

Perks or perils? The dual effect of artificial intelligence-augmented human resource management digitization on employee performance

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Abstract

Purpose – This study aims to examine why artificial intelligence-augmented human resource management (AI-HRM) digitization has mixed implications for employee performance. By drawing on person–environment fit theory and sensemaking theory, we propose a contingent dual-pathway model in which AI-HRM digitization affects employee performance through job-related cynicism and innovative job behavior, with task discretion shaping the pathways.

Design/methodology/approach – We tested the hypotheses by using three-wave time-lagged multisource survey data from full-time employees and their direct supervisors in China ($N = 543$ employee–supervisor dyads).

Findings – AI-HRM digitization has no significant direct relationship with employee performance when the mediating mechanisms are considered. Instead, the construct functions through two opposing indirect pathways, that is, a negative pathway through job-related cynicism and a positive pathway through innovative job behavior, with task discretion moderating both pathways. Specifically, high task discretion can weaken the cynicism-based pathway but strengthen the innovation-based pathway, whereas low task discretion can strengthen the cynicism-based pathway but weaken the innovation-based pathway or make it nonsignificant.

Originality/value – Our study advances a contingent dual-pathway model of AI-HRM digitization by showing that the same digital HR transformation mechanism can elicit defensive and proactive employee responses simultaneously. By identifying task discretion as a key boundary condition, the study can explain when AI-HRM digitization will undermine or enhance employee performance and thus moves beyond simple net-effect explanations for AI-HRM outcomes.

Keywords AI-HRM digitization, Job-related cynicism, Innovative job behavior, Employee performance, Task discretion

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Introduction

The rapid diffusion of artificial intelligence (AI) into human resource management (HRM) is reshaping how organizations recruit, develop, evaluate, and retain employees (Deng *et al.*, 2024; Fang *et al.*, 2026; Parent-Rochelleau *et al.*, 2024). In this study, we define AI-augmented HRM (AI-HRM) digitization as the extent to which an organization uses AI-enabled digital systems in HRM activities to digitally record and analyze employee-related information to inform or support HRM decisions and practices (Deng *et al.*, 2024; Prikshat *et al.*, 2023a; Tambe *et al.*, 2019). Therefore, employees will be exposed extensively to AI-mediated processes as the level of AI-HRM digitization increases, including processes related to performance appraisal, training and development, monitoring, and other HRM decisions. Although such systems may improve efficiency, consistency, and data-informed decision-making, it may also influence how employees are evaluated, developed, monitored, and managed. In practice, organizations typically receive uneven returns from such initiatives, because their implementation success will depend on not only their technical functionality but also employees' acceptance of and day-to-day engagement with AI-HRM processes. Employees may welcome AI-HRM digitization as an objective and developmental process but may also perceive heightened opacity, privacy risks, surveillance, or loss of autonomy, which can translate into disengagement, resistance, and reduced performance (Abraham, 2000; Brandes *et al.*, 2004; Jia *et al.*, 2024). For managers, such perceptions can create a practical challenge: The same AI-HRM investment intended to improve employees' performance may also trigger responses that will undermine it. Thus, understanding the dual effect of AI-HRM digitization is essential for obtaining value from the process and avoiding unintended performance costs.

Consistent with such practical challenges, previous scholarly findings on AI-HRM are mixed. Some studies found that AI-HRM and data-driven HR systems can enhance employee outcomes by enabling improved feedback, learning, and proactive problem-solving (Di Prima *et al.*, 2024; Pei *et al.*, 2024; Prikshat *et al.*, 2023a). Meanwhile, other studies highlighted the negative consequences of the use of such systems, including cynicism, reduced trust, and alienation, particularly when employees perceive digital HR systems as being controlling, impersonal, opaque, or misaligned with their expectations (Abraham, 2000; Brandes *et al.*, 2004; Jia *et al.*, 2024). In this study, we do not treat the mixed findings as evidence that AI-HRM digitization is beneficial in some settings but harmful in others. Rather, we argue that such inconsistencies reflect the inherently ambivalent nature of AI-HRM digitization, that is, the same AI-HRM environment can elicit defensive and proactive responses from employees. Thus, the important theoretical question is not simply whether AI-HRM digitization can improve or harm performance but why it creates opposing psychological and behavioral pathways and how work context features can strengthen or weaken each pathway.

To address the aforementioned questions, we draw on person–environment (P–E) fit theory (Edwards *et al.*, 1998) and sensemaking theory (Weick, 1995) to develop a dual-pathway model linking AI-HRM digitization with employee performance. According to P–E fit theory, when individuals perceive incongruence between their personal needs/expectations and the work environment, they will experience strain and attempt to restore balance through cognitive or behavioral adjustment (Follmer *et al.*, 2018). In the context of AI-HRM digitization, employees may perceive an improved fit when AI-HRM processes provide clear standards, rich developmental feedback, or increased access to work-related information. At the same time, employees may experience a misfit when such systems reduce their autonomy, devalue their expertise, or intensify their perception of algorithmic control. Meanwhile, sensemaking theory suggests that employees interpret ambiguous and consequential workplace changes through ongoing cognitive and social processes that can shape how they define and react to such changes (Maitlis and Christianson, 2014; Weick, 1995). By integrating the two perspectives into our analysis, we argue that employees' response to AI-HRM digitization will depend on how they make sense of its fit or misfit with their work environment.

Specifically, we propose two competing pathways. First, AI-HRM digitization may activate a defensive pathway, reflected in employees' cynicism toward their job, which is a

skeptical, detached stance that emerges when they perceive AI-HRM as undermining valued aspects of their work or signaling a misalignment between their interests and organizational intentions (Abraham, 2000; Dean *et al.*, 1998). Cynicism can reduce an employee's effort and engagement and thus harm their performance (Naus *et al.*, 2007). Second, AI-HRM digitization may also activate a coping pathway, reflected in employees' innovative job behavior, which describes their voluntary effort to introduce and implement novel ideas or methods (De Jong and Den Hartog, 2010; Janssen, 2000). When employees interpret AI-HRM digitization as a resource (e.g. offering rich data, new insights, or improved coordination), they may proactively experiment, refine processes, and generate improvements, which can enhance their performance (Galperin, 2012; Parker *et al.*, 2010). Accordingly, our study treats job-related cynicism and innovative job behavior not as mutually exclusive reactions but as parallel mechanisms through which AI-HRM digitization can give rise to opposing performance implications.

