digital HRM practices are the usage of manager self-service, algorithm-based HRM, HR analytics, telework, digital learning and social media selection. Our study provides empirical support for the relevance of HRM digitalization for strategic HRM outcomes, as well as gives insights into digital HRM practices that could be considered a priority while digitalizing HRM.

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