The Double-Edged Sword Effect of Artificial Intelligence Awareness among Hotel Employees

Journal:	*International Journal of Contemporary Hospitality Management*
Manuscript ID	IJCHM-01-2024-0051.R4
Manuscript Type:	Original Article
Keywords:	Organizational behaviour, Human resource management

The Double-Edged Sword Effect of Artificial Intelligence Awareness among Hotel Employees

Shengmin Liu

Business School, University of Shanghai for Science and Technology, China

Pengfan Cheng (Corresponding Author)

School of Management, Shanghai University of International Business and Economics, China

Abstract

Purpose-With its continuous development and application in the hotel industry, artificial intelligence (AI) is gradually replacing many jobs traditionally performed by humans. This research aims to understand how this threat and opportunity of substitution affects hotel employees' behavioral decision-making.

Design/methodology/approach-This study employs a structural equation model, ordinary least squares, and bootstrapping method to analyze the data collected with a field study and a scenario experiment from star-hotels in Shanghai, Paris and Seoul.

Findings-The results discovered that employees' AI awareness has a positive relationship with their work engagement and AI boycott through two paths. The promoting path involves recovery level, while the hindering path includes job insecurity. In addition, the estimates showed that AI awareness has a great indirect effect on work engagement or AI boycott when innovativeness as a job requirement is high.

Practical implications-The findings offer insights to help hotels optimize the relationship between AI and hotel human workers while providing valuable implications for addressing behavioral dilemmas faced by hotel employees in the era of AI.

Originality/value-By integrating the behavioral decision-making literature with the conservation of resources theory, the study focuses on the dual mechanisms—challenging and hindering—through which AI awareness influences hotel employees' coping strategies.

Keywords: AI awareness; AI boycott; Job insecurity; Recovery level; Work engagement

Paper type Research paper

1. Introduction

Artificial intelligence (AI) refers to the simulation of human intelligent behaviors through machine learning, visual perception, and cognitive computing. Over the past decade, AI has been extensively applied in the hospitality industry (Khaliq et al., 2022). In hotel operations, AI enhances employees' productivity and efficiency to alleviate workloads, but it presents challenges to organizational management, particularly regarding employees' adaptive behaviors and responses. For example, hotel employees may damage AI systems due to the repetitive nature of hotel tasks and the fear that intelligent machines will replace them through automation (Raisch and Krakowski, 2021). Some scholars argue that the risk of being replaced by robots leads to job insecurity and maladaptive behaviors (Yam et al., 2023). For example, Koo et al. (2021) found that job insecurity among hotel employees likely detracts from their work engagement, limits their career capabilities, and contributes to higher levels of job burnout (Kong et al., 2021).

However, many researchers have highlighted the positive role of AI in assisting employees (Jia et al., 2024). AI applications can reduce workload by enabling human workers to focus on more valuable tasks (Osawa et al., 2017). Qiu et al. (2022) found that AI technology significantly alleviates the physical and psychological fatigue of frontline hotel employees, enhancing their positive emotions and service quality. Prentice et al. (2020) emphasized AI's crucial role in improving the performance and retention of employees. Moreover, Kong et al. (2024) indicated that the work autonomy provided by AI can effectively foster the innovative capabilities of employees. Thus, AI alleviates employees' workload, evoking job insecurity and prompting employees to seek alternative employment opportunities in the hotel industry.

Frontline staff positions are highly susceptible to replacement due to the repetitive and relatively uncreative nature of many current hotel tasks. AI,

with its rapid feedback capabilities, reduces communication and management costs, minimizes the risk of human error in service delivery, and enhances service accuracy (Wong et al., 2023). For these advantages, it has become integral to hotel service operations, like a digital employee assuming essential roles previously performed by humans. AI-powered robots provide guests with attraction recommendations. For example, Osawa et al. (2017) discovered that AI technology effectively reduces frontline employees' workload, alleviating fears of job displacement by AI. Despite its proficiency in specific tasks, AI in hotels lacks the general intelligence of humans (Yuan and Woodman, 2010). Many hotels still complement AI with human innovative intelligence, i.e., ingenuity, adaptability, flexibility, and problem-solving.

Current literature shows different outcomes of AI application in hotels including job insecurity (Koo et al., 2021) and augmentation (Qiu et al., 2022; Kong et al., 2024). For this reason, frontline employees should innovatively interact with AI to maintain a balance between human value and AI functionality. This raises the following questions: Is AI a threat or an opportunity? How do frontline employees respond to AI? When do these employees respond differently to AI based on varying levels of demand for innovation?

To answer these questions, this research aims to identify potential mechanisms by which AI awareness influences employees' adaptive behaviors like AI boycott in hotel frontline roles (Longoni et al., 2019). If employees perceive AI as a valuable resource, the Job Demands-Resources (JDR) model suggests that increased work resources can enhance employees' work engagement and overall performance. With the rise in job demand, employees may develop goals and convert available resources into productive input (Schaufeli, 2017). Conversely, if employees view AI as a threat to their resources, they may experience job burnout, leading to

negative outcomes (Bakker and Demerouti, 2007). According to the Conservation of Resources (COR) theory, when facing resource threats, employees may develop strategies, such as engaging in boycotts, to mitigate them (Hobfoll et al., 2018). In contrast, when experiencing resource gains, they actively conserve energy, reduce stress, and promote recovery.

To address these issues, this research proposes an integrated framework that combines the interaction of job demands and resources from the JDR model with resource responses from the COR theory. This framework employs two studies to test the issues. Study 1 focuses on the various effects of AI awareness with a field study, and Study 2 discerns the incremental effects of AI awareness after controlling the traditional technology.

This study makes essential contributions. First, it uncovers the interactive call for an ethics framework that considers interpersonal interaction (Mittelstadt, 2019). While AI can enhance employee work efficiency and reduce workloads, it can replace service jobs and threaten employment opportunities. To mitigate the challenge, this paper can provide insights into how human employees in the service industry may resort to boycott behavior to protect their interests, while also engaging with AI substitution to expand the boundaries of human-computer interaction decision-making. Second, although AI awareness was recognized as the risk of consuming employees' energy in previous literature (Kong et al., 2021; Koo et al., 2021), we identify its positive effects on employees' resources. The two-edged sword effect of AI awareness is integrated into the same framework so that the symbiotic relationship between AI and human employees can be clear with this coopetition in the future. Finally, this study reveals how innovativeness as a job requirement moderates employees' behavioral decision-making in the context of AI awareness. This offers guidance for hotel managers in navigating the ethical risks and enhancing work efficiency associated with AI awareness.

2. Theory and hypothesis development

2.1 AI awareness and the conservation of resources

Despite the utilization of AI by companies and organizations in business operations, particularly in the service industry (Liang et al., 2022), the research literature on the potential impacts of AI on employment is still largely in the theoretical exploration stage. Scholars' views on AI are centered on three perspectives: substitution effect (Frey and Osborne, 2017), creation effect (Autor, 2015), and neutrality (Mokyr et al., 2015; Goos et al., 2014). These views reflect distinct attitudes on the role of AI in the workplace, including whether it creates new jobs and substitutes existing jobs, or it has insignificant influence on overall employment. While employees proficient in AI and human-machine collaboration technologies are likely to encounter more job opportunities (Badet, 2021), only scarce individuals in the hotel industry excel in these areas or possess significant competitiveness in man-machine collaboration. A reason is that a significant portion of the hotel workforce consists of low-level manual workers. Moreover, Autor et al. (2003) argued that AI not only creates jobs for high-end talent but also leads to simultaneous growth at both the top and bottom levels of demand.