Therefore, the central question is how the work context can shape the strength of the two pathways through which employees respond to AI-HRM digitization. We identify task discretion, which describes employees' perceived latitude in deciding how to organize, schedule, and perform their work, as a key work design boundary condition. When an employee's task discretion is high, they will perceive considerable latitude to interpret AI-generated information, adapt digital recommendations to local task demands, and translate AI-enabled insights into experimentation and improvement outcomes (Hackman and Oldham, 1976; Parker, 1998; Parker *et al.*, 2010). Under such conditions, employees may perceive AI-HRM digitization as enabling, which can strengthen the innovation-based pathway. By contrast, when an employee's task discretion is low, they will perceive limited room to question, adapt, or act on AI-HRM inputs. Under such conditions, employees may perceive AI-HRM digitization as externally imposed control, which can intensify their perceived misfit and strengthen the cynicism-based pathway (Abraham, 2000; Naus *et al.*, 2007). Thus, task discretion is theoretically important, because it can control the strength of the defensive and proactive pathways linking AI-HRM digitization with employee performance.

Our study makes three contributions to the literature on AI-HRM and employee outcomes. First, our study advances a contingent dual-pathway explanation for the performance implications of AI-HRM digitization. Prior research typically emphasized either the benefits or the risks of AI-HRM; thus, little is known about how conflicting employee outcomes may emerge from the same digital HR transformation mechanism. By hypothesizing and testing job-related cynicism and innovative job behavior as parallel mediating mechanisms, our study can explain why AI-HRM digitization can simultaneously undermine and enhance employee performance. This contribution moves the literature beyond simple "net effect" explanations and provides a precise account of why previous studies reported the beneficial, harmful, or nonsignificant effects of AI-HRM.

Second, our study integrates P-E fit theory and sensemaking theory into the analysis to explain how employees interpret AI-HRM digitization. P-E fit theory can explain why employees evaluate AI-HRM cues in terms of fit or misfit with their autonomy, competence, values, and role expectations (Edwards *et al.*, 1998, 2006; Kristof-Brown *et al.*, 2005). Meanwhile, sensemaking theory can explain how employees construct plausible meanings from such cues over time (Maitlis and Christianson, 2014; Weick, 1995; Weick *et al.*, 2005). The integration allows us to specify why the same AI-HRM system can elicit divergent responses: Threat-based interpretations of misfit can prompt defensive distancing through job-related cynicism, whereas resource-based interpretations of fit support proactive adjustment through innovative job behavior. Thus, our study moves beyond the use of sensemaking theory as a broad interpretive lens and specifies the meaning-making process through which AI-HRM digitization elicits distinct psychological and behavioral responses.

Third, our study identifies task discretion as a critical boundary condition that can differentially shape the two pathways linking AI-HRM digitization with employee performance. Our study hypothesizes and demonstrates that high task discretion can weaken the cynicism-

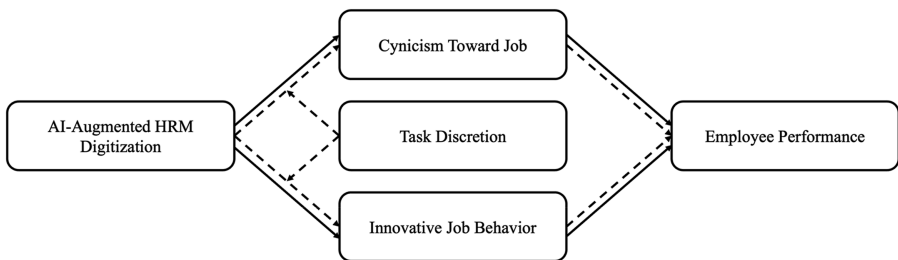
based pathway but strengthen the innovation-based pathway. Conversely, low task discretion can intensify the cynicism-based pathway but constrain the innovation-based pathway. Thus, our study shows that a common work design condition can have asymmetric implications for employees' defensive and proactive responses. Accordingly, the performance implications of AI-HRM digitization may depend on not only the technology but employees' degree of discretion to interpret, adapt, and use AI-HRM inputs constructively. Thus, our study offers an actionable contingency, namely, work design discretion, that complements technology-centric explanations and clarifies the conditions under which each pathway can be intensified or attenuated (Figure 1).

Literature review

AI-HRM digitization: P–E fit and sensemaking perspectives

By building on P–E fit theory, prior research examined how the alignment or misalignment of employees' attributes with technology-driven job demands can shape workplace outcomes (e.g. Bondarouk and Brewster, 2016; Kaushal et al., 2023). P–E fit theory argues that individuals will likely thrive when their needs, capabilities, and values correspond with environmental supplies and demands (Edwards et al., 1998; Kristof-Brown et al., 2005). In the context of AI-HRM, employees may perceive a considerable fit when AI-HRM digitization provides clear information, developmental feedback, or decision support that can help them perform their role effectively. Conversely, employees may perceive a misfit when algorithmic tools and automated HR workflows fail to recognize their expertise, constrain their autonomy, or conflict with their expectations of fair and meaningful work (Follmer et al., 2018; Parker et al., 2010). Such perceived misfit may increase employees' concerns about their work being increasingly constrained by rigid technological parameters or consequential decisions being dominated by opaque data-driven systems (Tambe et al., 2019). Consistent with P–E fit research, such perceptions can trigger negative reactions, including reduced engagement and heightened cynicism, as employees increasingly view AI-HRM systems as impersonal, inflexible, or unfair (Dean et al., 1998; Luksyte et al., 2011). For example, employees who believe that AI-based practices overlook their expertise may feel frustrated and question the legitimacy of algorithm-generated performance feedback (Stone and Deadrick, 2015).

At the same time, AI-HRM digitization may strengthen employees' perceived fit with the increasingly digitized work environment. Technology-enabled HRM can provide employees with new information, feedback, and analytical insights that can help them deploy underutilized capabilities, experiment with alternative ways of working, and engage in innovative job behavior (Bondarouk and Brewster, 2016; De Jong and Den Hartog, 2007; Lin et al., 2017). When employees adapt proactively to AI-enabled work demands, they may be able to improve their performance and well-being (Christian et al., 2011; Prikshat et al., 2023a). Reflecting such complexities, recent studies reported mixed findings or nonsignificant associations between AI-HRM practices and performance outcomes (Chuang et al., 2025),



Notes. Solid lines (—) indicate the direct paths, whereas dashed lines (---) indicate the full moderated mediation model.

Figure 1. The proposed moderated mediation model

which suggest that employees' interpretations of AI-HRM digitization vary substantially. Thus, the same AI-HRM system may be experienced as a constraint by some employees but as a resource by others. This dual possibility highlights the importance of explaining not only whether AI-HRM digitization can influence performance but also the interpretive and behavioral pathways through which such an effect unfolds.

