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Employee–AI collaboration and employee innovative behavior: The roles of AI self-efficacy and AI trust

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Abstract: Purpose: In the era of digital transformation, employee–artificial intelligence (AI) collaboration has become an increasingly important work pattern. However, its impact on employees’ innovative behavior remains unclear. Drawing on the social cognitive framework, this study aims to examine how employee–AI collaboration influences employees’ innovative behavior and to uncover the underlying mechanism. **Design/Methodology/Approach:** A 2 × 2 scenario-based experiment was conducted among employees from China. The experiment manipulated two factors: the level of employee–AI collaboration (high vs. low) and the level of AI trust (high vs. low). **Findings:** The results indicate that employee–AI collaboration has a positive effect on employees’ innovative behavior. AI self-efficacy mediates the relationship between employee–AI collaboration and innovative behavior. In addition, AI trust moderates this relationship. **Originality/Value:** This study extends the research on human–AI collaboration to the domain of employee innovation and reveals the cognitive mechanism and boundary condition underlying the influence of employee–AI collaboration on innovative behavior.

Keywords: employee–AI collaboration; innovative behavior; AI self-efficacy; AI trust

1. Introduction

In the case of particularly uncertain and rapidly changing competitive environment, employees’ innovative behavior has become the key to the company’s sustainable development and maintaining its competitive advantage (Ng, 2024). A growing number of corporations are discovering that their employees generate fresh ideas, experiment with novel approaches, and consistently push the envelope when it comes to innovation in their everyday tasks—forming the very lifeblood of organizational creativity. (Li et al., 2025). The innovative behavior of employees can not only enhance the firm’s problem-solving prowess and adaptability, but also be an important means to deal with technological changes and environmental complexity (Yang et al., 2024). Thus, understanding the why and how behind workers’ innovative actions has long been at the forefront of scholarly inquiries in the fields of organizational behavior and HRM. Research up to this point has primarily zeroed in on three key factors influencing employees’ innovative behavior mainly focused on leadership behavior (An et al., 2025; Liehr et al., 2024; Ma et al., 2025;), individual traits (Li et al., 2025; Zhou, 2024), and the environment they operate within (Dai et al., 2024; Farooqi et al., 2025; Zhu et al., 2025;). By studying these influencing factors from different angles, the previous research makes us more aware of how employees’ innovative behavior comes into being and develops, which lays a robust theoretical underpinning for the further study in this domain.

As organizations increasingly implement AI technologies, the contextual conditions under which employee innovative behavior emerges are undergoing profound transformation (Zang et al., 2024). Unlike traditional work settings that primarily relied on interpersonal interaction, AI has increasingly become an indispensable collaborative partner in employees' daily work. It is now deeply embedded in innovation-related tasks, including information analysis, solution generation, and decision support (Cai et al., 2025). Against this backdrop, employees no longer depend solely on personal experience or interpersonal resources to carry out innovative activities. Instead, they are required to accomplish highly uncertain and exploratory tasks through continuous interaction with AI systems. In this sense, AI implementation at work offers fresh perspective on understanding how employee innovative behavior develops and unfolds.

While an increasing body of research has begun to focus on how AI impacts employee innovation, the findings consistently reveal a distinctly two-sided impact. On one hand, AI enhances employees' innovative ability by improving information processing efficiency, expanding knowledge acquisition channels and supporting complex problem solving (Liang et al., 2022; Zang et al., 2024). On the other hand, the introduction of AI may weaken employees' sense of autonomy, lead to technical dependence and worry about uncertainty (Dong et al., 2024; Zhang et al., 2026), thus limiting their innovative behavior. In the past, most of the research started from the technical attributes or functional characteristics of AI, and paid attention to how these characteristics affected employees' attitudes and behaviors. However, they pay relatively little attention to the cooperative relationship between employees and AI systems in their daily work—particularly the variable of employee-AI collaboration. Against this backdrop, a small number of studies have begun to expand their research focus to the behavioral consequences of employee-AI collaboration. However, the findings in this area are equally complex. Research indicates that, on the one hand, employee-AI collaboration serves as a positive resource that can both alleviate employees' workloads—thereby promoting proactive behavior (Sun et al., 2025)—and contribute to employees' career sustainability (Kong et al., 2023); on the other hand, employee-AI collaboration may lead to increased feelings of loneliness and emotional exhaustion among employees, resulting in more counterproductive behaviors (Meng et al., 2025). However, there remains a research gap regarding whether employee-AI collaboration influences employees' innovative behaviors and the mechanisms underlying such effects.

Social cognitive theory posits that one's actions aren't merely shaped by external surroundings but are also deeply rooted in their personal perceptions of their own skills (Bandura, 1991). In the process of cooperation with AI, employees will continue to interact, learn and get feedback, and gradually believe that they can use AI to complete innovative tasks—this confidence is called AI self-efficacy (Zhou & Lyu, 2025). With this confidence, employees are more willing to embrace novel approaches when confronted with uncertain and challenging tasks, which makes it easier to make innovative behaviors. In addition, employees' trust in AI will also affect the effect of this mechanism. AI trust refers to the degree to which employees are willing to rely on AI systems and accept their suggestions under uncertain circumstances (Z. Li & Zhou, 2025). Greater employee trust in AI increases its

perceived reliability as a collaborative partner, so that they will have more positive experiences in the cooperation process, thus further enhancing their AI self-efficacy and stimulates their innovative behavior. On the contrary, if the trust in AI is low, the positive impact of cooperation between employees and AI may be weakened and inhibit employee innovation. Therefore, trust in AI may play a moderating role in the mechanism through which employee–AI collaboration influences employee innovative behavior.

Grounded in social cognitive theory, this investigation delves into how employees' collaboration with artificial shapes their innovative performance while identifying the contextual factors that moderate this connection. The study pursues three core objectives: initially, it examines the impact of human-AI partnership on innovative conduct; secondly, it unpacks the psychological processes that underpin this relationship; and finally, it seeks to pinpoint the boundary conditions that potentially amplify or diminish this effect. This study has several contributions: First, it enriches the theoretical framework of employee -AI cooperation by providing a new perspective on how AI integration affects employee behavior; Second, it reveals the psychological mechanism between employee -AI cooperation and innovative behavior, thus helping to understand how this cooperation translates into behavioral results. Third, it expands the existing research by finding out the boundary conditions for the operation of this mechanism, so that we can understand in more detail when and how the cooperation between employees and AI can promote innovation. These findings are very useful for enterprises undergoing digital and intelligent transformation, especially in optimizing employee collaboration mode and improving innovation ability in AI working environment.