However, this two-tiered growth is not a permanent condition (Goos et al., 2014). Driven by government support and market demand, AI continues to develop rapidly. Enterprises are actively adjusting their resource allocation and operational systems to enhance production efficiency and reduce costs of labor, production, and communication. In this pursuit, they prioritize AI systems known for high efficiency, standardization, and low error rates. This preference results in a more pronounced substitution effect of AI on tasks at the entry level within the hotel industry.

The increasing prevalence of AI technologies, e.g., machines, robots, and algorithms, in the workplace signals that they may potentially replace the employees' roles in the future, resulting in a perceived sense of job uncertainty (Brougham and Haar, 2018; Kong et al., 2021). Currently, research on AI awareness is still in its early stages. Only a few studies have examined employees' emotional (emotional

exhaustion), psychological (job insecurity), motivational (intrinsic motivation), and behavioral reactions (work engagement and innovative behavior) to AI at the individual level (Liang et al., 2022; Koo et al., 2021; Yam et al., 2023). They indicate that AI awareness may have a dual-edged effect due to its dual attributes—challenging and hindering (Liang et al., 2022; Ding, 2021). On the one hand, employees with heightened AI awareness tend to enhance their professional skills to meet more demanding job requirements, which can increase their engagement at work (Chen et al., 2022; Ding, 2021). On the other hand, heightened AI awareness can instill fear of job replacement among employees, leading to an increased sense of job insecurity within the hospitality sector (Brougham and Haar, 2018). Therefore, it remains unclear how AI awareness influences employee behaviors positively or negatively, and whether these dual attributes entail different mechanisms within the same framework.

The COR theory can provide a more comprehensive explanation of how AI awareness affects members' behavior from the resource perspective. The basic tenet of the COR theory is that individuals are driven to acquire, conserve, and protect resources that they value to ensure their survival. These resources include object resources (e.g., money and tools), condition resources (e.g., getting employed and tenured), and personal resources (e.g., personality traits and new skills) (Hobfoll et al., 2018). The COR theory follows the "gain paradox principle", i.e., gaining resources becomes more vital when the risks for resource loss are high.

Meanwhile, individuals adopt a defensive mode to reduce resource loss when their resources are exhausted. Aligned with the dual attribute of AI awareness (challenging versus hindering), hotel members are likely to exhibit two different reactions. The first reaction is their significant effort to work engagement for the retention of existing resources and to gain more resources through their recovery. This reaction is to a sense of needing help regarding the replacement of jobs or promotive working conditions (Whitman et al., 2014), which illustrates the challenging aspect of AI awareness. The second reaction is their attempt to protect against potential resource

loss by managing their stress through cognitive or behavioral strategies. They frequently experience insecurity when facing potential job displacement by AI machines, highlighting the hindering aspect of AI awareness. When AI threatens to replace their jobs and increase competition, employees may compromise their ethical standards to safeguard their job resources, often resorting to boycotting behaviors.

In addition, Bandura (1991) introduced the social cognitive model which emphasizes the interaction between individuals and their environments, highlighting how situational factors, such as immediate job contexts, moderate the relationship between cognitive processes and behavior. The JDR model posits that job demands deplete individual resources and influence coping processes towards resource conservation (Schaufeli, 2017). Based on this analysis, Figure 1 integrates individual awareness and job requirements into a framework illustrating how AI awareness influences paradoxical behaviors.

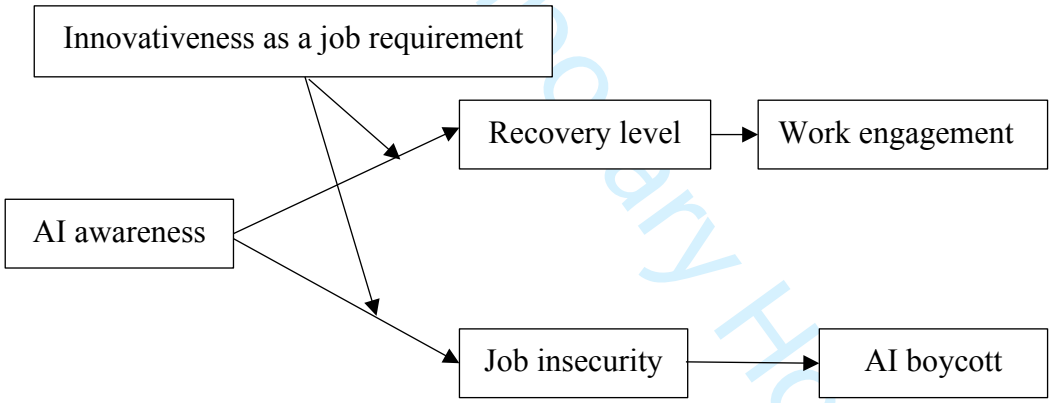


Figure 1. Conceptual Framework

Source: Authors own work

2.2 The challenging path between AI awareness and work engagement

Firstly, AI awareness refers to the recognition that AI technology may replace an employee's current job in the future, often signaling a concerning prospect for the employee (Brougham and Haar, 2018). AI tools lack emotional and physical limitations, allowing them to operate continuously without interruptions, thereby enhancing efficiency in

performing various human tasks (Makridakis, 2017). As employees perceive advancements in job requirements, they typically aim to minimize potential resource losses as a precaution against the risk of AI replacement (Schaufeli, 2017). This defensive strategy is frequently adopted in response to the threat posed by AI technology (Bakker and Demerouti, 2007).

Substituting human labor with AI can save time and resources while compensating for any loss experienced by employees due to increased job demands. This shift prompts employees to prioritize their health in relation to work tasks, enhancing their recovery levels and safeguarding their immediate work resources. Improved recovery levels enable employees to invest their energy and time more effectively, focusing their attention on current tasks, and diminishing unrelated information (Sonnentag, 2003). Consequently, employees can allocate resources to engage more effectively in their work. Previous research supports the positive impact of recovery levels on work engagement (Qin, et al., 2018). This analysis proposes the following research hypothesis.

H1. Hotel employees' AI awareness promotes their work engagement through their recovery level.

2.3 The hindering path between AI awareness and AI boycott

Job insecurity is defined as "a sense of powerlessness to maintain desired continuity in a threatened job situation" (Greenhalgh and Rosenblatt, 1984: 438). This insecurity encompasses employees' concerns about the continuity or certain aspects of their jobs (Hartley et al., 1991). To reflect this differentiation, Hellgern, Serke, and Isaksson (1999) further divide job insecurity into quantitative and qualitative forms. The quantitative form refers to the fear of losing one's current job while the qualitative form relates to perceptions of diminished job quality and changes in the employment relationship. This distinction is the focus of many previous studies on job insecurity. Haar and Brougham (2022) provides an exception. With the increasing deployment of

AI technologies and algorithms in hotels, a gradual replacement appears for existing jobs, such as cleaners being substituted by sweeping robots and AI robots handling hotel check-ins. This trend poses threats to hotel employees in terms of reduced resources, intensified competition in the workplace, and altered employment dynamics, collectively contributing to their sense of job insecurity (Koo et al., 2021; Yam et al., 2023).