Despite such advances, the literature has paid little attention to how employees make sense of and respond to the fit or misfit created by AI-HRM digitization. By combining P–E fit theory and sensemaking theory, we argue that employees who are extensively exposed to AI-HRM systems engage in interpretive behavior to understand the implications of such systems for their autonomy, competence, professional value, and future role at work. According to P–E fit research (Caplan *et al.*, 1984; Edwards *et al.*, 1998; Follmer *et al.*, 2018), two broad adjustment routes are particularly relevant. First, employees may engage in defensive adjustment, that is, they may reframe a situation in ways that will protect themselves but elicit negative attitudes, when they interpret the algorithmic work environment as undermining their value or constraining their meaningful contribution (Chiaburu *et al.*, 2013; Dean *et al.*, 1998). Second, employees may engage in proactive adjustment, that is, they may exert effort to work with or reshape the environment by learning to use AI-enabled information, experimenting with system recommendations, proposing process improvements, or aligning their technology use with their expertise. From this perspective, we argue that job-related cynicism reflects a defensive sensemaking pathway in response to perceived misfit, whereas innovative job behavior reflects a proactive pathway through which employees attempt to use AI-HRM digitization to restore, maintain, or enhance their fit with the increasingly digitized work environment (Christian *et al.*, 2011; Follmer *et al.*, 2018). Accordingly, whether AI-HRM digitization generates detrimental or beneficial outcomes will depend on which pathway is activated and strengthened. The situation highlights the importance of boundary conditions such as task discretion, which can shape employees' sensemaking and enable or constrain their constructive response to their perceived misalignment.

However, our model does not assume that AI-HRM digitization exerts a dominant or uniformly positive or negative effect on employee performance. Instead, we argue that AI-HRM digitization is a feature of the HRM environment, whose increasing presence may trigger competing employee interpretations and responses. From a P–E fit perspective, we posit that employees may experience AI-HRM as being misaligned with their autonomy, expertise, values, or role expectations. In such situations, AI-HRM may elicit defensive reactions. At the same time, employees may interpret AI-HRM as a resource that can provide them with information, structure, and opportunities for improvement. In such situations, AI-HRM may elicit proactive responses. Thus, the theoretical focus of our study is the coexistence of the competing pathways and the work design conditions that can determine their relative strength.

Combining P–E fit theory with sensemaking theory

Sensemaking theory suggests that individuals engage in meaning-making when they encounter ambiguous or consequential features in their work environment (Maitlis and Christianson, 2014; Weick, 1995; Weick *et al.*, 2005). Therefore, employees do not only respond to the existence of AI-HRM technologies but also interpret the signals of the extent of AI-HRM digitization related to their autonomy, competence, fairness, managerial control, and future value at work. Extensive AI-HRM digitization may reinforce employees' perception that algorithmic systems are increasingly shaping consequential employment decisions while providing employees with rich information, developmental feedback, and opportunities to improve their work.

The combination of sensemaking theory with P–E fit theory will enable us to explain why AI-HRM digitization may elicit divergent employee responses. P–E fit theory argues that employees evaluate their work environment in terms of its fit or misfit with their needs, values, abilities, and role expectations (Edwards *et al.*, 1998, 2006; Kristof-Brown *et al.*, 2005). In AI-HRM contexts, employees will likely attend to cues such as algorithmic recording, the

automatic analysis of work-related data, the transparency of AI-generated recommendations, opportunities to question or override AI outputs, and whether AI is used for developmental support or managerial control (Bondarouk and Brewster, 2016; Kellogg *et al.*, 2020; Stone and Dulebohn, 2013; Tambe *et al.*, 2019). Such cues can serve as the raw materials for employees' sensemaking. Then, employees will interpret whether AI-HRM digitization demonstrates a fit or misfit with their expectations for meaningful, competent, and agentic work.

When employees interpret AI-HRM cues as signaling a misfit, they will likely view the technology as controlling, opaque, or devaluing human expertise. For example, employees may interpret algorithmic recording as surveillance, automatic analysis as undermining their professional judgment, and AI-generated feedback as being impersonal or unfair when they do not understand how certain conclusions were reached (Jia *et al.*, 2024; Kellogg *et al.*, 2020; Tambe *et al.*, 2019). Through such meaning-making process, employees may view AI-HRM digitization as a threat to their autonomy, competence, and importance at work. Such perceived misfit can elicit defensive responses, including disengagement, withdrawal, and negative work attitudes (Edwards *et al.*, 2006; Follmer *et al.*, 2018). In this study, we argue that job-related cynicism reflects a defensive sensemaking response. Cynicism involves skepticism, detachment, and doubts about the value or integrity of one's work context (Chiaburu *et al.*, 2013; Dean *et al.*, 1998). Thus, employees' job-related cynicism reflects not simply their resistance to technology but their defensive interpretation of AI-HRM digitization as being misaligned with their need for agency, competence, and meaningful contribution.

By contrast, when employees interpret AI-HRM cues as signaling fit or attainable fit, they may perceive AI-HRM digitization as an enabling resource. For example, employees may interpret AI-generated analytics as being able to provide highly accurate feedback, identify skills gaps, improve their access to developmental opportunities, or reveal new ways to solve work problems (Di Prima *et al.*, 2024; Prikshat *et al.*, 2023b; Strohmeier, 2020). In such situations, AI-HRM digitization can improve, rather than undermine, employees' perceived ability to contribute meaningfully to their organization and thus prompt them to engage in proactive behavior, such as experiment with AI-generated insights, modify work routines, suggest improvements, or use digital information to enhance their task accomplishment. This logic is consistent with research that showed that employees will respond proactively when they perceive opportunities to shape their environment and improve their fit with changing job demands (Follmer *et al.*, 2018; Grant and Ashford, 2008; Parker *et al.*, 2010). In the pathway, innovative job behavior reflects constructive sensemaking: Employees will interpret AI-HRM digitization as a resource they can use to restore, maintain, or enhance the fit between their capabilities and the increasingly digitized work environment.

The theoretical integration can clarify why AI-HRM digitization can lead to job-related cynicism and innovative job behavior. Sensemaking theory can explain how employees construct meaning from AI-HRM cues, whereas P-E fit theory can explain the evaluative basis of such meanings: Employees will assess whether AI-HRM digitization will support or undermine their autonomy, competence, values, and role expectations (Edwards *et al.*, 1998; Maitlis and Christianson, 2014; Weick *et al.*, 2005). When the constructed meaning describes a misfit, control, or devaluation, employees will likely display job-related cynicism. However, when the constructed meaning describes a fit, support, or opportunities, employees will likely engage in innovative job behavior. Thus, the dual pathway proposed in this study represents not merely parallel empirical mechanisms but two theoretically distinct sensemaking responses of employees to their perceived fit or misfit with AI-HRM practices or cues.

