

Innovation-driven human resource management practices in the digital era

1. Introduction

The implementation of innovation-driven development strategies in China requires enterprises to develop new models of human resource management (HRM) to address rapid changes with their increasing challenges in the digital era. Zhao (2018) suggested that Chinese organizations should explore new ideas, new methods and new tools of HRM to promote firm innovation, accelerate economic transformation and upgrade and achieve social progress. Two important ways forward for organizations are:

- building innovation-oriented teams to enhance competitiveness; and
- developing and implementing innovation-driven HRM policies and practices.

Along with the deepening of economic globalization, digitalization and rapid development of science and technology, enterprises' internal and external environments are constantly changing. Consequently, HRM faces unprecedented new challenges (Bissola and Imperatori, 2019). New technologies such as the internet of things, artificial intelligence (AI), mobile internet, big data and cloud computing, are changing the business world in unprecedented ways. These, in turn, lead to new types of business, work and employment such as the sharing economy and the gig economy (Hamari *et al.*, 2016; Kuhn, 2016; Kuhn and Maleki, 2017). While scholars of HRM and employment relations have started to examine the impact of the sharing economy on HRM, many issues remain unaddressed. These include the definition, connotation, characteristics and operation mode of HRM in the sharing economy and its impact on innovation (Kuhn and Maleki, 2017; Lee *et al.*, 2015; Keegan and Meijerink, 2019; Nica, 2018).

In the era of digitalization, the subversive reconstruction of the relationship between people and organizations has posed tremendous challenges to HRM (Cooke *et al.*, 2019). Traditional HRM systems are unable to meet the challenge of developing innovation-based strategies required by today's enterprises. Focusing on improving employee efficiency, traditional HRM practitioners are deeply involved in routine work (Ulrich and Dulebohn, 2015). Disconnected from the innovation strategies needed by the business, existing HRM has failed to maximize the value of human capital (Charan, 2014; Stankevičiūtė and Savanevičienė, 2018; Ulrich and Dulebohn, 2015) and is unlikely to meet the needs of organizational transformation.

In response, many organizations are redesigning their HRM systems by building a “three-pillar” or “three-legged stool” HRM model (Keegan *et al.*, 2018; Kelly and Rapp, 2018). This involves a shared human resource service center (Richter and Bruehl, 2017), a human resource center of expertise (Ulrich and Dulebohn, 2015) and a center of human resource business partners (McCracken and Heaton, 2012; Ulrich *et al.*, 2009). While applied widely, the “three-pillar” HRM model faces theoretical challenges as to how the model affects firm performance and promotes enterprise innovation in the digital era. These questions deserve further study.

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Given that rapidly evolving new technologies are changing the nature of work and how it is done, HRM systems need to incorporate the democratization of work, the empowerment of individual employees and enhancement of worker autonomy in decision-making (Gee *et al.*, 2018). The new work environment challenges long-held assumptions about leadership, organizational operating models, workforce engagement, organizational culture, the purpose of enterprises and the future of the HRM profession. New technologies have popularized social media and offered new models of communication and collaboration within and between organizations (Cook, 2017).

Compounding these challenges, we are moving from a world of hierarchical organizational structures toward a flat world, where human resources can be digitally activated, de-activated and re-configured when and where needed (Ernst and Chrobot-Mason, 2011). For example, employees in a global virtual team are interconnected to work on the same project even though they are from different organizations across the globe. Employees are enjoying more freedom about when and how to carry out their tasks because of the facilitation of digital technologies. The challenge of building a productive work community in such an environment will reshape the role of leaders and human resource professionals and require innovative HRM practices to support the implementation of new corporate strategies.

Stimulating employee creativity is one way to achieve organizationally and HRM innovation (Jiang *et al.*, 2012). Inspiring employee creativity can produce new or better ideas, products, services and production processes for organizations, enabling them to achieve breakthroughs and competitive advantages (Anderson *et al.*, 2014). Employees' knowledge and skills are critical sources of the core competitiveness of enterprises, which enterprises can re-deploy and transform into innovations (Berisha Qehaja and Kutllavci, 2015; Stankevičiūtė and Savanevičiūnė, 2018). HRM that performs a range of important functions such as providing rewards and incentives, shaping organizational atmosphere and culture, offering creativity training and developing team brainstorming techniques, is an important tool to realize this transformation (Jiang and Zhao, 2007; Liu *et al.*, 2017). While scholars have started to research HRM and organizational innovation and creativity, the era of digitalization poses ever-rising challenges to both scholars and practitioners in developing and improving innovative and effective HRM models.

2. Preview of the special issue

To contribute to the development of innovation-driven HRM in China, three chairs of key projects of National Natural Science Foundation of China, Shuming Zhao (Nanjing University, China), Hong Liu (Nanjing University, China) and Zhiqiang Liu (Huazhong University of Science and Technology, China), jointly proposed this special issue to the Chinese Management Studies (CMS). The nine papers published in this special issue were selected from 28 submissions through CMS's double-blind peer-review process. In this section, we offer a preview of these papers.