In an increasingly AI-driven working environment, employees often grapple with issues related to human-machine collaboration and may harbor emotional resistance to AI integration (Longoni et al., 2019). Human-machine collaboration involves distinct features and requirements (Haesevoets, et al., 2021). The challenge of working with machines can lead to reduced work efficiency and hinder the achievement of performance goals. As AI replaces many hotel jobs, the remaining human roles become more competitive, retaining employees who meet their heightened expectations (Prentice et al., 2020). As AI replaces jobs in the hotel industry, the talent market tends to become saturated. With fewer job opportunities available, leaders gain greater bargaining power, and employees may have less influence over their compensation, potentially leading to salary reductions. Consequently, frontline hotel staffs often perceive a heightened risk of AI replacing their job responsibilities and roles. The various threats of resource loss described above contribute to the stress experienced by hotel employees. Those with high AI awareness are particularly concerned about the potential replacement of their jobs by AI or the deterioration of their working conditions, leading to increased feelings of job insecurity. Yam et al. (2023) confirmed that employees experience greater job insecurity as the scale of robot applications in the workplace increases. Similarly, AI awareness exacerbates job insecurity among hotel employees, affecting both the quality and quantity aspects of their roles.

Furthermore, the feeling of job insecurity may continue to affect hotel members' coping through hindering behaviors. Previous research indicates that employees' felt job insecurity harms their in- and extra-role performance (Ashford et al., 1989;

Hellgren et al., 1999). Based on the COR theory, job insecurity indicates the resource loss of employees (Hobfoll et al., 2018). To prevent additional resource loss, employees are likely to focus on protecting their resources by prioritizing their own benefits. Boycotting provides a choice to prioritize their benefits and protect their resources. AI boycott refers to the resistance to AI, defined as non-use, reduced use, destructive use, and other abnormal operations of AI when hotel's regulations require the use of AI (Longoni et al., 2019). In addition, Huang et al. (2017) found that job insecurity encouraged employees to engage in unethical behavior such as workplace deviance and turnover intentions that directly or indirectly harm the organization. An intense sense of job insecurity encourages employees to redefine and attribute the threats they face as the payback for an organization's violation of the implicit social contract (Rousseau, 1995; Huang et al., 2017). This viewpoint incentivizes them to justify harmful behaviors as a rational response to the perceived injustice.

Therefore, hotel employees' perception of AI replacement will stimulate their sense of job insecurity related to impaired work conditions and potential job loss. This insecurity motivates them to reinterpret the causes as attributable to the organization and to prioritize their own interests. Consequently, employees may resort to AI boycotts as a strategy to safeguard their positions and benefits. Based on this analysis, this research proposes the following research hypothesis.

H2. The positive relationship between hotel employees' AI awareness and their AI boycotts is mediated by the sense of job insecurity.

2.4 The moderation of innovativeness as a job requirement

Innovativeness as a job requirement refers to the organizational expectation that employees generate new ideas and solutions as a fundamental task (Yuan and Woodman, 2010). Specifically, it entails employees expending effort to explore novel ways to solve problems and continuously adapt to environmental changes (Liang et al., 2022). Innovativeness as a job requirement serves to delineate the boundary conditions influencing employees' behavioral decision-making in response to heightened AI awareness. AI technologies reduce the repetitive tasks of frontline staff

through different channels such as the introduction of automated menu ordering services (Ivanov et al., 2020), thereby conserving their physical exertion. The hotel's emphasis on innovation compels employees to exert additional effort towards creative endeavors (Liang et al., 2022). It motivates employees to pay more attention to innovation and creativity in their works facilitated by AI to find a higher capacity for efficient services, thereby reducing their physical workload (Qiu et al., 2022). Conversely, low hotels' demand for innovative workers discourages employees from being responsive to innovative ideas, leading them to interact with AI in traditional ways, which can expend their physical energy and diminish their recovery levels. When their work demands high innovativeness, their AI awareness has a stronger impact on the levels of recovery.

H3. Innovativeness as a job requirement positively moderates the direct effect of employees' AI awareness on their recovery level.

Sonnentag (2007) discovered that a high-quality recovery experience correlates positively with increased levels of work engagement. In addition, the study showed that effective strategies for recovering from work stress promote work engagement (Sonnentag and Fritz, 2015). These findings highlight the crucial role of recovery experiences in enhancing work engagement. When employees' tasks require high levels of innovation facilitates an effective utilization of AI tools. They can recover from AI and engage in more tasks (Kong et al., 2024). Therefore, innovativeness as a job requirement can moderate the indirect effect of recovery levels on the relationship between AI awareness and work engagement. This analysis introduces the subsequent research hypothesis.

H4. Innovativeness as a job requirement positively moderates the indirect effect of employees' AI awareness on their work engagement via recovery level.

Innovative services have placed additional pressure and burden on hotel frontline employees. High job requirements necessitate that frontline

employees expend a significant amount of their energy, which can deplete their remaining resources (Schaufeli, 2017; Bakker and Demerouti, 2007). In the case of resource scarcity, individuals tend to be more sensitive to minimizing further resource losses (Hobfoll et al., 2018). When faced with high demand for innovation and creativity, frontline employees have less energy remaining to compete with AI, which amplifies their insecurity about AI replacing their roles. Conversely, lower demand for innovation allows frontline employees to retain more energy, enabling them to invest time in skill enhancement to effectively collaborate with AI and reduce their sense of job insecurity prompted by AI awareness. Therefore, the positive impact of AI awareness on job insecurity is more pronounced when hotels' demand for innovation is high. This discussion defines the subsequent research hypothesis.

H5. Innovativeness as a job requirement positively moderates the effect of AI awareness on job insecurity, and the direct effect is stronger with high innovativeness as a job requirement than with low innovativeness as a job requirement.

Based on H2, the indirect effect of employees' AI awareness on AI boycotts through the mediation of job insecurity will rely on the level of innovativeness as a job requirement. Job requirements cost employees' resources, and they face the situation of low resources (Schaufeli, 2017). When facing the threat of resource loss, people have more intentions to conserve their resources (Halbesleben et al., 2014). High demand for innovation encourages employees to face resource loss and pay more attention to the threat of AI replacement (Bakker and Demerouti, 2007). Consequently, they experience more insecurity and may resort to boycotting AI to reduce its threat. With job roles requiring high levels of innovativeness, AI awareness exerts a stronger impact on their job insecurity, which in turn continues to affect AI boycotts. Based on this discussion, this study proposes the following hypothesis.

H6. Innovativeness as a job requirement positively moderates the indirect effect of AI awareness on AI boycott via the mediator of job insecurity, and the indirect effect

is stronger with high innovativeness as a job requirement than that with low innovativeness as a job requirement.