2. Hypotheses

2.1. Employee-AI collaboration and innovative behavior

Employee's innovative behavior refers to that employees actively come up with new ideas, try new methods and push them to the ground in their work (Liu et al., 2025). In essence, innovative behavior is uncertain and risky, because it requires employees to voluntarily do things beyond the scope of their daily work (Ghlichlee & Larijani, 2024). Compared with completing tasks step by step, innovation usually requires constant exploration and continuous input of brain power and action. As artificial intelligence becomes increasingly prevalent in professional settings, the synergy between human workers and AI systems has emerged as a fertile ground for groundbreaking innovation. Employee-AI collaboration emphasizes that employees actively cooperate with AI system in the process of work and regard AI as a thinking helper and task partner. Through continuous interaction, employees and AI work together to solve those particularly complex and uncertain tasks (Kong et al., 2023). Through the lens of social cognitive theory, human actions stem from a dual influence: environmental factors combined with personal evaluations of potential outcomes and the perceived viability of those actions (Bandura, 1991). When employees cooperate with AI, the AI system can quickly process a large amount of information, generate various solutions, and help analyze complex problems. These abilities can help employees expand their cognitive scope and reduce the difficulty of

tasks (Liang et al., 2022). In this manner, staff members can gain a thorough grasp of the issue and brainstorm some creative and practical solutions in the initial stages of the innovation process. Nurturing innovative ideas often involves a bit of trial and error. AI delivers immediate feedback and guidance, empowering employees to embrace innovative approaches with greater assurance. This supportive cooperative environment can enhance employees' willingness to act and make them more willing to adopt exploratory and experimental work strategies, thereby fostering innovative practices. Consequently, the subsequent hypothesis is formulated:

H1: *Employee–AI collaboration is positively related to employee innovative behavior.*

2.2. The mediating role of AI self-efficacy

AI self-efficacy essentially captures an individual's belief in their own capacity to effectively navigate and become proficient with artificial intelligence technologies (Zhou & Lyu, 2025). Drawing from social cognitive theory, human actions aren't solely dictated by external circumstances; rather, they're shaped by how we perceive our own capabilities, with self-efficacy serving as the crucial psychological bridge between environmental influences and actual behavioral outcomes (Bandura, 1991). Self-efficacy is context-dependent and can be reinforced in specific situations through accumulated experience and feedback. As AI is more and more integrated into the workflow, employees will form a judgment after interacting with the AI system for a long time-whether they can effectively use AI to complete tasks, which is AI self-efficacy. As a cognitive state in human-AI collaboration contexts, AI self-efficacy plays a key mediating role between employee–AI collaboration and behavioral outcomes. In the process of cooperation between employees and AI, repeated contact and use of AI system can enable employees to accumulate experience and evaluate their technical ability, while also gaining vicarious experience and cognitive support through the feedback provided by the AI. This process of experience accumulation may improve AI's self-efficacy. When employees believe that they can understand, control and effectively use AI tools to complete complex tasks, the psychological pressure caused by technical uncertainty may be reduced. Based on this, staff possessing strong AI confidence demonstrate greater receptiveness to try new methods, explore different solutions, and invest continuous cognitive and behavioral resources in their work, thus promoting innovative behavior. Previous studies have also supported this mechanism, indicating that in the case of highly intelligent AI assistants, an employee's belief in their own capabilities plays a crucial mediating role in connecting AI features and workers' propensity for innovation when utilizing artificial intelligence (Yin et al., 2023).. Accordingly, the subsequent hypothesis is put forward:

H2: *AI self-efficacy mediates the relationship between employee–AI collaboration and employee innovative behavior.*

2.3. The moderating role of AI trust

AI trust refers to employees' overall trust and acceptance of its ability, reliability and intention when interacting with AI system (Li et al., 2025). As a

psychological judgment at the relational level, AI trust reflects how willing employees are to rely on and use the information, suggestions and decision support provided by AI in their work. In human-AI collaboration contexts, trust is regarded as a critical boundary condition influencing collaboration outcomes. Its role lies in shaping individuals' cognitive evaluations and behavioral responses toward AI, thereby influencing the process by which employee-AI collaboration translates into behavioral outcomes (Łapińska et al., 2021). Social cognitive theory posits that an individual's AI self-efficacy stems from the perception and internalization of external information. In contexts where employees collaborate with AI—which serves as a critical external information source—whether the information provided by AI can be internalized depends on the employees' level of trust in AI. When employees have a high level of trust in AI, they are willing to regard it as a reliable collaborative partner and actively adopt the information and suggestions it provides. They are more likely to receive positive feedback during the collaboration process, which in turn enhances their AI self-efficacy. AI self-efficacy boosts employees' confidence in using AI and encourages them to utilize it more actively to solve problems and generate new ideas, thereby enhancing their innovative behavior. Conversely, when employees have low levels of trust in AI, even with a high degree of employee-AI collaboration, they may remain skeptical of AI outputs, tending to avoid risks or limit their use of AI. This weakens the accumulation of experience during the collaboration process, hinders the development of AI self-efficacy, and ultimately suppresses employees' innovative behavior. Previous studies have also shown that in human-computer interaction, AI trust will affect the effect of environmental factors related to AI on employee performance and behavior results (Marimon et al., 2024). This finding lends credence to the current research by establishing AI trust as a critical moderating factor. Accordingly, the subsequent hypothesis is put forward:

H3: *AI trust positively moderates the indirect effect of employee-AI collaboration on employee innovative behavior via AI self-efficacy, such that the mediated relationship is stronger at higher levels of AI trust.*

In summary, this research puts forward a moderated mediation framework to examine the mechanism through which employee-AI collaboration influences employee innovative behavior. The conceptual model is presented in **Figure 1**.

3. Research design

3.1. Participants

This study used a 2×2 inter-group experimental design. We use situational materials to manipulate Employee-AI collaboration level (high vs low) and AI trust intensity (high vs low), so there are four experimental conditions. This design is to see the influence of cooperation between employees and AI on employees' innovative behavior, and to test the moderating effect of AI trust. Participants were recruited from a group of recent graduates at a university in Anhui Province. Participants were required to be currently employed individuals with some work experience, and all participants took part in this study on a voluntary basis. After reading the assigned experimental scenarios, they filled out the questionnaire. In order to ensure the data quality, we added an attention verification item, and the

questionnaire that failed the check or did not finish the answer will be eliminated and will not enter the final analysis.

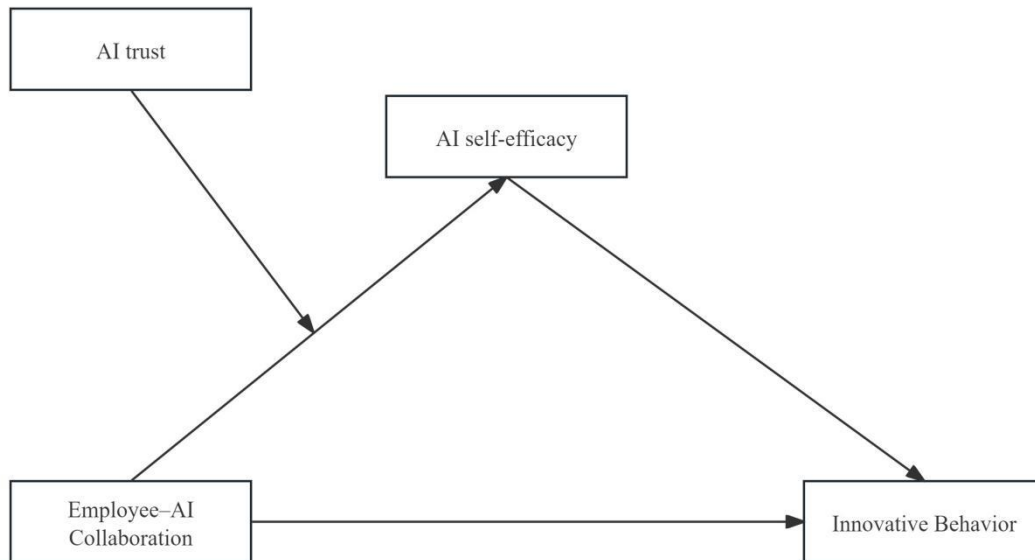


Figure 1. Research Model.