In the first paper, Liu, Zhou, Liu and Xin investigated whether the uncertainty of gaining legitimacy from the organizational change was an important antecedent of resistance to change. They also explored why some enterprises were reluctant to choose institutional entrepreneurship for transformation when the uncertainty of gaining legitimacy from the organizational change was high. They found that the uncertainty of gaining legitimacy from organizational change not only resulted in resistance to change through the mediating variable – organizational readiness for change but also played an important role in shaping enterprises' choices of the change strategy.

In the second paper, Huang and Chen examined whether employee vitality mediated the relationships between two different types of idiosyncratic deals and the innovative performance of employees. They also explored whether the mediating effects were moderated by employees' age. They found that task and work responsibilities idiosyncratic deals and flexibility idiosyncratic deals were both positively related to the innovative performance of employees and that vitality mediated those relationships. Further, they found that the chronological age of employees strengthened the positive relationship between task and work responsibilities idiosyncratic deals and vitality, as well as the indirect effect that task and work responsibilities idiosyncratic deals impacted on the innovative performance of employees through vitality. The results of their study indicated, however, that the moderating effect of the chronological age of employees in the relationship between flexibility idiosyncratic deals and vitality was not significant. Chronological age of employees also did not play a moderating role in the relationship between flexibility idiosyncratic deals and innovative performance.

The third paper by Qu, Zhao and Zhao identified profiles of inclusion in the workplace to provide evidence-based guidance on building an inclusive organization. Specifically, they identified three subgroups: the identity inclusion group (the highest level of inclusion, 34.0%), the value inclusion group (the moderate level of inclusion, 47.5%) and the low inclusion group (the lowest level of inclusion, 18.5%). The findings indicated that male, older and highly-educated members and members from developed areas generally tended to feel more included. In addition, greater inclusion is related to more favorable outcomes and fewer detrimental consequences. The results help organizational leaders develop a deeper understanding of the significance of inclusion.

The fourth paper, by Liu, Pan and Zhu, examined why and when employees engaged in creative deviance to develop creativity in China. Drawing on strain theory, they examined creative deviance engagement as a mediator and transformational leadership as a moderator of the distinct relationships between emotional and rational status-striving orientations and radical and incremental creativity. They found that emotional status-striving orientation related to creative deviance engagement, which, in turn, had a stronger relationship with radical, than incremental, creativity. Furthermore, their results indicated that creative deviance engagement mediated the indirect relationships between emotional status-striving orientation and radical and incremental creativity. Moreover, transformational leadership moderated the indirect relationships described above.

Wan and Liu investigated whether big data enabling (BDE) and empowerment-focused human resource management (EHRM) could effectively promote employee intrapreneurship and their effects on platform enterprises' innovation performance. They also examined the contexts under which employee intrapreneurship could affect business performance. They found that BDE, EHRM and their synergy positively influenced employee intrapreneurship, which could, in turn, influence enterprise performance. Specifically, employee intrapreneurship played a partial mediating role between BDE, EHRM and performance and a fully mediating role between synergy and performance. Finally, their results suggest that platform strategic flexibility played a positive moderating role between employee intrapreneurship and performance.

Drawing on previous research on millennial employee management in China and self-determination theory and theory of situation interaction, Zhang and Zhao proposed hedonic and eudaimonic well-being as dual mediators to explain the positive effect of job characteristics on millennial employees' creative performance. They also hypothesized that inclusive leadership and achieving styles could separately moderate these dual mediation paths. They found that both hedonic and eudaimonic well-being mediated the positive effect

of job characteristics on millennial employees' creative performance. The positive effect of job characteristics on millennial employees' hedonic well-being was stronger when inclusive leadership was stronger and the positive effect of millennial employees' hedonic well-being on creative performance was stronger when "direct" and "instrumental" achieving styles were stronger. In addition, their findings show that job characteristics exerted a positive, indirect effect on employees' creative performance through employees' hedonic well-being. Moreover, this cascading effect was moderated by inclusive leadership, direct achieving style and instrumental achieving style.

The seventh paper, by Huang, Tang and Deng, examined the influence of developing human resources (HR) practices on management innovation. Drawing on the social exchange theory, they analyzed the mediating role of responsibility for change and the moderating role of resource availability. The authors found a positive relationship between developmental HR practices and management innovation, which was mediated by responsibility for change. Furthermore, their results suggest that resource availability positively moderated the correlation between responsibility for change and management innovation, as well as the indirect effect of developmental HR practices on management innovation via responsibility for change.

The penultimate article, by Jia, Liu and Zheng, explored the antecedents of bootlegging from the perspective of paradoxical leadership. Based on the theory of planned behavior, they developed a multiple mediation model with harmonious innovation passion, role breadth self-efficacy and perceived error management culture as mediators, to explain why paradoxical leadership influenced employee bootlegging. They found that paradoxical leadership had an indirect influence on bootlegging through harmonious innovation passion and role breadth self-efficacy.