3. Methods of Study 1

3.1 Samples

Deep insight into AI awareness requires careful investigation since it holds great significance among employees of the hotel industry for its labor-intensive nature and the potential to replace ordinary intelligent machines (Koo et al., 2021). In addition, AI is one of the three pillar industries in Shanghai, widely used in the management of hotels with three stars and above. After obtaining the consent of the hotel managers, the questionnaire was distributed among 13 hotels with at least three stars in Shanghai in three stages at one-month intervals. The first stage collected the demographic information and AI awareness of employees. In the second stage, hotel employees filled in the survey for their recovery level and job insecurity. Their direct leaders reported the level of innovativeness as a job requirement. In the third stage, the direct leader completed the survey for the employees' outcomes (work engagement and AI boycott).

Stage 1 used the question "Do you work with the AI system or its service robot in the same department?" as a screening item, distributed among 800 respondents. After excluding invalid cases due to failed screening questions or missing data, we retained valid responses from 658 employees and their direct leaders, resulting in an effective response rate of 82.25%. According to Table 1, 60.9% of the employees were women. The largest age group was 31-40 years old, comprising 35.1% of the respondents. Regarding years of employment, the majority (50.2%) had worked for 1-2 years. In terms of academic qualifications, 60.8% held a bachelor's degree, representing the largest proportion. Moreover, 50.9% of participants were employed under contract.

3.2 Measures

Two experts translated the scales, i.e., the five-point Likert scale (from 1=strongly disagree to 5=strongly agree), to measure all key variables (AI awareness, recovery

level, job insecurity, work engagement, AI boycott, and innovativeness as job requirements). To measure AI awareness, stage 1 refers to the four-item AI awareness scale developed by Brougham and Haar (2018). To measure job insecurity, stage 2 refers to the six-item scale by Hellgern, Sverke, and Isaksson (1999), including both the quantitative and qualitative aspects of job insecurity. We measured the recovery level using the scale by Qin et al. (2018), with a total of 3 items. Innovativeness as a job requirement was measured with the 5-item scale developed by Yuan and Woodman (2010). Stage 3 measured work engagement with the 9 items from Schaufeli et al. (2006). AI boycott was measured based on three factors including accuracy, cost, and the part-worth utility from Longoni, Bonezzi, and Morewedge (2019).

Table 1 presents the results of composite reliability (CR), convergent, and discriminant validity of the 6 variables. The CR values of the variables ranged from 0.769 to 0.927, indicating high reliability. The factor loading is all higher than 0.5, confirming convergence validity at the item level. The CR of each dimension is greater than 0.7, and the average variance extracted (AVE) is greater than 0.5, indicating high convergence validity at the construct level.

Table 1.

Composite reliability (CR), loading and average variance extracted (AVE) analysis

	Scale Items	Loading	CR	AVE
JI	I am worried about having to leave my job before I would like to.	0.735	0.888	0.569
	There is a risk that I will have to leave my present job in the year to come.	0.788		
	I feel uneasy about losing my job in the near future.	0.773		
	My future career opportunities are favorable (R).	0.757		
	The unit can provide me with stimulating job content in the near future (R).	0.769		
	My pay development is promising (R).	0.701		

	I feel relaxed.	0.783		
RI	*I feel recovered.*	0.732	0.795	0.565
	I am in a good mood	0.738		
	At work, the employee is bursting with energy.	0.757		
	At the job, the employee is strong and vigorous.	0.813		
	The employee is enthusiastic about his/her job.	0.789		
WE	The employee likes going to work.	0.761	0.927	0.584
	The employee is happy when s/he is working intensely.	0.773		
	The employee is proud of the work that s/he does.	0.759		
	The employee is immersed in his/her work.	0.708		
	The employee gets carried away when s/he is working.	0.711		
	The job inspires the employee.	0.799		
AIB	*The employee tends to resist the applications of AI for the lack of accuracy.*	0.751	0.769	0.527
	The employee is averse to the help of AI because of its unsatisfied part-worth utility.	0.658		
	The employee refuses to use the AI because of its cost.	0.764		
AIA	Given that AI is being widely used workplace, I am concerned about my future in this industry.	0.772	0.846	0.579
	Given that AI is being widely used workplace, I am concerned about my future in the organization.	0.791		
	There is a possibility that my current job will be replaced by AI.	0.751		
	AI might replace my jobs.	0.729		
IJR	*My job duties include searching for new technologies and techniques.*	0.839	0.909	0.667
	Introducing new ideas into the organization is part of my job.	0.808		

I don't have to be innovative to fulfill my job requirements. (R)	0.785
My job requires me to try out new approaches to problems.	0.794
Suggesting new ideas is part of my job duties.	0.856

Source: Authors own work

3.3 Control variables

COR's key content is resources, and we controlled for managerial access to organizational resources developed by McClean, Burris, and Detert (2013) (from 1 = very low to 5 = very high).

3.4 Analytic strategy

We tested the research hypotheses using structural equation modeling and software AMOS 26.0. The results report path coefficients, variance parameter estimates, and Critical Ratio (C.R.). If the C.R. values are greater than or equal to 1.96, the differences are significant. Moreover, we followed Hayes (2013) to test the mediating effects and moderated mediation employing bootstrap 5000 times.

4. Results of Study 1

4.1 Common method variance and confirmatory factor analysis

A potential concern in the analyses is common method bias, arising from shared measurement resources, item context, or respondent characteristics (Podsakoff et al., 2003). To check this issue, we employed Harman's single-factor method, specifically conducting a one-factor exploratory factor analysis. The principal component analysis revealed four common factors with eigenvalues greater than 1. The first factor without rotation explained 27.13% of the total variance, rejecting the issue of common method bias.

Table 2 represents the descriptive information and correlations between the six key variables. We tested the discriminant validity between the six key variables: AI awareness, work engagement, AI boycott, recovery level, job insecurity, and

innovativeness as a job requirement. First, the AVE is greater than the shared variance (i.e., comparing the square root of AVE and correlation coefficient among each two variables) (Table 3). Hence, the six variables had discriminant validity. Second, the 6-factor model strongly fitted the indices (χ^2/df = 2.132, CFI = 0.912, TLI = 0.909, RMSEA= 0.055) compared with the other alternative models.

Table 2.

Descriptive statistics and correlations.

	M	SD	1	2	3	4	5	6
1.WE	3.077	1.008	0.764					
2.AIA	3.124	0.874	0.501***	0.761				
3.AIB	3.077	1.118	0.578***	0.512***	0.726			
4.RL	3.009	1.213	0.619***	0.537***	0.608***	0.751		
5.JI	2.995	1.031	0.534***	0.518***	0.526***	0.314***	0.754	
6.IJR	3.091	1.136	0.251***	0.073	0.098	0.325***	0.117	0.817

Notes: WE=work engagement, AIA=AI awareness, AIB=AI boycott, RL=recovery level, JI=job insecurity, IJR=innovativeness as job requirement; ***p < 0.001; The diagonal line presents the square root of the average variance extracted.

Source: Authors own work

4.2 Hypothesis testing

The structural equation model in Figure 1 examines the hypotheses with the indices (χ^2/df = 1.458, CFI = 0.923, TLI = 0.933, RMSEA = 0.049). According to the results, AI awareness has a positive impact on recovery level (β = 0.435, p < 0.001) or job insecurity (β = 0.418, p < 0.001). Meanwhile, the recovery level is positively and significantly related to work engagement (β = 0.552, p < 0.001), and job insecurity is positively and significantly connected with the AI boycott (β = 0.462, p < 0.001). These results support *H1* and *H2*.