Before we started to collect data, we made a statistical power analysis with GPower software. According to the interaction effect of ANOVA between 2×2 subjects ($f = 0.25$, $\alpha = 0.05$, power = 0.80), it is calculated that at least 128 participants are needed. In order to enhance the statistical power and validate the data's accuracy, we expanded the participant pool and randomly assigned subjects to four experimental groups. After removing the invalid answers and the questionnaires that failed the attention check, 320 valid questionnaires remained for analysis. In the valid sample, a majority of the participants, to be precise, 54.1%, are male, while the remaining 45.9% are female. When it comes to age distribution, the lion's share, 32.8%, falls into the 25-and-under category, followed by those aged 26 to 30, who make up 41.6%. The 31 to 35 age bracket accounts for 17.2%, and the smallest segment, 8.4%, consists of individuals 36 and older. Regarding educational attainment, the bulk of the group, 61.9%, boasts a bachelor's degree, with 31.3% holding a master's. Participants come from different industries, including Finance, Information Services, Education, Healthcare, Business Services.

3.2. Procedure

This experiment was conducted through an online survey platform. Participants will be randomly assigned to one of four experimental conditions after entering the study. They should first read the corresponding scene description, and then follow the instructions to practice imagination to simulate the working environment with different employee -AI cooperation levels and AI trust levels. After completing the scene task, participants should answer the operation check questions and then fill in the formal questionnaire. In order to ensure the data quality, attention check questions were also inserted in the survey to find and eliminate careless or invalid

answers.

3.3. Experimental materials and manipulations

3.3.1. Scenario materials

The scenario materials for employee–AI collaboration were developed with reference to the employee–AI collaboration framework proposed by Kong et al. (2023). This framework includes several key workflows, such as decision support, forecast analysis, problem solving, information identification and evaluation, as well as opportunity and risk identification. In the case of a high degree of employee –AI collaboration, AI is described as deeply integrated into the employee’s workflow, continuously providing data analysis, decision support and problem solving assistance. On the contrary, in the case of low employee –AI cooperation, AI’s participation is very limited, only providing basic information support, and not really participating in the core task execution or decision-making process.

The scenario materials for AI trust were constructed based on the AI trust scale developed by Chowdhury et al. (2022), which measures the trust in AI from the aspects of system reliability, stability and output reliability. Under the condition of high AI trust, AI system is described as stable operation and reliable output, which can always provide high-quality analysis results and decision support, so employees are more willing to believe its suggestions. On the contrary, under the condition of low AI trust, the AI system is described as unstable, the output quality is unstable, and the reliability of the analysis results is limited, which leads employees to be more cautious about its suggestions in their work.

3.3.2. Experimental manipulations

This study employed a 2×2 between-subjects experimental design, manipulating employee–AI collaboration (high/low) and trust in AI (high/low) through contextual materials to form four experimental groups. To test the effectiveness of the contextual manipulation, this study conducted separate manipulation checks for employee–AI collaboration and trust in AI.

Manipulation Check for Employee–AI Collaboration: In order to test the effect of employee–AI collaboration, we used the employee–AI collaboration scale developed by Kong et al. (2023) and slightly changed it to make it more in line with the experimental scene. There are three questions: (1) “In the above scenario, AI plays a key role in completing the task.” (2) “In the above scenario, I rely on information or advice from AI to complete the task.” (3) “In the above scenario, AI is deeply involved in the process of completing the task.” The answer is a five-point Likert scale (1 = very different, 5 = very agree) ($\alpha = 0.830$).

Manipulation Check for AI Trust: In order to test the effect of AI trust manipulation, we used the questions in the AI trust scale developed by Chowdhury et al. (2022) and adjusted it according to the experimental situation. Four questions were used: (1) “In this scenario, I think the AI system is reliable.” (2) “In this scenario, I am willing to listen to the advice of the AI system at work.” (3) “In this scenario, I think the AI system can help me complete my work tasks stably and reliably.” (4) “In this scenario, I trust the overall performance of the AI system.” All questions were scored with a five-level Likert scale (1 = very different, 5 = very

agree) ($\alpha = 0.880$).

3.4. Measures

All variables are measured by the mature scale that has been verified in previous studies. In order to facilitate China employees to fill in the questionnaires, these scales have undergone a strict translation and back translation process (Brislin, 1970). Specifically, a bilingual researcher with a background in management first translated the English scales into Chinese. Subsequently, another bilingual researcher who had not seen the original scales performed a back-translation. Finally, the original English version and the back-translated version were compared, and items with discrepancies were revised to ensure semantic consistency. All the questions were scored by Likert five-level scale with a score of 1 (very different) to 5 (very different).

- (1) AI self-efficacy. AI self-efficacy is a four-question scale developed by Zhou and Lyu(2025). For example, there is a topic: “I believe that if AI becomes part of my work, I can learn to use it” ($\alpha = 0.864$).
- (2) Employees’ innovative behavior. Employees’ innovative behavior is measured by the six-question scale developed by Scott and Bruce(1994). The representative topics are: “I often come up with creative ideas in my work” ($\alpha = 0.892$).

4. Empirical analysis

4.1. Experimental testing

4.1.1. Pre-assessment of scenario materials

To evaluate the perceived authenticity, vividness, and plausibility of each scenario, this study conducted a pre-assessment of the scenario materials. The pre-assessment sample was drawn from a different group of participants than the formal experiment and was recruited via an online survey platform. The sample size for the pre-test was determined based on the recommendations of Johanson and Brooks (2010). Therefore, 12 participants were recruited for each scenario in this study, totaling 48 participants. Authenticity, vividness, and plausibility were all assessed using single-item measures, with all items rated on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). The specific items are as follows: ① Realism: This scenario could occur in real life; ② Vividness: I can clearly visualize this scenario; ③ Plausibility: The description of this scenario is plausible. The results of the pilot test are shown in **Table 1**. The results indicate that the mean scores for realism, vividness, and plausibility across all scenarios ranged from 3.67 to 4.33, indicating a high level of acceptance. This suggests that the scenario materials were well understood and accepted, providing a solid foundation for the formal experiment.

Table 1. Predicted Results for Scenario Materials.