The final paper, by Liu, Xi, Li and Geng, drew on social identity theory and uncertainty-identity theory to investigate whether CEO relationship-focused leadership impacted corporate entrepreneurship through middle managers' (MMs') organizational identification. They also explored whether the indirect effect was moderated by environmental uncertainty. The authors found that CEO relationship-focused leadership positively predicted MMs' organizational identification and corporate entrepreneurship. In addition, MMs' organizational identification mediated the relationship between CEO relationship-focused leadership and corporate entrepreneurship. The authors also found that environmental uncertainty moderated not only the relationship between CEO relationship-focused leadership and MMs' organizational identification but also the indirect effect of CEO relationship-focused leadership on corporate entrepreneurship through MMs' organizational identification.

3. Future research directions

Although the articles in this special issue contribute to our better understanding of innovation-driven HRM practices in the digital age, many issues remain unexplored. Among the most important issues of HRM in the digital era, two are particularly promising for future research: the application of AI in HRM and the digital transformation of HRM.

3.1 Application of artificial intelligence in human resource management AI has been applied to a range of HRM practices, attracting more and more attention from researchers and practitioners (Brougham and Haar, 2018; Marler and Boudreau, 2017). For example, companies are increasingly using AI and algorithmic decisions in their hiring and selection processes for cost and efficiency reasons (Vardarlier and Zafer, 2020). In particular, machine-learning algorithms used in personnel selection procedures are a promising tool for many companies.

The application of AI in HRM is expected to increase the objectivity of HR decision-making, reduce administrative burdens of HR managers and realize the automation of HR decision-making (Möhlmann and Zalmanson, 2017). In addition, the application of AI can help enterprises accelerate business processes or transform systems, enhance employee productivity, promote employee career development and improve enterprise profitability.

The application of AI in HRM, however, may also have notable negative impacts. In particular, the use of AI in HR processes and systems may possibly result in a complex set of problems adversely affecting employees. Specifically, AI may change the nature of work. This, in turn, may deskill workers and reduce their income. Robots may replace workers, leading to high job instability or even large-scale job losses. AI-backed online platforms may alter the relationship of employment at the workplace, forcing workers into the gig economy. In addition, algorism, albeit claimed to increase objectivity, may in fact strengthen various stereotypes and discrimination in recruitment and selection due to the way it is developed. Moreover, AI-facilitated surveillance tools aiming to improve efficiency may increase workers' stress and cause severe concerns about privacy. As such, the use of AI in HRM needs to be treated with caution by organizational leaders.

To deepen our understanding of the double-edged-sword nature of AI in HRM, the following questions need to be addressed by future research:

- First, can AI improve the employee experience?
- And if so, how?

Answers to these questions are of high practical value for organizations that use AI to manage their employees.

Second, to what extent is the use of AI in HRM accepted by employees? What are the behavioral responses of employees to algorithmic HRM? How do these reactions affect their work attitudes and performance? For example, our knowledge of the emotional response to various AI-supported selection processes (e.g. pre-selection and phone or video interviews) is still limited (Acikgoz *et al.*, 2020; Wang and Zhou, 2021).

Third, what are the dark sides of using AI in HRM and how should we theorize these dark sides? Are there any contextual factors or management practices that help alleviate the negative impacts of using AI in HRM?

3.2 Digital transformation of human resource management Digital transformation has gone beyond conventional HRM practices, driving the rapid development of digital HRM (Vardarlier, 2020; Zehir *et al.*, 2020). Digital transformation of the workplace encourages HR leaders to re-think and develop innovative digital applications to attract, select and manage their human capital (Mazurchenko and Maršíková, 2019). HRM departments are increasingly using digital tools to innovate their traditional HRM processes, provide information for decisions and generate solutions to people management problems (Manuti *et al.*, 2017).

Despite the progress made in digitizing HRM over the past few decades, some major questions remain unsettled. First, the concept of digital HRM is still ill-defined and used inconsistently by researchers (Kim *et al.*, 2021). What are the key dimensions of digital HRM? How best can these dimensions be measured? Are there any typologies or classification systems for digital HRM? These questions need to be systematically addressed before further development of this stream of research.

In addition, we still have insufficient knowledge regarding how HRM leaders describe digital HRM, how digital HRM is used in organizations, how employees perceive digital HRM and what are the organizational drivers and barriers to digital HRM. These questions

call for intensive, in-depth qualitative research and case studies to shed light on the process of digital HRM.

Finally, what are the impacts of digital HRM on organizational, employee and customer outcomes, particularly in comparison with the traditional HRM practices? Does digital HRM improve or deteriorate these outcomes? Are the impacts universal for all stakeholders or differentiated or contingent on specific tools of digital HRM? How should we theorize the relationships between digital HRM and various stakeholder outcomes? In addition, what are the internal and external boundary conditions for these relationships? Future research is needed to answer these questions to advance our understanding of digital HRM.

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