Table 3 represents the results of path analysis with bootstrapping of 5000 times. The mediating effect of recovery level was significant (β = 0.033, SE = 0.013, p < 0.001) between AI awareness and work engagement, with a 95% CI [0.020, 0.066]. The upper and lower intervals of the mediating path of AI awareness → recovery level → work engagement did not contain 0, supporting *H1*. The mediating effect of job insecurity was significant (β = 0.016, SE = 0.009, p < 0.05), with a 95% CI [0.001,

0.036]. The upper and lower intervals of the mediating path of AI awareness → job insecurity → AI boycott excluded 0, confirming *H2*.

Table 3.
Mediating effects.

Paths	Estimate	SE	Upper	Lower	*P*	*Result*
AI awareness→Recovery level→Work engagement	0.033	0.013	0.020	0.066	0.000	*Supported*
AI awareness→Recovery level→Work engagement (+SD)	0.054	0.017	0.030	0.091	0.000	*Supported*
AI awareness→Recovery level→Work engagement (-SD)	0.025	0.011	0.014	0.038	0.000	*Supported*
AI awareness→Recovery level→Work engagement (Δ difference)	0.029	0.014	0.009	0.059	0.000	*Supported*
AI awareness→Job insecurity→AI boycott	0.016	0.009	0.001	0.036	0.037	*Supported*
AI awareness→Job insecurity→AI boycott (+SD)	0.019	0.010	0.007	0.045	0.021	*Supported*
AI awareness→Job insecurity→AI boycott (-SD)	-0.005	0.007	-0.001	0.009	0.141	*Unsupported*
AI awareness→Job insecurity→AI boycott (Δ difference)	0.023	0.010	0.005	0.035	0.031	*Supported*

Source: Authors own work

H3 tests the moderating effect of innovativeness as a job requirement on the relationship between AI awareness and recovery level. The coefficient of the interaction between AI awareness and innovativeness as a job requirement on recovery level was positive and significant ($\beta = 0.193$, $p < 0.01$), supporting *H3*.

H5 tests the moderating effect of innovativeness as a job requirement on the relationship between AI awareness and job insecurity. The coefficient of the interaction between AI awareness and innovativeness as a job requirement on job insecurity was positive and significant ($\beta = 0.231$, $p < 0.01$), supporting *H5*.

H4 is for testing the conditional indirect effect of AI awareness on work engagement via recovery level. Based on the bootstrap results, AI awareness had a significant indirect impact on work engagement if the innovativeness as a job requirement was at the lower level (-SD) (index = 0.025, 95% CI [0.014, 0.038]) or at the higher level (+SD) (index = 0.054, 95% CI [0.030, 0.091]). Nonetheless, the

indirect effects at high and low levels of the moderator showed a significant difference (Δ index = 0.029, 95% CI [0.009, 0.059]), affirming *H4*.

H6 is for checking the conditional indirect effect of AI awareness on AI boycotts via job insecurity. The bootstrap results indicated that AI awareness had an insignificant indirect impact on AI boycott when innovativeness as a job requirement was at the lower level (-SD) (index = -0.005, 95% CI [-0.001, 0.009]). However, it was significant (index = 0.019, 95% CI [0.007, 0.045]) when the moderator was at a higher level (+SD). The two indirect effects of the moderator indicated a significant difference (Δ index = 0.023, 95% CI [0.005, 0.035]), supporting *H6*.

5. Design and results of Study 2

5.1 Design

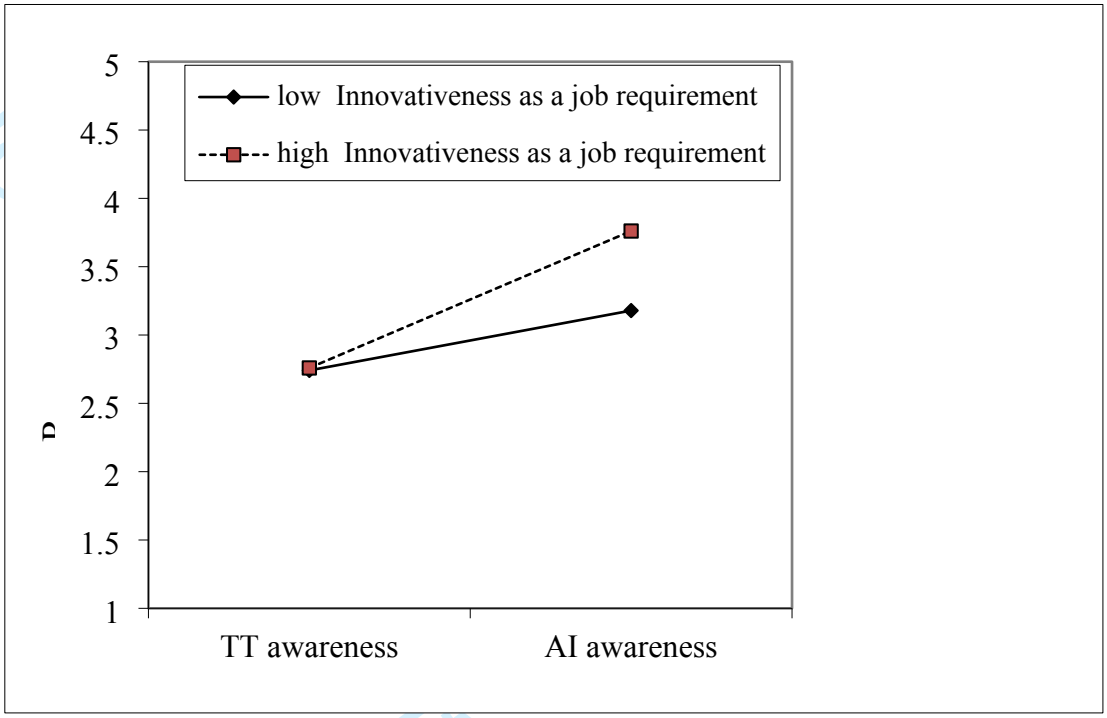
The sample of this research involved 400 frontline employees from 5-star hotels in Shanghai, Paris and Seoul. Two technology conditions (AI awareness versus traditional technology awareness) × Two innovative requirement conditions (high-level vs low-level innovativeness as job requirement) were randomly assigned to the employees, resulting in 100 responses with each condition. Among the responses, 63% were female, 59% were Chinese, 21% were Frenchmen, 13% were South Korean, and 7% came from other European and American countries. The average age was 24.6 years (SD = 5.1), the average years of education were 15.1 (SD = 3.1), and the average tenure was 4.3 years (SD = 1.5). The composite scenario of AI or traditional technology awareness and high or low innovative requirement were developed by He et al. (2023) or Yuan and Woodman (2010). These participants read one scenario of 2 × 2 conditions and completed the measures of recovery level, job insecurity, work engagement and AI boycott. The scales were the same as study 1. The hypotheses were tested using 2 × 2 analysis of variance and bootstrap method.