Scenario	Authenticity M (SD)	Vividness M (SD)	Plausibility M (SD)
High Employee-AI Collaboration × High AI Trust	4.17 (0.72)	4.33 (0.65)	4.25 (0.75)
High Employee-AI Collaboration × Low AI Trust	3.83 (0.39)	3.67 (0.49)	3.92 (0.29)
Low Employee-AI Collaboration × High AI Trust	3.67 (0.49)	3.83 (0.39)	3.83 (0.39)
Low Employee-AI Collaboration × Low AI Trust	3.75 (0.62)	3.67 (0.65)	3.67 (0.65)

4.1.2. Manipulation check

In order to see whether the experimental operation is successful, we have done independent sample *t*-test on employee-AI collaboration and AI trust. The results can be seen in **Table 2**. Under the condition of high collaboration, people think that the level of employee-AI collaboration is obviously higher than that under the condition of low collaboration ($t = -5.62, p < 0.001$). Similarly, under the condition of high AI trust, the level of AI trust reported by participants was significantly higher than that under the condition of low AI trust ($t = -8.04, p < 0.001$). These findings show that the experimental operation is effective.

Table 2. Results of Independent-Samples *t*-Tests.

	Mean ± SD		<i>t</i>	<i>p</i>
	Low (<i>n</i> = 161)	High (<i>n</i> = 159)		
Employee-AI collaboration manipulation check	3.44 ± 1.19	4.07 ± 0.78	-5.62	***
AI trust manipulation check	3.18 ± 1.20	4.02 ± 0.57	-8.04	***

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.1.3. Analysis of variance

To test the causal effects of the experimental manipulations and the underlying hypotheses, this study first conducted an analysis of variance (ANOVA) based on a 2×2 experimental design. The experimental variables were coded as follows: both employee-AI collaboration and AI trust were binary experimental manipulations, coded using dummy variables (low level = 1, high level = 2). Building on this, an interaction term (Employee-AI Collaboration × AI Trust) was constructed to test for moderating effects. **Table 3** presents the means and standard deviations for each experimental condition, while **Table 4** provides the ANOVA results for main and interaction effects.

Analysis of AI self-efficacy revealed a significant main effect of employee-AI collaboration ($F = 45.64, p < 0.001, \eta^2 = 0.126$), indicating that participants' AI self-efficacy was significantly higher under high collaboration conditions than under low collaboration conditions; the main effect of AI trust was also significant ($F = 74.44, p < 0.001, \eta^2 = 0.191$), indicating that participants' self-efficacy significantly increased in high AI trust conditions. Furthermore, the interaction effect between employee-AI collaboration and AI trust was significant ($F = 7.45, p = 0.007, \eta^2 = 0.023$), indicating that AI trust amplified the positive impact of employee-AI collaboration on AI self-efficacy.

Table 3. Means and Standard Deviations of AI Self-Efficacy and Employee Innovative Behavior Under Different Experimental Conditions.

Dependent variable	Employee–AI collaboration group	AI trust group	M	SD
AI Self-Efficacy	Low	Low	2.96	1.31
	Low	High	3.58	1.02
	High	Low	3.38	0.75
	High	High	4.57	0.39
Innovative Behavior	Low	Low	3.04	1.13
	Low	High	3.46	0.92
	High	Low	3.37	0.83
	High	High	4.34	0.33

Table 4. Results of Analysis of Variance.

Dependent variable	Source of effect	F	p	η^2
AI Self-Efficacy	Employee-AI Collaboration	45.64	<0.001	0.126
	AI Trust	74.44	<0.001	0.191
	Employee-AI Collaboration $\times$ AI Trust	7.45	0.007	0.023
Innovative Behavior	Employee-AI Collaboration	39.2	<0.001	0.110
	AI Trust	52.04	<0.001	0.141
	Employee-AI Collaboration $\times$ AI Trust	8.25	0.004	0.025

Analysis of employee innovation behavior revealed that the main effect of employee–AI collaboration was significant ($F = 39.20$, $p < 0.001$, $\eta^2 = 0.110$), the main effect of AI trust was significant ($F = 52.04$, $p < 0.001$, $\eta^2 = 0.141$), and the interaction effect between the two was significant ($F = 8.25$, $p = 0.004$, $\eta^2 = 0.025$). Combining the mean values in **Table 5** reveals that, under conditions of high AI trust, the innovation behavior of the high employee–AI collaboration group was significantly higher than that of the low collaboration group, whereas under conditions of low AI trust, this difference was relatively weaker. This further illustrates that AI trust plays an enhancing role in the relationship between employee–AI collaboration and innovation behavior. The above results provide support for subsequent tests.

4.2. Mechanism validation

4.2.1. Confirmatory factor analysis

To test the reliability and validity of the scale, this study conducted a validation of the measurement indicators for AI self-efficacy and employee innovative behavior. The results indicate that the constructed measurement model fits well ($\chi^2/df = 1.581$, GFI = 0.969, AGFI = 0.950, CFI = 0.988, TLI = 0.984, RMSEA = 0.043), with all indices meeting recommended standards, suggesting that the scale possesses good construct validity. In contrast, the single-factor model exhibited significantly poorer fit ($\chi^2/df = 12.745$, GFI = 0.723, AGFI = 0.564, CFI = 0.748, TLI = 0.676, RMSEA = 0.192), further supporting the discriminant validity of the latent variables measured by the scale.

Table 5. Model Fit Indices.

Common Indices	χ^2	df	χ^2/df	GFI	RMSEA	AGFI	CFI	NFI	TLI
Two-factor	53.748	34	1.581	0.969	0.043	0.95	0.988	0.968	0.984
Single-factor	446.075	35	12.745	0.723	0.192	0.564	0.748	0.734	0.676

4.2.2. Descriptive statistics and correlation analysis

The descriptive statistics and correlation coefficients for the primary variables are presented in **Table 6**. A noteworthy positive association emerges between AI self-efficacy and employee innovative behavior ($r = 0.467$, $p < 0.001$). The correlations between the control variables and the core variables were generally low, and no serious multicollinearity issues were found, laying the groundwork for our subsequent hypothesis examinations.

Table 6. Descriptive Statistics and Correlations.

	Mean	SD	1	2	3	4	5	6
1 Gender	1.46	0.5	1					
2 Age	1.92	0.81	0.043	1				
3 Education level	2.38	0.9	0.078	−0.006	1			
4 Industry type	3.52	1.68	−0.006	−0.021	−0.047	1		
5 AI self-efficacy	3.61	1.1	−0.061	−0.017	−0.065	0.002	1	
6 Employee innovative behavior	3.54	0.98	−0.066	0.014	−0.097	0.012	0.467***	1

Note: N = 320, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.2.3. Hypothesis testing

Building on the coding and grouping of experimental variables from the ANOVA analysis described above, we conducted further mechanism tests. Employee–AI collaboration and trust in AI were treated as experimental variables, using the same coding scheme as in the ANOVA (low level = 1, high level = 2), and were analyzed using regression and PROCESS analyses. A regression analysis was employed to gauge the direct influence of employee–AI collaboration on their innovative behavior. The findings are detailed in **Table 7**. Employee–AI collaboration had a significant positive effect on AI self-efficacy ($M1$, $\beta = 0.711$, $p < 0.001$). In addition, employee–AI collaboration also had a significant positive effect on employee innovative behavior ($M2$, $\beta = 0.602$, $p < 0.001$), supporting H1. After including AI self-efficacy in the model, AI self-efficacy showed a significant positive effect on employee innovative behavior ($M3$, $\beta = 0.358$, $p < 0.001$). Meanwhile, the regression coefficient of employee–AI collaboration on employee innovative behavior decreased from 0.602 to 0.347 but remained statistically significant ($p < 0.001$), indicating that AI self-efficacy may play a mediating role in the relationship between employee–AI collaboration and employee innovative behavior.