Hypothesis development

Negative pathway: AI-HRM digitization, job-related cynicism, and employee performance

We propose that AI-HRM digitization is positively related to employees' job-related cynicism. According to P-E fit theory (Bondarouk and Brewster, 2016; Edwards *et al.*, 1998), employees who encounter substantial technology-driven changes in their work may defensively adjust

their perceptions to cope with the perceived misalignment between their needs, values, or capabilities and their increasingly digitized work environment. In AI-HRM contexts, employees may feel that their role is being increasingly shaped by opaque algorithmic systems, automated assessments, or data-driven recommendations that reduce the visibility and value of human judgment (Bankins *et al.*, 2024; Tambe *et al.*, 2019). Such experiences may prompt employees to question whether their work remains meaningful and their expertise is valued and the fairness of organizational decisions. When AI-HRM digitization is interpreted in such a way, employees will likely develop job-related cynicism, which describes their detached and skeptical orientation toward their job and its value. Similarly, prior research suggested that person–job misfit can undermine employees’ capacity to find significance in their work (Follmer *et al.*, 2018).

Job-related cynicism can negatively affect employee performance. Employees with pronounced cynicism may believe that their efforts will not be valued or rewarded (Chiaburu *et al.*, 2013), which will lead them to reduce the energy they devote to assigned tasks (Naus *et al.*, 2007). Cynical employees may also withdraw from collaborative efforts and limit their interpersonal exchanges and diverse inputs, which could otherwise support their performance (Stone and Deadrick, 2015). The low enthusiasm and sense of purpose of such employees may reduce their inclination to master workplace procedures, solve emerging problems, or contribute meaningfully to their organization (Chiaburu *et al.*, 2013; De Jong and Den Hartog, 2007). Collectively, such tendencies can diminish employees’ overall effectiveness. Thus, we propose the following hypotheses:

- H1a. AI-HRM digitization is positively related to job-related cynicism.
- H1b. Job-related cynicism is negatively related to employee performance.
- H1c. AI-HRM digitization will have a negative indirect effect on employee performance through job-related cynicism.

Positive pathway: AI-HRM digitization, innovative job behavior, and employee performance

We propose that AI-HRM digitization is positively related to employees’ innovative job behavior. By drawing on P–E fit theory, we posit that employees who confront technology-driven work environments may attempt to reshape such environments to align them with their capabilities, role expectations, and work goals. AI-HRM systems can provide employees with new forms of information, feedback, and data-driven insights that can support their learning, experimentation, and problem-solving. For instance, AI-based platforms may encourage employees to adapt existing processes, incorporate digital insights into their decision-making, or develop novel solutions for organizational challenges (De Jong and Den Hartog, 2007; Strohmeier, 2020). By actively experimenting with or customizing AI-enabled applications, employees can improve their sense of mastery and identify efficient ways to accomplish tasks (Tambe *et al.*, 2019). In this regard, innovative job behavior, which can manifest in problem identification, idea generation, idea promotion, and the implementation of new methods, can serve as a proactive response through which employees align their work with AI-enabled demands and opportunities (Parker *et al.*, 2010; Stone and Deadrick, 2015; Stone and Dulebohn, 2013).

Innovative job behavior is also positively related to employee performance. Through proactive improvements and novel ideas, employees can gain deep insights into organizational processes that can enable them to complete assignments effectively and respond to changing demands adaptively (Christian *et al.*, 2011). Such innovation-oriented activities can not only support employees’ organizational adaptation but also foster their personal growth and capacity to leverage AI-enabled resources (Bondarouk and Brewster, 2016). Prior research indicated that employees who embrace and proactively integrate new technologies into their

work tend to exhibit high overall performance. Accordingly, we propose the following hypotheses:

- H2a. AI-HRM digitization is positively related to innovative job behavior.
- H2b. Innovative job behavior is positively related to employee performance.
- H2c. AI-HRM digitization will have a positive indirect effect on employee performance through innovative job behavior.

Moderating role of task discretion

Although sensemaking can explain how employees construct meaning around AI-HRM digitization, employees do not make sense of such technologies in a vacuum. Employees' interpretations can be shaped by work design conditions under which AI-HRM systems are introduced and used. Therefore, we conceptualize task discretion not as a sensemaking mechanism but as a structural job feature that can shape the cues employees attend to and the meanings they will likely construct. Task discretion refers to employees' perceived latitude in scheduling, organizing, and performing their work (Parker, 1998; Morgeson and Humphrey, 2006). Work design research suggested that autonomy and discretion can provide employees with control over how they respond to changing work demands and translate available resources into action (Hackman and Oldham, 1976; Parker et al., 2010). In the context of AI-HRM digitization, high task discretion may allow employees to adapt AI-generated information to their local work context, exercise judgment in how digital recommendations are used, and experiment with new ways of working. Such conditions can increase employees' likelihood of interpreting AI-HRM digitization as an enabling resource. Conversely, when their task discretion is low, employees will have limited ability to shape how AI-generated information will affect their work. Under such conditions, employees will likely interpret AI-HRM digitization as externally imposed control; thus, AI-HRM digitization may intensify their perceived misfit and prompt their defensive sensemaking.

We propose that task discretion can weaken the positive relationship between AI-HRM digitization and job-related cynicism by shaping employees' threat-related sensemaking. When their task discretion is low, employees will have limited latitude in interpreting, questioning, or adapting AI-generated outputs. In such settings, employees will likely interpret algorithmic recording and automatic analysis as surveillance and control cues and diminished human agency (Kellogg et al., 2020; Tambe et al., 2019). Employees will not be able to easily modify how AI-HRM digitization can affect their work; thus, their perceived misfit will become highly salient. That is, AI-HRM will appear to constrain, rather than support, their autonomy and professional judgment (Edwards et al., 2006; Follmer et al., 2018). Such an interpretation can prompt defensive distancing and job-related cynicism, which prior research linked with skepticism, disengagement, and reduced willingness to exert effort at work (Dean et al., 1998; Chiaburu et al., 2013). By contrast, when their task discretion is high, employees will have considerable control over how AI-generated information is incorporated into their work. Such discretion can provide cues that human judgment is valued, and AI-HRM digitization can be adapted to local task demands (Hackman and Oldham, 1976; Morgeson and Humphrey, 2006; Parker, 1998). Thus, employees will less likely interpret AI-HRM digitization as an imposed threat and more likely maintain their sense of agency, which can reduce their cynical reactions. Therefore, we propose the following hypothesis:

- H3. Task discretion will moderate the relationship between AI-HRM digitization and job-related cynicism, and the relationship will be weak when task discretion is high.

We further propose that task discretion can strengthen the positive relationship between AI-HRM digitization and innovative job behavior by enabling opportunity-related sensemaking.