5.2 Results

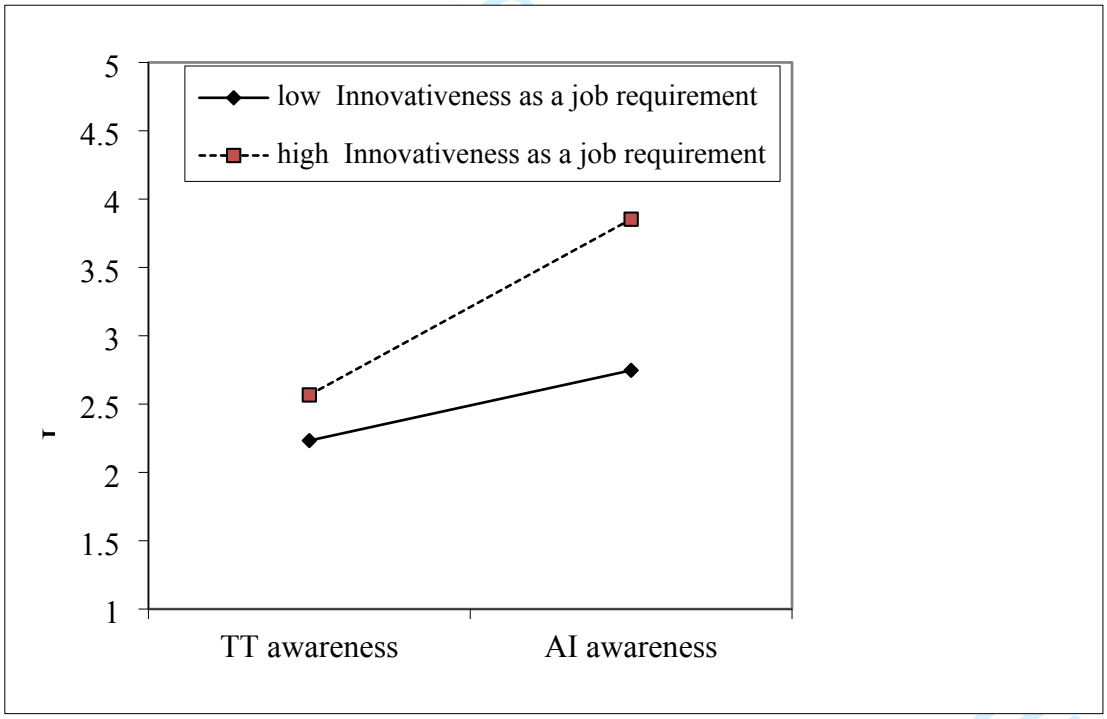
Employing a t-test to check whether the manipulation of AI awareness was effective, AI awareness of frontline employees in the AI awareness condition (Mean = 3.01, SD

= 0.67) was significantly higher than those in the traditional technology awareness condition (Mean = 2.13, SD = 0.46, t = 8.56, $p < 0.001$, Cohen's d = 0.81), supporting the success of AI awareness manipulation. Meanwhile, innovative requirement manipulation was effective (Mean $_{\text{high-level}}$ = 3.75, SD $_{\text{high-level}}$ = 0.60; Mean $_{\text{low-level}}$ = 2.13, SD $_{\text{low-level}}$ = 0.38; t = 10.03, $p < 0.001$, Cohen's d = 0.87).

Bootstrapping with 5000 resamples, the indirect effect of recovery level between AI awareness and work engagement was significant and positive (β = 0.035, 95% CI: [0.008, 0.056]), supporting *H1*. Meanwhile, hotel employees' sense of job insecurity significantly mediated the relationship between their AI awareness and AI boycotts (β = 0.048, 95% CI: [0.019, 0.075]), confirming *H2*. The results of two-way ANOVA showed that the interactive effect of AI awareness and innovativeness as a job requirement on recovery level or job insecurity was significant and positive (F = 32.15, $p < 0.001$, η^2= 0.18; F = 48.56, η^2= 0.21, $p < 0.001$), and the moderating effects showed in figure 2 supporting *H3* and *H5*. The difference between the indirect effects at high and low levels of innovativeness as a job requirement was both significant in the mediating relationship of recovery level (Δ index = 0.031, 95% CI [0.011, 0.050]) or job insecurity (Δ index = 0.045, 95% CI [0.019, 0.071]), affirming *H4* and *H6*.



(a)



(b)

Figure 2. Moderating effect of innovativeness as a job requirement

Notes: TT is traditional technology, (a) Moderating phase between AI awareness and recovery level; (b) moderating phase between AI awareness and job insecurity

Source: Authors own work

6. Discussion

In the competitive global market, organizations require unparalleled flexibility to offer a diverse range of services and products. Simultaneously, they should be effective, responsive, and cost-efficient, often pushing the boundaries of what human employees can achieve. AI is advancing at an unprecedented pace and presents numerous potentials and opportunities for businesses and organizations (Lee and Lee, 2015). While AI automation is rapidly gaining popularity in hotel services, only limited studies have investigated how frontline hotel service employees respond to the increased risks and opportunities posed by AI substitution. Hotel employees frequently encounter ethical dilemmas regarding whether to embrace AI technology or take action to protect themselves.

To fill this gap in decision-making within the context of AI substitution, we have integrated the COR theory and the JDR model to construct a theoretical framework. This framework aims to uncover the underlying mechanisms and boundary conditions regarding how employees' AI awareness influences their work engagement or propensity to boycott AI technologies.

Study 1 established a causal relationship between employees' AI awareness and its dual outcomes, while Study 2 extended this relationship by controlling for traditional technology effects. The results showed that higher AI awareness among employees positively influences their work engagement through improved recovery levels. AI interventions in hotels relieve frontline staff from repetitive tasks, conserving both physical and psychological energy for more impactful responsibilities (Jia et al., 2024; Qiu et al., 2022). However, heightened AI awareness exacerbates feelings of job insecurity among employees, prompting them to engage in AI boycott behaviors. As AI increasingly replaces critical tasks traditionally performed by employees, perceived job insecurity drives behavioral responses such as boycotts, consistent with Yam et al. (2022) but inconsistent with Yam et al. (2022); Li, Bonn, and Ye, (2019), and passive responses such as burnout, workplace incivility, and turnover. The findings show that employees could resort to proactive responses such as boycotts that

weaken AI. Moreover, the requirement for innovativeness consumes employees' resources (Yuan and Woodman, 2010). In a state of scarcity, employees are more likely to engage in resource-protection behaviors (Hobfoll et al., 2018). Therefore, innovativeness as a job requirement serves as a conditional variable that can strengthen the two positive relationships between AI awareness and either work engagement or AI boycott.

The findings align with the findings of Jia et al. (2024) that AI interacts more effectively with the innovativeness of higher-skilled employees, thereby enhancing their cognitive skills and psychological states. With greater job demands, AI facilitates increased skill knowledge and positive emotions through frequent interaction in innovative tasks (Qiu et al., 2022). These insights suggest the potential to reduce job insecurity and enhance recovery levels under conditions with a higher requirement for innovativeness and increased AI awareness (Yin, Jiang, and Niu, 2024).