To further test the mediating effect, a bootstrap analysis based on PROCESS Model 4 with 5,000 resamples was conducted. The results are reported in **Table 8**. The total effect of employee–AI collaboration on employee innovative behavior was significant (Effect = 0.602, 95% CI [0.396, 0.807]). After including AI self-efficacy in the model, the direct effect of employee–AI collaboration on employee innovative

behavior remained significant (Effect = 0.347, 95% CI [0.148, 0.546]). Meanwhile, employee–AI collaboration exerted a significant indirect effect on employee innovative behavior through AI self-efficacy (Effect = 0.255, 95% CI [0.151, 0.376]). Because the confidence interval did not include zero, the mediating effect of AI self-efficacy was supported. Therefore, AI self-efficacy partially mediated the relationship between employee–AI collaboration and employee innovative behavior, supporting H2.

Table 7. Results of Regression Analysis.

Variables	AI self-efficacy	Employee innovative behavior	Employee innovative behavior
	M1	M2	M3
Constant	2.983***	3.028***	1.961***
Employee–AI Collaboration	0.711***	0.602***	0.347***
AI Self-Efficacy	—	—	0.358***
Gender	−0.165	−0.151	−0.092
Age	−0.031	0.011	0.022
Education Level	−0.064	−0.091	−0.068
Industry Type	0.004	0.009	0.008
R ²	0.111	0.107	0.252
Adjusted R ²	0.097	0.093	0.237
F	7.849***	7.544***	17.560***

Note: 1. Unstandardized regression coefficients (B) are reported.; 2 * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 8. Results of the Mediation Effect.

Effect type	Path	Effect	BootSE	BootLLCI	BootULCI
Total Effect	Employee-AI Collaboration→Employee Innovative Behavior	0.602***	0.105	0.396	0.807
Direct Effect	Employee-AI Collaboration→Employee Innovative Behavior	0.347***	0.101	0.148	0.546
Indirect Effect	Employee-AI Collaboration→AI Self-Efficacy→Employee Innovative Behavior	0.255	0.057	0.151	0.376

Note: 1. Unstandardized regression coefficients (B) are reported. 2. Bias-corrected percentile Bootstrap method with 5,000 resamples was used. 3. $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The moderating role of AI trust was examined using the PROCESS macro (Model 8). As shown in **Table 9**, after controlling for gender, age, education level, and industry type, the interaction term between employee–AI collaboration and AI trust had a significant effect on AI self-efficacy ($B = 0.604$, $p < 0.01$). This result indicates that AI trust significantly moderates the relationship between employee–AI collaboration and AI self-efficacy. Further simple slope analysis shows that when the level of AI trust is high, the positive effect of employee-AI collaboration on AI self-efficacy becomes stronger; when AI trust is low, this effect becomes relatively weaker. These findings show that the higher employees’ trust in AI system, the more cooperation between employees and AI can promote AI self-efficacy, which supports H3.

Further examination of the moderating effect across different levels of AI trust is shown in **Table 10**. When the trust level of AI is low, the indirect effect of employee -AI collaboration on employee innovation behavior through AI

self-efficacy is 0.1017, and the 95% confidence interval is [0.0174, 0.2135]. When the trust level of AI is high, the indirect effect increases to 0.2494, and the 95% confidence interval is [0.1315, 0.3757]. Because these two confidence intervals do not contain 0, it shows that the mediation effect is significant at both high and low levels of AI trust. Further testing the index of mediating effect, the result is 0.1477, and the 95% self-help confidence interval is [0.0420, 0.2703], which does not include 0. This shows that AI trust significantly enhances the indirect effect of employee -AI collaboration on employee innovation behavior through AI self-efficacy. In other words, AI trust plays a significant regulatory role in this mediation process, thus supporting hypothesis H3.

Table 9. Moderation Effect Regression Results.

Variables	AI self-efficacy	Employee Innovative behavior
Constant	2.688	2.375
Employee–AI Collaboration	−0.188	−0.205
AI Trust	0.007	−0.156
Employee–AI Collaboration × AI Trust	0.604**	0.425*
Gender	−0.131	−0.094
Age	0.004	0.035
Education Level	−0.051	−0.067
Industry Type	0.043	0.030
R ²	0.296	0.308
Adjusted R ²	0.280	0.290
F value	18.733***	17.263***

Note: 1. Unstandardized regression coefficients (B) are reported. 2* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

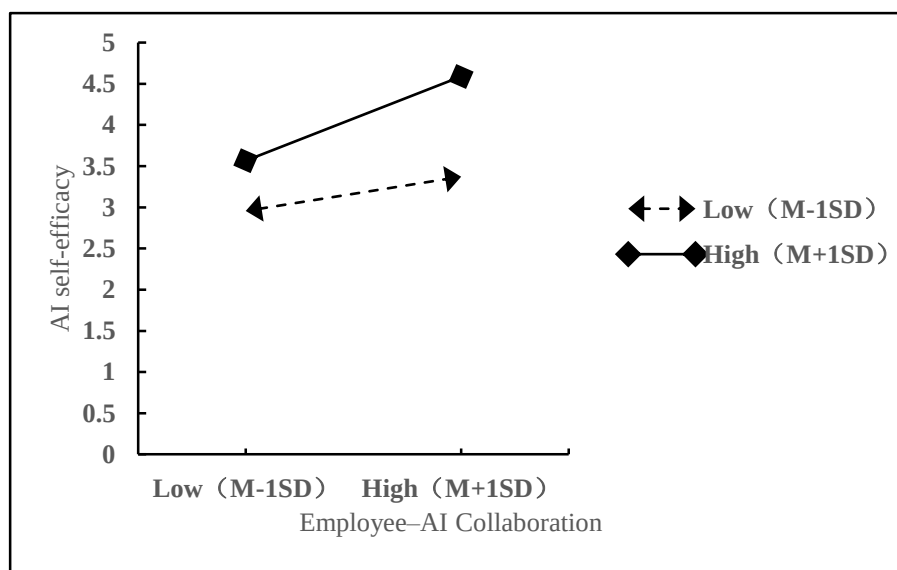


Figure 2. Simple slope of the moderating effect of AI trust on the relationship between employee–AI collaboration and AI self-efficacy.

Table 10. Conditional Indirect Effects at Different Levels of AI Trust.

Level of AI trust	Effect	BootSE	BootLLCI	BootULCI
Low (−1 SD)	0.1017	0.0504	0.0174	0.2135
High (+1 SD)	0.2494	0.0621	0.1315	0.3757
Index of Moderated Mediation	0.1477	0.0582	0.042	0.2703

Note: Bias-corrected percentile Bootstrap method with 5,000 resamples was used.