When their task discretion is high, employees will have considerable latitude in experimenting with AI-generated insights, adapting digital recommendations to their tasks, and using AI-enabled information to refine work processes. Under such conditions, employees will likely interpret AI-HRM digitization as a resource that can enhance their competence and capacity for improvement (Parker *et al.*, 2010; Prikshat *et al.*, 2023b; Strohmeier, 2020). This logic is consistent with proactive behavior research, which suggested that employees will generate and implement new ideas when they have autonomy to take the initiative and shape their work environment (De Jong and Den Hartog, 2010; Grant and Ashford, 2008; Parker *et al.*, 2010). In such a context, employees will likely interpret AI-HRM digitization as being compatible with their role and capabilities, which will encourage their proactive adjustment through idea generation, experimentation, and the implementation of new methods. By contrast, when their task discretion is low, employees will not be able to translate potentially useful AI-generated insights into innovation, because they will lack the freedom to act on such information. Thus, they may experience AI-HRM digitization as a rigid system, rather than a flexible resource, that can weaken the innovation pathway. The arguments lead us to propose the following hypothesis:

- H4. Task discretion will moderate the relationship between AI-HRM digitization and innovative job behavior, and the relationship will be strong when task discretion is high.

Moderated mediation model

By building on the preceding arguments, we propose a conditional indirect-effects model in which AI-HRM digitization influences employee performance through two parallel pathways, namely, job-related cynicism and innovative job behavior, which are contingent on task discretion. By drawing on P–E fit theory, sensemaking theory, and research on technology-enabled HRM, we contend that task discretion can determine the extent to which employees can interpret, adapt, and act on AI-HRM inputs in ways that will either decrease their defensive reactions or support their proactive behavior.

Specifically, we propose that task discretion functions as a boundary condition in the negative pathway. When their task discretion is high, employees will have considerable latitude in deciding how to perform and adapt their work, which can help them interpret AI-HRM digitization as being less constraining and decrease their defensive reactions. Accordingly, high task discretion can weaken the negative indirect effect of AI-HRM digitization on employee performance through job-related cynicism. Conversely, when their task discretion is low, employees will likely interpret AI-HRM practices or cues as externally imposed constraints, which will intensify their perceived misfit and reinforce cynical responses that can detract from their performance. Similarly, we propose that task discretion can strengthen the positive pathway. When their task discretion is high, employees will have increased flexibility to experiment with AI-enabled processes and use AI-generated insights to improve their work and hence engage in innovative job behavior. Thus, the positive indirect effect of AI-HRM digitization on employee performance through innovative job behavior will be strong when employees' task discretion is high. Based on the arguments, we propose the following hypotheses:

- H5. Task discretion will moderate the indirect effect of AI-HRM digitization on employee performance through job-related cynicism, and the negative indirect effect will be weak when task discretion is high.
- H6. Task discretion will moderate the indirect effect of AI-HRM digitization on employee performance through innovative job behavior, and the positive indirect effect will be strong when task discretion is high.

Methods

Sample and procedure

We collected multisource time-lagged survey data from full-time employees and their immediate supervisors in multiple organizations in China. We initially approached the HR managers of 11 service- and manufacturing-sector organizations, who all agreed to participate in this study and supported the recruitment and survey administration processes. In our initial communication with the HR managers, we described the broad purpose of our study, that is, to examine how AI-HRM and digitized HRM practices can shape employees' job experiences and work outcomes; outlined the data collection procedures; and requested organizational support for the distribution of the questionnaires. The HR managers of the participating organizations identified the eligible participants, that is, employees with at least one year of organizational tenure and their direct supervisors, and administered the survey questionnaires during work hours.

To reduce concerns about common method bias and strengthen temporal separation among the focal variables, we employed a three-wave time-lagged design with the data from the employees and their supervisors. At the beginning of each survey wave, we provided the participants with a cover letter explaining the purpose of our study, emphasizing that participation was voluntary, and assuring them that their responses would remain confidential and anonymous. We also informed the participants that the data would be used only for academic research and reported in aggregate form. To match the responses across the survey waves and between the employees and their supervisors while maintaining their confidentiality, we assigned a unique identification code to each respondent. We administered the survey questionnaires in paper format during work hours, with the assistance of the HR liaisons. We instructed the participants to place their completed questionnaire inside a sealed envelope and give it directly to our research team to minimize evaluation apprehension and ensure their confidentiality.

At Time 1 (T1), we obtained the employees' perceptions of AI-HRM digitization and task discretion and their demographic information, such as age, gender, education, and organizational tenure. After one month, at Time 2 (T2), we instructed the same employees to complete a questionnaire on the measures of job-related cynicism and innovative job behavior. After one month, at Time 3 (T3), we instructed the supervisors to evaluate the job performance of the employees. The design combined temporal separation, multisource ratings, and confidentiality assurances to reduce the likelihood of method-related inflation and support the rigorous testing of the hypothesized model.

We distributed 790 questionnaires to the employee participants at T1 and received 591 usable responses. At T2, we distributed the questionnaires to the 591 T1 respondents and received 552 responses, which represents a 93.4% retention rate from T1 to T2. At T3, we instructed the supervisors to provide performance ratings for the T2 respondents. After we excluded the cases with excessive missing data or unmatched employee-supervisor records, our final matched sample comprised 543 employee-supervisor dyads, which represents an overall response rate of 68.7% (543/790). We conducted attrition analysis by comparing the respondents who completed all three waves of the survey with those who dropped out after the first wave. The results revealed no significant demographic differences between the two groups and thus suggested that attrition bias did not likely materially influence the findings. The demographic profile of the sample is reported in [Web Appendix A \(Table A1\)](#). Among the 543 employees, 58.4% are female, the average age is 37.8 years, and the average work tenure is 9.35 years. Regarding their education level, 13.4% of the respondents have an associate's degree, 35.5% have a bachelor's degree, and 51.0% have a master's degree or higher.

Measures

We adapted all the measures from previously validated English-language scales and translated them into Chinese by using a standard translation and back-translation procedure. Unless

otherwise noted, all the items were rated on a seven-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

AI-HRM digitization. Consistent with our conceptualization of AI-HRM digitization as the extent to which AI is used to support or automate core HR activities (e.g. performance management and training) through data-driven algorithmic processes, we operationalized the construct as employees' perceived exposure to AI-HRM practices that digitally record or capture employee-related information and automatically analyze such data to generate HR-related recommendations or actions. We measured *AI-HRM digitization* by using a seven-item scale that comprised two dimensions: algorithmic recording and automatic analysis (Deng et al., 2024). Sample items are, "My company appraises my work attitude based on the algorithm and quantitative data generated by digital technology" and "My company uses digital technology to identify my training needs and automatically generate training plans" ($\alpha = 0.83$). We performed confirmatory factor analysis (CFA) to assess the validity of the two dimensions of *AI-HRM digitization*. The two-factor model demonstrated an acceptable fit, that is, $\chi^2(13) = 37.63$, RMSEA = 0.06, SRMR = 0.03, and CFI = 0.99, with all the values meeting the recommended thresholds.