6.1 Theoretical implications

This research has several implications for the literature on AI and behavioral decision-making. First, it enriches the theoretical understanding of paradoxical responses to AI awareness through the development of a nuanced theoretical framework. Previous scholars focus on challenging outcomes like service innovation (Liang et al., 2022) or hindering behaviors such as turnovers (Li, Bonn, and Ye, 2019) of AI awareness. It is challenging to understand the complex relationship between AI awareness and employee responses, given the various dynamics (e.g., recovery and emotion stability). The findings provide insights into how employees perceive the benefits and risks of AI use, illustrating its dual impact, which contributes to advancing the literature on AI awareness in the hotel and service industries, particularly from the perspective of benefits. The widespread adoption of AI has resulted in significant changes in service management, gradually replacing human employees in social and service communication roles (Law et al., 2024).

Several studies on AI awareness primarily focus on its negative impact on

employees' behavior within organizations, including reduced work engagement (Brougham and Haar, 2018), increased service sabotage (Zhou et al., 2018), decreased service innovation behavior (Liang et al., 2022), and higher turnover intentions (Khaliq et al., 2022). In this regard, researchers have observed that the use of AI in customer service can lead consumers to engage in unethical behaviors aimed at personal gain, often accompanied by reduced anticipatory guilt (Kim et al., 2023). Nonetheless, only a limited understanding exists about whether and how employees themselves can benefit from increased awareness of AI substitution. To bridge this gap, this research investigates how the dual attribute of AI awareness, challenging and hindering (Liang et al., 2022), influences employees' behavioral decision-making to protect against resource loss (i.e., AI awareness → job insecurity → AI boycott) and enhance resource acquisition for personal benefits (i.e., recovery → work engagement). This integration lays the groundwork for future research to explore the consistent implications of AI use in the service workplace. For example, if employees perceive AI ownership, they may feel relieved of job insecurity and benefit from reduced energy expenditure.

Finally, this study advances our understanding of behavioral decision-making within the context of AI applications in hotels. Specifically, it examines the moderation of innovativeness as a job requirement—a critical job feature aligned with AI technology—in shaping employees' decision-making processes. This effort highlights the amplified effects of innovativeness as a job requirement on the pathways from AI awareness to coping strategies. Jia, Luo, Fang, and Liao, 2023 has confirmed that AI can enhance employee creativity. However, creativity derived from AI use differs from innovativeness as a job requirement, although both can contribute to organizational innovation in products or services. The former signifies the presence of available resources while the latter indicates the need to expend resources. Innovativeness as a job requirement consumes resources, prompting employees to seek additional resources through recovery and advocating for their self-interests by engaging in boycotts when faced with AI displacement. The findings suggest that job

requirements for innovativeness may inhibit creativity within the context of AI use. Future studies can delve into the nuanced effects of demand for innovation and their impact on creativity resulting from AI use. In this way, they can explore an underdeveloped area, i.e., how AI use affects employee creativity and innovative job requirements from a job design perspective.

6.2 Practical implications

The findings offer the following practical implications for hotel management. AI awareness acts as a double-edged sword, enhancing either work engagement or leading to boycott behaviors depending on whether it influences recovery or job insecurity pathways. Managers should implement diverse AI methods, such as algorithmic controls and deep learning tools, to alleviate the workload for frontline employees (Li et al., 2019). In addition, AI applications should include entertainment features like cartoon videos, music broadcasting, and jokes, which can enhance employees' recovery levels. Moreover, hotel managers should establish clear divisions of labor between AI and frontline employees. They should assign key tasks, e.g., customer service and service innovation, to human employees, while repetitive tasks, e.g., greeting guests and taking orders to AI. This approach aims to mitigate employees' feelings of job insecurity.

Furthermore, the findings identify organizational innovativeness as a job requirement and boundary condition that enhances the double-edged sword effect of AI awareness. Therefore, managers should tailor innovative job requirements based on the skill levels of frontline employees. High-skilled employees can benefit from more innovative job requirements because AI can enhance their cognitive abilities, facilitating their engagement in creative tasks and workload management (Jia et al., 2024). Conversely, low-skilled employees in hotels may require less innovative job requirements since their tasks are more susceptible to automation by AI. Furthermore, managers should implement skill development programs for lower-skilled employees to help them acquire additional resources and mitigate job insecurity arising from AI awareness.

6.3 Research limitations and future directions

Despite its valuable theoretical and practical implications, our research has several limitations which guide future research. First, regarding data collection, it focused on hotels, while future studies can broaden the scope to other service industries such as restaurants and museums. Second, the phenomenon of boycotts spreads within organizations by influencing the perceptions of colleagues or employees, potentially leading to collective boycotts of AI. Future research should comprehensively investigate the mechanisms and processes through which AI awareness influences human members within organizations.

Finally, our research discusses the benefits and drawbacks of AI replacing frontline hotel staff without addressing strategies for mitigating the risk of job displacement by AI. Other researchers can explore how AI is leveraged to automate repetitive tasks while maintaining a symbiotic relationship between AI systems and frontline employees in critical operations. This approach can help prevent the complete replacement of frontline staff by AI, thereby alleviating employee insecurities effectively. Future AI utilization should prioritize automating simple and repetitive tasks in hotel operations, while tasks requiring information interpretation and complex communication should continue to rely on the cognitive abilities of human employees. Exploring effective collaboration approaches between frontline staff and AI systems represents a crucial avenue for future research in the hospitality industry.

7. Conclusion

This study underscores the potential for hotel employees to resort to boycotting as a means to compete with AI machines and secure personal benefits. This unethical decision-making process is exacerbated when facing higher job requirements for innovativeness. Conversely, hotel employees can alleviate their workloads and enhance their recovery with the assistance of AI. Our research aims to offer valuable insights for future studies and organizational practices, promoting a nuanced

understanding of the dynamics between competition and collaboration among hotel employees and AI, particularly in terms of resource conservation.

References

Autor, D. (2015). "Why are there still so many jobs? The history and future of workplace automation", *Journal of Economic Perspectives*, Vol.29 No.3, pp.3-30.

Autor, D. H., Levy, F., and Murnane R. J. (2003). "The skill content of recent technological change: an empirical exploration", *The Quarterly Journal of Economics*, Vol.118 No.4, pp.1279-1333.

Badet, J. (2021). "AI, automation and new jobs", *Open Journal of Business and Management*, Vol.9 No.5, pp.2452-2463.

Bandura, A. (1991). "Social cognitive theory of self-regulation", *Organizational Behavior and Human Decision Processes*, Vol.50 No.2, pp.248-287.

Bakker, A. B., and Demerouti, E. (2007). "The job demands-resources model: State of the art", *Journal of Managerial Psychology*, Vol.22 No.3, pp.309-328.

Brougham, D., and Haar, J. (2018). "Smart technology, artificial intelligence, robotics, and algorithms (STARA): Employees' perceptions of our future workplace", *Journal of Management* and *Organization*, Vol.24, pp.239-257.

Cheng, T., Mauno, S., and Lee, C. (2014). "The buffering effect of coping strategies in the relationship between job insecurity and employee well-being", *Economic and Industrial Democracy*, Vol.5, pp.71-94.

Frey, C.B. and Osborne, M.A. (2017). "The future of employment: how susceptible are jobs to computerization?", *Technological Forecasting and Social Change,* Vol.114, pp.254-280.