5. Discussion

This study used social cognitive theory and made a 2×2 situational experiment to see how employees working with AI affect their innovative behavior. The results show that AI self-efficacy plays an intermediary role between employee–AI collaboration and innovation behavior, and AI trust is a boundary condition that affects this mechanism.

First, employee–AI collaboration exerts a positive effect on employee innovative behavior. It is found that when the cooperation between employees and AI is improved, the innovation behavior will also increase. This result is consistent with the core view of social cognitive theory, that is, personal behavior will be influenced by the interaction between environmental factors and cognitive processes (Bandura, 1991). In the case of cooperation between employees and AI, AI is not only a technical tool, but also provides information support, task help and decision feedback. These supports can reduce the workload, release cognitive resources, and enable employees to spend more energy and time on innovative activities. These findings are consistent with previous studies. Existing research shows that cooperation with AI can reduce the workload of employees, improve their performance, and make them more proactive (Sun et al., 2025; Wan & Jiang, 2025), while reducing the behavior of fishing (Xu et al., 2025). In addition, the use of AI can also promote employees' innovative behavior through cognitive evaluation mechanism (Qian et al., 2025; Zang et al., 2024).

Second, the mediating role of AI self-efficacy has been supported. The results show that AI self-efficacy plays an intermediary role between employees' collaboration with AI and employees' innovative behavior. This discovery shows that the ability and belief cultivated by employees through interaction with AI is the key psychological mechanism behind their innovative behavior (Chang et al., 2024). According to social cognitive theory, self-efficacy is the core cognitive factor that affects individual behavior choice, hard work and persistence. When employees accumulate successful experience and get positive feedback in the process of cooperation with AI, their confidence in their ability to complete tasks with AI will be enhanced (Han et al., 2025). Therefore, they are more willing to try new working methods and participate in innovative activities. Moreover, the higher the AI self-efficacy, the less anxiety caused by technical uncertainty, and the more psychological security employees feel when facing complex tasks, so they are more willing to innovate. From this perspective, the cooperation between employees and AI can not only directly provide information and task support to promote innovation, but also indirectly promote innovative behavior by enhancing employees' confidence

in “using AI well”. These findings are consistent with previous studies, indicating that technology-related self-efficacy is very important between AI use and innovative behavior-for example, Jeong(2025) found that it can affect employee innovation through job design.

Third, the moderating effect of AI trust has been verified. AI trust not only regulates the direct relationship between employee -AI collaboration and employee’s innovative behavior, but also strengthens the indirect influence of employee -AI collaboration on innovative behavior through AI self-efficacy. The degree of employees’ trust in AI system is an important boundary condition that affects their behavioral response (Duong et al., 2025). When employees have a high degree of trust in AI, they are more likely to accept the information and suggestions provided by the system and rely on AI for decision support in their work. In this way, they can make better use of AI-related resources to participate in innovation activities (Khassawneh et al., 2026; Li et al., 2025). Conversely, if employees don’t trust AI, they may reduce their dependence on the system because they are afraid of risks or feel too uncertain, even if the company actually supports them to cooperate with AI. In this way, the positive impact of employee and AI cooperation on innovation behavior is weakened. This finding is consistent with previous research, which shows that people’s trust in intelligent technology will greatly affect the use effect of technology (Kong et al., 2023). In the environment of man-machine cooperation, trust is generally regarded as a key factor, which can determine the behavior and reaction of employees.

6. Conclusions and implications

6.1. Conclusions

This research analyzes how the cooperation employee -AI cooperation affects their innovative behavior. The findings are as follows: First, the cooperation between employees and AI has a positive effect on innovation behavior-the more employees cooperate with AI, the more willing employees are to participate in innovation activities. Second, AI self-efficacy plays an intermediary role between employee -AI cooperation and innovative behavior. Specifically, cooperation with AI can enhance employees’ confidence in their ability to use AI, thus promoting innovative behavior. Third, AI trust plays an important role in this process. On the one hand, AI trust significantly regulates the direct relationship between employee -AI cooperation and innovation behavior; On the other hand, AI trust further moderates the indirect influence of employee -AI cooperation on innovation behavior through AI self-efficacy.

6.2. Theoretical contributions

First, this study expands the range of outcome variables and theoretical perspectives in research on human–AI collaboration. Existing studies have primarily focused on the impact of human–AI collaboration on individual employees’ career sustainability (Kong et al., 2023), counterproductive behavior (Meng et al., 2025), and proactive behavior (Sun et al., 2025), largely remaining at the level of general behavioral outcomes. In contrast, how innovative behavior-a complex phenomenon that relies on brains and risks-is formed in the AI environment is still uncertain. By

putting the cooperation between employees and AI into the research framework of innovative behavior, our research fills the gaps in the existing literature, expands the theoretical scope of employee-AI cooperation research, and makes us better understand the mechanism behind employees' innovative behavior in the AI environment.

Second, from the perspective of social cognitive theory, this study reveals the cognitive mechanisms through which employee-AI collaboration influences innovative behavior, enriching the explanation of the role of self-efficacy in AI work contexts. Unlike traditional research, which views self-efficacy as a relatively stable individual trait, this study emphasizes that in employee-AI collaboration contexts, individuals dynamically construct their AI self-efficacy by gaining experiences of control and feedback through interactions with AI. This finding indicates that self-efficacy is not only a variable of individual differences but also an important cognitive resource that can be activated by the human-AI collaboration process, thereby expanding the application of social cognitive theory in intelligent work contexts.

Third, by taking AI trust as a key situational variable, this study reveals the boundary conditions of man-machine cooperation and deepens our understanding of trust mechanism in AI environment. Although the existing research usually examines the direct influence of AI trust from the perspective of technology acceptance, this study puts it in the process of employee-AI collaboration and studies its moderating effect on collaboration results. The results show that trust not only affects whether employees use AI, but also affects the intensity of human-computer cooperation on employee behavior results. This discovery expands the theoretical significance of AI trust from the perspective of relationship.

6.3. Practical implications

First, as companies promote their digital transformation, they should shift their focus from "technology adoption" to "optimizing human-ai collaboration", so as to make full use of the role of cooperation between employees and AI in stimulating innovative behavior. Cooperation between employees and AI is not just a way to use tools; It is also an important working environment, which can affect the behavior of employees. Therefore, the company should optimize the process of task allocation and human-AI collaboration, and give employees more opportunities to interact with AI deeply at work, thus releasing their innovation potential.

Second, when using AI, enterprises should put employees' feelings of use in an important position, especially to improve their AI self-efficacy. AI self-efficacy plays a key intermediary role between human and AI cooperation and innovation behavior; In other words, whether employees believe that "they can effectively use AI to complete tasks" is an important factor affecting innovation. Therefore, the company should not only provide technical training, but also enhance employees' confidence in their AI capabilities through practical learning, excellent cases and positive feedback.

Third, the company should focus on building the trust of cooperation between people and AI, so as to make good use of the benefits brought by this cooperation.

Trust in AI can make people more willing to try new things when working with AI. Therefore, when the company introduces AI system, it should reduce employees' uncertainty about this technology by improving the transparency of the system, making the algorithm easier to understand and strengthening communication, so as to establish a healthy trust relationship between people and AI.