Job-related cynicism. We adapted a four-item measure of employees' job-related cynicism from Liu et al. (2024). A sample item is, "I have become less interested in my job since I started this job" ($\alpha = 0.81$).

Innovative job behavior. We measured innovative job behavior by using a five-item scale adapted from Prieto and Pérez-Santana (2014). The scale can capture employees' generation, promotion, and implementation of new ideas at work and has been validated by previous studies. A sample item is, "I search for new technologies, processes, or product ideas related to my job" ($\alpha = 0.83$).

Employee performance. We used a four-item scale from Griffin et al. (2007) for the supervisors' assessment of their subordinates' job performance. A sample item is, "The employee adapted well to changes in their tasks" ($\alpha = 0.89$).

Task discretion. We measured the employees' perceived latitude in scheduling tasks, determining work procedures, and managing their workload by using a four-item task discretion scale developed by Parker (1998). A sample item is, "I have the freedom to decide how to carry out my tasks" ($\alpha = 0.89$).

Control variables. We controlled for the employees' age, gender, education, and work experience, because such characteristics may be related to their job attitude and innovation-related behavior. We also controlled for trust in AI, because employees' trust in AI-HRM systems may influence their perceptions, attitudes, and behavioral responses. We measured trust in AI-HRM by using an 11-item scale adapted from Chowdhury et al. (2022; $\alpha = 0.94$).

Results

Descriptive statistics and measurement model

The measurement model demonstrates acceptable reliability, convergent validity, and discriminant validity. The full factor loadings, composite reliability, average variance extracted, Cronbach's alpha values, descriptive statistics, and correlations among the study variables are reported in Web Appendix A (Tables A2 and A3). The CFA supports the hypothesized six-factor measurement model, with *AI-HRM digitization* modeled as a second-order construct: $\chi^2(543) = 1044.01$, RMSEA = 0.04, SRMR = 0.04, and CFI = 0.95. The alternative models that combine the theoretically distinct constructs demonstrate poor fit, which can provide additional support for the discriminant validity. The full CFA results and alternative model comparisons are reported in Web Appendix A.

Hypothesis testing

We used SPSS Amos 24 to test the hypothesized relationships. The tool is a covariance-based structural equation modeling technique for testing models. Before we tested the moderation hypotheses, we mean centered *AI-HRM digitization* and *task discretion* to reduce nonessential multicollinearity and facilitate the interpretation of the interaction effects. Then, we created an interaction term by multiplying the mean-centered *AI-HRM digitization* score by the mean-centered *task discretion* score. We entered the centered main-effect terms and interaction term simultaneously into the relevant models to predict job-related cynicism and innovative job behavior.

Direct and mediating effects. **H1a** and **H1b** state that *AI-HRM digitization* is positively related to *job-related cynicism*, and *job-related cynicism* is negatively related to *employee performance*. As shown in **Table 1**, *AI-HRM digitization* is significantly related to *job-related cynicism* ($\beta = 0.17, p < 0.001$); thus, **H1a** is supported. Meanwhile, *job-related cynicism* demonstrates a significant negative relationship with *employee performance* ($\beta = -0.25, p < 0.001$); thus, **H1b** is supported. Moreover, **H1c** predicts the negative indirect effect of *AI-HRM digitization* on *employee performance* through *job-related cynicism*. The bootstrapping with 10,000 resamples indicates that the indirect effect is negative and significant (indirect effect = $-0.04, p < 0.001$, 95% CI $[-0.07, -0.02]$); thus, **H1c** is supported. However, the direct relationship between *AI-HRM digitization* and *employee performance* is not significant ($\beta = 0.07, p > 0.05$).

H2a and **H2b** state that *AI-HRM digitization* is positively related to *innovative job behavior*, and *innovative job behavior* is positively related to *employee performance*. As shown in **Table 1**, *AI-HRM digitization* is significantly related to *innovative job behavior* ($\beta = 0.12, p < 0.05$); thus, **H2a** is supported. Meanwhile, *innovative job behavior* has a significant positive relationship with *employee performance* ($\beta = 0.26, p < 0.001$); thus, **H2b** is supported. Furthermore, **H2c** predicts the positive indirect effect of *AI-HRM digitization* on *employee performance* through *innovative job behavior*. The bootstrapping with 10,000 resamples indicates that the indirect effect is positive and significant (indirect effect = $0.03, p < 0.01$, 95% CI $[0.01, 0.06]$); thus, **H2c** is supported.

Table 1. Mediation analysis

Outcome variable	Job-related cynicism		Employee performance		Innovative job behavior		Employee performance	
	β	SE	β	SE	β	SE	β	SE
Age	0.00	0.00	−0.01	0.01	−0.01*	0.00	−0.01	0.01
Gender	0.04	0.05	−0.01	0.08	0.06	0.06	−0.01	0.08
Education	−0.01	0.03	0.02	0.06	0.01	0.04	0.02	0.06
Experience	0.00	0.00	0.01	0.01	0.01*	0.01	0.01	0.01
Trust in AI driven HRM	−0.03	0.02	0.08*	0.03	−0.01	0.03	0.08*	0.03
AI-HRM digitization	0.17***	0.03	0.09	0.05	0.12*	0.04	0.02	0.05
Job-related Cynicism			−0.25***	0.07				
Innovative job behavior							0.26***	0.06
Indirect effect via		Effect		BootLLCI		BootULCI		
Job-related Cynicism		−0.04***		−0.07		−0.02		
Innovative job behavior		0.03**		0.01		0.06		
Note(s): <i>N</i> = 543; AI-HRM = Artificial intelligence-augmented human resource management; Bootstrap sample size = 10,000. LLCI: lower level of the 95% confidence interval; ULCI: upper level of the 95% confidence interval. Significance at: * <i>p</i> < 0.05; ** <i>p</i> < 0.01; *** <i>p</i> < 0.001								

Moderating effects. *Task discretion* significantly moderates the relationship between *AI-HRM digitization* and *job-related cynicism* ($\beta = -0.10, p < 0.01$) (see Table 2). The simple-slope analysis indicates that the positive relationship between *AI-HRM digitization* and *job-related cynicism* is weak when *task discretion* is high, at one standard deviation above the mean (simple slope = 0.10, $p < 0.01$), and strong when *task discretion* is low, at one standard deviation below the mean (simple slope = 0.26, $p < 0.001$) (see Figure 2). Thus, the findings support H3.

Task discretion also significantly moderates the relationship between *AI-HRM digitization* and *innovative job behavior* ($\beta = 0.14, p < 0.001$) (see Table 2). The simple-slope analysis shows that the positive relationship between *AI-HRM digitization* and *innovative job behavior* is strong when *task discretion* is high (simple slope = 0.20, $p < 0.001$) and nonsignificant when *task discretion* is low (simple slope = $-0.01, p > 0.05$) (see Figure 3). Thus, H4 is supported.

Moderated mediating effects. Consistent with H5, the conditional indirect effect of *AI-HRM digitization* on *employee performance* through *job-related cynicism* is weak, or less negative, when *task discretion* is high (indirect effect = $-0.03, SE = 0.01, 95\% CI [-0.06,$

Table 2. Moderation analysis

Outcome variable	Job-related cynicism		Innovative job behavior	
	β	SE	β	SE
Age	0.00	0.00	-0.01	0.00
Gender	0.04	0.05	0.07	0.06
Education	0.00	0.03	0.00	0.04
Experience	0.00	0.00	0.01	0.01
Trust in AI driven HRM	-0.02	0.02	-0.03	0.02
AI-HRM digitization	0.21***	0.03	0.12**	0.04
Task discretion	0.04	0.03	-0.27***	0.03
Interaction	-0.10**	0.03	0.14***	0.04

Note(s): $N = 543$; AI-HRM = Artificial intelligence-augmented human resource management; Interaction = AI-HRM digitization x Task discretion; Significance at: ** $p < 0.01$; *** $p < 0.001$

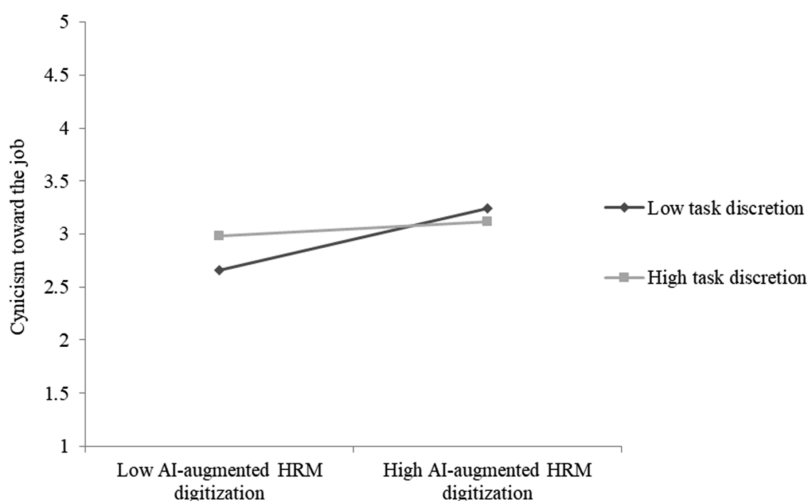


Figure 2. Interaction effect of AI-HRM digitization and task discretion on job-related cynicism

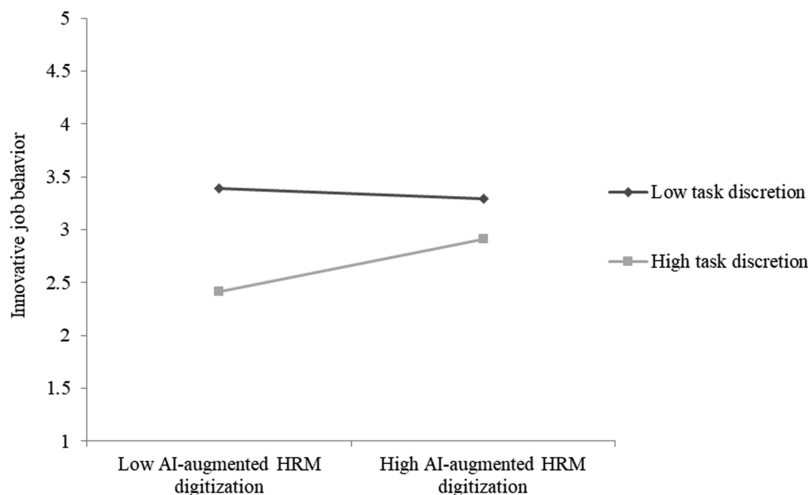


Figure 3. Interaction effect of AI-HRM digitization and task discretion on innovative job behavior

−0.01]) and strong, or more negative, when *task discretion* is low (indirect effect = −0.07, SE = 0.02, 95% CI [−0.11, −0.03]) (see Table 3). The index of the moderated mediation is also significant (index = 0.03, SE = 0.01, 95% CI [0.01, 0.06]), which can provide further support for H5. Similarly, the positive indirect effect of *AI-HRM digitization* on *employee performance* through *innovative job behavior* is strong when *task discretion* is high (indirect effect = 0.05, SE = 0.02, 95% CI [0.02, 0.09]) and nonsignificant when *task discretion* is low (indirect effect = 0.00, SE = 0.01, 95% CI [−0.03, 0.03]) (see Table 3). The index of the moderated mediation is significant (index = 0.04, SE = 0.02, 95% CI [0.01, 0.07]) and thus further supports H6.

Supplementary analysis

To further assess the robustness of the parallel mediation specification, we tested whether *job-related cynicism* and *innovative job behavior* exert directional effects on each other. The

Table 3. The moderated mediation results

Mediator	Effect	SE	BootLLCI	BootULCI
Job-related Cynicism (−1SD)	−0.07	0.02	−0.11	−0.03
Job-related Cynicism (M)	−0.05	0.02	−0.08	−0.02
Job-related Cynicism (+1SD)	−0.03	0.01	−0.06	−0.01
Index of moderated mediation				
Job-related Cynicism	0.03	0.01	0.01	0.06
Innovative job behavior (−1SD)	0.00	0.01	−0.03	0.03
Innovative job behavior (M)	0.02	0.01	0.00	0.05
Innovative job behavior (+1SD)	0.05	0.02	0.02	0.09
Index of moderated mediation				
Innovative job behavior	0.04	0.02	0.01	0.07

Note(s): N = 543; LLCI: lower level of the 95% confidence interval; ULCI: upper level of the 95% confidence interval

supplementary analysis shows no significant cross-paths, which supports their treatment as independent parallel mediators. The full results are reported in [Web Appendix A](#). Internet Research

General discussion

Theoretical implications

Our study advances theory at the intersection of AI-HRM digitization and employee outcomes in four important ways. First, our study develops and tests a contingent dual-pathway model that can explain why AI-HRM practices may have detrimental and beneficial consequences for employee performance. By combining P–E fit theory with sensemaking theory, we show that AI-HRM digitization should be understood as not inherently empowering or constraining. Employees may interpret digitized HRM processes as a threat to their role, autonomy, or expertise and thus may elicit defensive adjustment in the form of job-related cynicism. At the same time, employees may interpret the same digitized HRM processes as opportunities to learn, experiment, and improve work processes and thus may elicit proactive adjustment in the form of innovative job behavior. The reframing shifts the contribution of our study away from simply reconciling the mixed findings toward explaining why conflicting outcomes can coexist within the same AI-HRM context. Therefore, the mixed findings of the literature may reflect the simultaneous operation of different mechanisms and work design conditions that can shape their relative strength.