6.4. Limitations and future research

Although this study systematically analyzes the influence of cooperation between employees and AI on employees' innovative behavior through 2×2 scenario experiment design, there are still several places to pay attention to. First, the study relied on self-reports to measure both the mediating and dependent variables. Such measurements may be influenced by individual personality traits rather than purely situational reactions, which could impose certain limitations on the findings. Future research could employ measures of situational reflection or behavioral intention. Second, self-reported data may be subject to common-method bias. Although the risk of such bias was partially mitigated through procedures such as anonymous questionnaires and experimental manipulation, future studies could further validate the results using data collected at multiple time points. Third, this study did not conduct a comprehensive pilot test prior to the formal experiment; instead, it merely assessed the authenticity, vividness, and plausibility of the scenario materials. This may have compromised the study's scientific rigor; in future studies, a comprehensive pilot test should be included to ensure scientific rigor.

Conflict of interest: The authors declare they have no competing interests.

Reference

- An, W., & Hu, L. (2025). The role of leader humor and employee innovative behavior: Dancing with job stressors. *Social Behavior and Personality an International Journal*, 53(8), 1–15. <https://doi.org/10.2224/sbp.14284>
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50(2), 248–287. [https://doi.org/10.1016/0749-5978\(91\)90022-L](https://doi.org/10.1016/0749-5978(91)90022-L)
- Brislin, R. W. (1970). Back-Translation for Cross-Cultural Research. *Journal of Cross-Cultural Psychology*, 1(3), 185–216. <https://doi.org/10.1177/135910457000100301>
- Cai, H., Ge, Y., & Zhao, H. (2025). How AI-Related Task Complexity Shapes Innovative work Behavior: A Coping Theory perspective. *Behavioral Sciences*, 15(11), 1467. <https://doi.org/10.3390/bs15111467>
- Chang, P., Zhang, W., Cai, Q., et al. (2024). Does AI-Driven technostress promote or hinder employees' artificial intelligence adoption intention? A moderated mediation model of affective reactions and technical Self-Efficacy. *Psychology Research and Behavior Management*, 17, 413–427. <https://doi.org/10.2147/prbm.s441444>
- Chowdhury, S., Budhwar, P., Dey, P. K., et al. (2022). AI-employee collaboration and business performance: Integrating knowledge-based view, socio-technical systems and organisational socialisation framework. *Journal of Business Research*, 144, 31–49. <https://doi.org/10.1016/j.jbusres.2022.01.069>
- Dai, Y., & Hou, J. (2024). Negative workplace gossip and employees' innovative behaviors: The role of psychological resilience. *Social Behavior and Personality an International Journal*, 52(8), 1–12. <https://doi.org/10.2224/sbp.13387>
- Dong, X., Tian, Y., He, M., et al. (2024). When knowledge workers meet AI? The double-edged sword effects of AI adoption on innovative work behavior. *Journal of Knowledge Management*, 29(1), 113–147. <https://doi.org/10.1108/jkm-02-2024-0222>
- Duong, N., Hung, H. N., An, N. H., et al. (2025). Psychological drivers of employee-ai collaboration and career sustainability: The role of trust, threat, and protean orientation. *Acta Psychologica*, 262, 106074. <https://doi.org/10.1016/j.actpsy.2025.106074>
- Farooqi, A. S., Song, D., Yin, Y., et al. (2025). Always good for innovation? Investigating when and why high-performance work

- systems promote versus inhibit employees' innovative behavior. *Employee Relations*, 47(1), 217–236.
<https://doi.org/10.1108/er-03-2024-0151>
- Ghlichlee, B., & Larijani, M. M. (2024). Servant leadership and knowledge employee performance: the mediating role of employee innovative behavior in knowledge-based firms. *Leadership & Organization Development Journal*, 45(3), 544–558.
<https://doi.org/10.1108/lodj-08-2023-0428>
- Han, Z., Song, G., Zhang, Y., et al. (2025). Trust the Machine or Trust Yourself: How AI Usage Reshapes Employee Self-Efficacy and Willingness to Take Risks. *Behavioral Sciences*, 15(8), 1046. <https://doi.org/10.3390/bs15081046>
- Jeong, J. (2025). The innovative side of AI adoption in South Korea: how job crafting and technology self-efficacy influence employee innovative work behaviour. *Asia Pacific Business Review*, 1–34. <https://doi.org/10.1080/13602381.2025.2562901>
- Johanson, G. A., & Brooks, G. P. (2009). Initial Scale development: sample size for pilot studies. *Educational and Psychological Measurement*, 70(3), 394–400. <https://doi.org/10.1177/0013164409355692>
- Khassawneh, O., Mohammad, T., & Tabche, I. (2026). Delegating to the algorithm: how AI-driven leadership shapes bias perceptions, trust and emotional disengagement in the workplace. *Leadership & Organization Development Journal*, 1–18.
<https://doi.org/10.1108/lodj-06-2025-0406>
- Kong, H., Yin, Z., Baruch, Y., et al. (2023). The impact of trust in AI on career sustainability: The role of employee–AI collaboration and protean career orientation. *Journal of Vocational Behavior*, 146, 103928.
<https://doi.org/10.1016/j.jvb.2023.103928>
- Li, C., Fang, Y., & Li, H. (2025). Perceived overqualification and innovative behavior in Chinese employees. *Social Behavior and Personality an International Journal*, 53(7), 1–12. <https://doi.org/10.2224/sbp.14408>
- Li, Z., & Zhou, Y. (2025). Starting with trust: unraveling the impact of AI trust on employee digital performance. *Baltic Journal of Management*, 20(5), 637–655. <https://doi.org/10.1108/bjm-03-2025-0177>
- Liang, X., Guo, G., Shu, L., et al. (2022). Investigating the double-edged sword effect of AI awareness on employee's service innovative behavior. *Tourism Management*, 92, 104564. <https://doi.org/10.1016/j.tourman.2022.104564>
- Liehr, J., & Hauff, S. (2024). Promoting employees' innovative work behavior through innovation-specific leader behavior: An AMO-approach. *Journal of Management & Organization*, 31(1), 215–232. <https://doi.org/10.1017/jmo.2024.57>
- Liu, Y., Houghton, J. D., Chen, S., et al. (2025). Differential leadership, employee dynamic capabilities, and innovative behavior: employees' power distance orientation matters. *Baltic Journal of Management*, 21(1), 36–56.
<https://doi.org/10.1108/bjm-01-2025-0076>
- Łapińska, J., Escher, I., Górka, J., et al. (2021). Employees' trust in artificial intelligence in companies: the case of energy and chemical industries in Poland. *Energies*, 14(7), 1942. <https://doi.org/10.3390/en14071942>
- Ma, Q., & Zhou, H. (2025). Leaders' expectations of innovation and employees' innovative behavior: The roles of employees' expected positive performance outcomes and innovative self-efficacy. *Journal of Psychology in Africa*, 35(1), 7–19.
<https://doi.org/10.32604/jpa.2025.065775>
- Marimon, F., Mas-Machuca, M., & Akhmedova, A. (2024). Trusting in Generative AI: Catalyst for employee performance and engagement in the workplace. *International Journal of Human-Computer Interaction*, 41(11), 7076–7091.
<https://doi.org/10.1080/10447318.2024.2388482>
- Meng, Q., Wu, T., Duan, W., et al. (2025). Effects of Employee–Artificial Intelligence (AI) Collaboration on Counterproductive Work Behaviors (CWBS): Leader emotional support as a moderator. *Behavioral Sciences*, 15(5), 696.
<https://doi.org/10.3390/bs15050696>
- Ng, T. W. (2024). Workplace hurdles and innovative behavior: A meta-analysis. *Journal of Vocational Behavior*, 149, 103968.
<https://doi.org/10.1016/j.jvb.2024.103968>
- Qian, J., Chen, J., & Zhao, S. (2025). “Remaining Vigilant” while “Enjoying Prosperity”: How Artificial intelligence usage impacts employees' innovative behavior and proactive skill development. *Behavioral Sciences*, 15(4), 465.
<https://doi.org/10.3390/bs15040465>
- Scott, S. G., & Bruce, R. A. (1994). Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace. *Academy of Management Journal*, 37(3), 580–607. <https://doi.org/10.2307/256701>
- Sun, C., Zhao, X., Guo, B., et al. (2025). Will Employee–AI collaboration enhance employees' proactive behavior? A study based on the Conservation of Resources theory. *Behavioral Sciences*, 15(5), 648. <https://doi.org/10.3390/bs15050648>
- Wan, S., & Jiang, Y. (2025). AI-driven, human–AI collaboration, and employee performance: The roles of digital finance. *Finance Research Letters*, 90, 109292. <https://doi.org/10.1016/j.frl.2025.109292>