Second, our study specifies job-related cynicism as a central mechanism through which AI-HRM digitization can impair employee performance. When employees encounter AI-HRM procedures and analytics that appear to challenge their discretion, reduce transparency, or devalue human expertise, they may perceive diminished agency and a misalignment with the work environment, which is consistent with sensemaking theory. From a P–E fit perspective, such reactions reflect a perceived misfit between employees' needs, values, and capabilities and the digitally reconfigured HRM environment (Edwards *et al.*, 2006). Such perceived misfit can trigger defensive distancing, disengagement, and withdrawal. Job-related cynicism is performance depleting, because it can reduce employees' willingness to exert effort on and persist in difficult tasks, collaborate with others, and contribute to their organization beyond minimum role requirements. By highlighting the pathway, our study draws attention to an underemphasized downside of HRM digitization: Although AI-enabled systems are introduced to improve efficiency and decision quality, they may unintentionally signal reduced human judgment, increased monitoring, or diminished employee value and thus foster job-related cynicism and harm employee performance.

Third, our study illuminates a contrasting performance-enhancing mechanism by showing that AI-HRM digitization can stimulate innovative job behavior. In line with the constructive dimension of sensemaking, employees may interpret digitized HRM processes as opportunities to experiment, learn, and use data-driven insights to improve their task performance (Parker *et al.*, 2010; Weick, 1995). From a P–E fit standpoint, this finding reflects proactive adjustment: Employees will attempt to restore, maintain, or enhance their fit with the increasingly digitized work environment by adapting work methods and using AI-enabled information as a resource. In this sense, innovative job behavior is not only a desirable behavioral outcome but also a constructive response through which employees translate AI-HRM inputs into improved task execution and performance outcomes. This contribution extends research on proactive behavior in technology-enabled workplaces by demonstrating that AI-HRM digitization can increase employees' innovation and effectiveness when they interpret and use digital information constructively (De Jong and Den Hartog, 2007; Strohmeier, 2020).

Fourth, our moderated mediation results identify task discretion as a common boundary condition with asymmetric consequences for employees' defensive and proactive responses. When their task discretion is high, employees will have considerable latitude in interpreting AI-generated inputs, adapting digital recommendations to local task demands, and integrating

AI-enabled information into their work in ways that can preserve their competence, autonomy, and meaning. Under such conditions, the negative indirect effect through job-related cynicism is attenuated, whereas the positive indirect effect through innovative job behavior is strengthened. When their task discretion is low, employees will have limited room to question, adapt, or act on AI-HRM inputs. Thus, the cynicism-based indirect effect will intensify, whereas the innovation-based indirect effect will weaken or become nonsignificant. The findings demonstrate that work design can differentially strengthen and constrain the mechanisms through which employees respond to AI-HRM digitization. By identifying task discretion as a boundary condition, our study complements technology-centric explanations and shows that employee agency remains central to understanding the performance implications of AI-HRM systems.

Practical implications

Our findings can provide important guidance for managers who implement AI-HRM digitization. Organizations should recognize that AI-HRM systems can elicit simultaneous but opposing employee responses: job-related cynicism, which can undermine performance, and innovative job behavior, which can enhance performance. Therefore, managers should avoid assuming that the benefits of AI-HRM digitization will automatically outweigh its risks. Instead, managers should actively reduce employees' cynical interpretations by communicating how AI-generated recommendations are used, what decisions remain under human control, how data are handled, and when employees or supervisors can question, contextualize, or override AI-enabled outputs. Such practice is especially important for low-discretion roles, in which employees may likely experience AI-HRM digitization as being opaque, surveillance oriented, or controlling.

Managers should also treat task discretion as an implementation lever, rather than a background job characteristic. In low-discretion jobs, organizations should preserve employees' judgment whenever possible through bounded-use policies, clear decision rights, and structured feedback channels. In high-discretion roles, managers can strengthen the innovation pathway by creating space for experimentation, peer learning, and the use of AI-generated insights to improve work processes. Training should move beyond basic system use and help employees interpret AI-enabled outputs, evaluate their relevance, and translate them into problem-solving action. Furthermore, organizations should monitor employees' reactions throughout the AI-HRM digitization implementation through feedback mechanisms, supervisor conversations, and employee voice channels to identify unintended cynicism and address it before performance costs emerge.

Limitations and future directions

Our study has several limitations that can offer directions for future research. First, though our three-wave time-lagged multisource design can strengthen temporal separation and reduce common method concerns, our study is observational and does not permit definitive causal claims. Future research could use experimental, quasi-experimental, or long-term longitudinal designs to examine causality, reciprocal effects, and how employees' interpretations of AI-HRM digitization evolve over time. Second, though our study focused on task discretion as a key boundary condition, other contextual, job-level, and individual factors may also shape employees' response to AI-HRM systems. Future studies could examine factors such as leadership style, organizational culture, algorithmic fairness, transparency, psychological safety, job complexity, workload, and digital self-efficacy to clearly understand when AI-HRM digitization will elicit employees' cynicism or innovative job behavior.

Third, because our study collected the data in China, future research should replicate and extend the model across different cultural and institutional contexts in which employees may interpret algorithmic monitoring, AI-generated feedback, and managerial use of digital HRM data differently. Fourth, though our study examined job-related cynicism and innovative job

behavior as parallel mediators, future studies could explore additional mechanisms, such as perceived surveillance, trust in the management, psychological empowerment, job insecurity, identity threat, and algorithmic fairness, as well as whether pathways emerge sequentially over time. Finally, though our study focused on employee performance, future research could examine broader outcomes, including employee well-being, retention, team innovation, learning agility, ethical perceptions, and organizational adaptability. Qualitative approaches, such as interviews, diaries, or ethnographic studies, could also provide deep insights into how employees make sense of AI-HRM digitization in their everyday work.

Conclusion

Our study advances a contingent dual-pathway explanation for AI-HRM digitization and employee performance. By using three-wave time-lagged multisource data from employee-supervisor dyads in China, we show that AI-HRM digitization functions through two opposing pathways, that is, a detrimental pathway through job-related cynicism and a beneficial pathway through innovative job behavior, conditioned differently by task discretion. High task discretion can attenuate the cynicism-based pathway but strengthen the innovation-based pathway, whereas low task discretion can strengthen the cynicism-based pathway but constrain the innovation-based pathway. The findings can explain why AI-HRM initiatives may elicit mixed employee responses and highlight the importance of designing work systems that can maintain employees' discretion, support their sensemaking, and enable them to interpret AI-HRM digitization as experimentation and improvement, rather than disengagement.

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Supplementary material

The supplementary material for this article can be found online.

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