- Xu, J., Wu, T., Duan, W., et al. (2025). How the Human–Artificial Intelligence (AI) Collaboration Affects Cyberloafing: An AI Identity Perspective. *Behavioral Sciences*, 15(7), 859. <https://doi.org/10.3390/bs15070859>
- Yang, C., Jin, H., & Zhang, C. (2024). The influence of leaders' collectivist orientation on employees' innovative behavior. *Leadership & Organization Development Journal*, 45(5), 899–918. <https://doi.org/10.1108/lodj-09-2023-0528>
- Yin, M., Jiang, S., & Niu, X. (2023). Can AI really help? The double-edged sword effect of AI assistant on employees' innovation behavior. *Computers in Human Behavior*, 150, 107987. <https://doi.org/10.1016/j.chb.2023.107987>
- Zang, J., Shao, Q., & Li, H. (2024). Challenge and hindrance: Yin and Yang paths of AI usage's effects on Chinese employee innovative behaviour. *Asia Pacific Business Review*, 1–27. <https://doi.org/10.1080/13602381.2024.2367526>
- Zhang, Y., Chen, X., & Wei, S. (2026). How does AI knowledge empowerment influence innovative use of AI? The moderating roles of work and AI technological uncertainties. *Information Technology and People*, 1–30. <https://doi.org/10.1108/itp-09-2024-1233>
- Zhou, J. (2024). Is more proactive more innovative? The nonlinear mechanism of proactive personality on innovative behavior. *Current Psychology*, 43(36), 28965–28977. <https://doi.org/10.1007/s12144-024-06556-7>
- Zhou, Y., & Lyu, B. (2025). How does leadership AI awareness shape employee voice behavior? based on the framework of hindrance and challenge stressors. *Work*, 82(1), 289–305. <https://doi.org/10.1177/10519815251341816>
- Zhu, F., Wang, F., & Yue, M. (2025). Paradoxical effects of performance pressure on innovative behavior: A regulatory focus perspective. *Current Psychology*, 44(17), 14514–14529. <https://doi.org/10.1007/s12144-025-08157-4>

Appendix: Scenario materials

① High Employee-AI Collaboration × High Trust in AI

Suppose you are an employee at “Future Technology Co., Ltd.” You work closely with AI, which acts as an intelligent assistant always by your side. It provides precise data analysis to help you make quick decisions; predicts future trends, allowing you to plan ahead; offers multiple solutions when you encounter challenges; filters key information to ensure you have the most accurate intelligence; and helps you keenly identify potential problems and opportunities.

At your company, the AI system has been widely integrated into daily workflows. The system has performed stably in past use, with virtually no technical failures, and its analysis results and recommendations have repeatedly proven to be accurate and reliable. Management continuously maintains and optimizes the AI system and encourages employees to fully utilize its outputs in their work. You and your colleagues generally agree that the system effectively supports work-related decisions and provides valuable assistance in completing tasks. In this environment, you have gradually become accustomed to relying on the AI system to assist with problem analysis and solution development.

② High Employee-AI Collaboration × Low Trust in AI

Suppose you are an employee at “Future Technology Co., Ltd.” You work closely with AI, which acts as an intelligent assistant always by your side. It provides precise data analysis to help you make quick decisions; predicts future trends, allowing you to plan ahead; offers multiple solutions when you encounter challenges; filters key information to ensure you have the most accurate intelligence; and helps you keenly identify potential problems and opportunities.

In your company, although the AI system has been integrated into some workflows, its operational stability and output quality are suboptimal. In past usage, the system has occasionally produced inaccurate analysis results or experienced operational instability, and the feasibility of its recommendations is frequently questioned by employees. Internal evaluations of the system’s reliability are inconsistent, and management has failed to provide clear assurances regarding the stability of its output. In this environment, you maintain a cautious attitude toward adopting the information and recommendations provided by the AI system in your work, often needing to assess their reference value on your own.

③ Low Employee-AI Collaboration × High Trust in AI

Suppose you are an employee at “Future Technology Co., Ltd.” You primarily complete work tasks independently, with limited AI involvement. The AI only occasionally provides basic data analysis and reference cases; it cannot deeply engage in your decision-making nor offer comprehensive trend forecasts.

At your company, the AI system has been widely integrated into daily workflows. The system has performed stably in past use, with virtually no technical failures, and its analysis results and recommendations have repeatedly proven to be accurate and reliable. Management continuously maintains and optimizes the AI system and encourages employees to fully utilize its outputs in their work. You and your colleagues generally agree that the system effectively supports work-related decisions and provides valuable assistance in completing tasks. In this environment,

you have gradually become accustomed to relying on the AI system to assist with problem analysis and solution development.

④ Low Employee-AI Collaboration × Low Trust in AI

Suppose you are an employee at “Future Technology Co., Ltd.” You primarily complete work tasks independently, with limited AI involvement. The AI only occasionally provides basic data analysis and reference cases; it cannot deeply engage in your decision-making nor offer comprehensive trend forecasts.

In your company, although the AI system has been integrated into some workflows, its operational stability and output quality are suboptimal. In past usage, the system has occasionally produced inaccurate analysis results or experienced operational instability, and the feasibility of its recommendations is frequently questioned by employees. Internal evaluations of the system’s reliability are inconsistent, and management has failed to provide clear assurances regarding the stability of its output. In this environment, you maintain a cautious attitude toward adopting the information and recommendations provided by the AI system in your work, often needing to assess their reference value on your own.