Goos, M., Manning, A., and Salomons, A. (2014). "Explaining job polarization: routine-biased technological change and offshoring", *The American Economic Review*, Vol.104, pp.2509-2526.

Haesevoets, T., De Cremer, D., Dierckx, K., and Van Hiel, A. (2021). "Human-machine collaboration in managerial decision making", *Computers in*

Human Behavior, Vol.119, pp.106730.

Halbesleben, J.R., Neveu, J.P., Paustian-Underdahl, S. C., and Westman, M. (2014). "Getting to the "COR" understanding the role of resources in conservation of resources theory", *Journal of management*, Vol.40 No.5, pp.1334-1364.

Hayes, A.F. (2013). "Introduction to mediation, moderation, and conditional process analysis: A regression-based approach", *Journal of Educational Measurement*, Vol.51, pp.335-337.

He, G., Liu, P., Zheng, X., Zheng, L., Hewlin, P. F., and Yuan, L. (2023). "Being proactive in the age of AI: exploring the effectiveness of leaders' AI symbolization in stimulating employee job crafting", *Management Decision*, Vol. 61 No.10, pp.2896-2919.

Hellgren, J., Sverke, M., and Isaksson, K. (1999). "A two-dimensional approach to job insecurity: Consequences for employee attitudes and well-being", *European Journal of Work and Organizational Psychology*, Vol.8, pp.179-195.

Hobfoll, S. E., Halbesleben, J., Neveu, J. P., and Westman, M. (2018). "Conservation of resources in the organizational context: The reality of resources and their consequences", A*nnual Review of Organizational Psychology and Organizational Behavior*, Vol.5, pp.103-128.

Huang, G. H., Wellman, N., Ashford, S. J., Lee, C., and Wang, L. (2017). "Deviance and exit: The organizational costs of job insecurity and moral disengagement", *Journal of Applied Psychology*, Vol.102, pp.26-42.

Ivanov, S., Kuyumdzhiev, M., and Webster, C. (2020). "Automation fears: Drivers and solutions", *Technology in Society*, Vol.63, pp.101431.

Jia, N., Luo, X., Fang, Z., and Liao, C. (2024). "When and how artificial intelligence augments employee creativity", *Academy of Management Journal*, Vol. 67 No.1, pp.5-32.

Khaliq, A., Waqas, A., Nisar, Q. A., Haider, S., and Asghar, Z. (2022). "Application of AI and robotics in hospitality sector: A resource gain and resource loss perspective", *Technology in Society*, Vol.68, pp.101807.

Kim, T., Lee, H., Kim, M. Y., Kim, S., and Duhachek, A. (2023). "AI increases

unethical consumer behavior due to reduced anticipatory guilt", *Journal of the Academy of Marketing Science*, Vol.51 No.4, pp.785-801.

Kong, H., Yin, Z., Chon, K., Yuan, Y., and Yu, J. (2024). "How does artificial intelligence (AI) enhance hospitality employee innovation? The roles of exploration, AI trust, and proactive personality", *Journal of Hospitality Marketing* and *Management*, Vol.33 No.3, pp.261-287.

Kong, H., Yuan, Y., Baruch, Y., Bu, N., Jiang, X., and Wang, K. (2021). "Influences of artificial intelligence (AI) awareness on career competency and job burnout", *International Journal of Contemporary Hospitality Management*,Vol. 33 No. 2, pp.717-734.

Koo, B., Curtis, C., and Ryan, B. (2021). "Examining the impact of artificial intelligence on hotel employees through job insecurity perspectives", *International Journal of Hospitality Management*, Vol.95, pp.102763.

Law, R., Lin, K. J., Ye, H., and Fong, D. K. C. (2024). "Artificial intelligence research in hospitality: a state-of-the-art review and future directions", *International Journal of Contemporary Hospitality Management*, Vol.36 No.6, pp. 2049-2068.

Liang, X., Guo, G., Shu, L., Gong, Q., and Luo, P. (2022). "Investigating the double-edged sword effect of AI awareness on employee's service innovative behavior", *Tourism Management*, Vol.92, pp.104564.

Longoni, C., Bonezzi, A., and Morewedge, C. K. (2019). "Resistance to medical artificial intelligence", Journal of Consumer Research, Vol.46 No.4, pp.629-650.

Makridakis, S. (2017), "The forthcoming artificial intelligence (AI) revolution: its impact on society and firms", *Futures*, Vol.90, pp.46-60.

McClean, E. J., Burris, E. R., and Detert, J. R. (2013). "When does voice lead to exit? It depends on leadership", *Academy of Management Journal*, Vol.56 No.2, pp.525-548.

Mittelstadt, B. (2019). "Principles alone cannot guarantee ethical AI", *Nature Machine Intelligence*, Vol.1 No.11, pp.501-507.

Mokyr, J., Vickers, C., and Ziebarth, N.L. (2015). "The History of Technological

Anxiety and the Future of Economic Growth: Is This Time Different?", *The Journal of Economic Perspectives*, Vol.9 No.3, pp.31-50.

Osawa, H., Ema, A., Hattori, H., Akiya, N., Kanzaki, N., and Kubo, A. (2017). "Analysis of robot hotel: Reconstruction of works with robots", *IEEE International Symposium on Robot and Human Interactive Communication* (pp.219-223). IEEE.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., and Podsakoff, N. P. (2003). "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol.88, pp. 879-903.

Prentice, C., Dominique Lopes, S., and Wang, X. (2020). "Emotional intelligence or artificial intelligence–an employee perspective", *Journal of Hospitality Marketing and Management*, Vol.29 No.4, pp.377-403.

Qin, X., Huang, M., Johnson, R. E., Hu, Q., and Ju, D. (2018). "The short-lived benefits of abusive supervisory behavior for actors: An investigation of recovery and work engagement", *Academy of Management Journal*, Vol.61 No. 5, pp.1951-1975.

Qiu, H., Li, M., Bai, B., Wang, N., and Li, Y. (2022). "The impact of AI-enabled service attributes on service hospitableness: the role of employee physical and psychological workload", *International Journal of Contemporary Hospitality Management*, Vol.34 No.4, pp.1374-1398.

Raisch, S., and Krakowski, S. (2021). "Artificial intelligence and management: The automation–augmentation paradox", *Academy of management review*, Vol. 46 No.1, pp.192-210.

Schaufeli, W. B., Bakker, A. B., and Salanova, M. (2006). "The measurement of work engagement with a short questionnaire: A cross-national study", *Educational and Psychological Measurement*, Vol.66 No.4, pp.01-716.

Schaufeli, W. B. (2017). "Applying the Job Demands-Resources model: A 'how to'guide to measuring and tackling work engagement and burnout", *Organizational dynamics*, Vol.46 No.2, pp.120-132.

Sonnentag, S. (2003). "Recovery, work engagement, and proactive behavior: a new look at the interface between nonwork and work", *Journal of Applied Psychology*, Vol.88 No.3, pp.518-528.

Sonnentag, S., and Fritz, C. (2007). "The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work", *Journal of Occupational Health Psychology*, Vol.12 No. 3, pp.204-221.

Sonnentag, S., and Fritz, C. (2015). "Recovery from job stress: the stressor-detachment model as an integrative framework", *Journal of Organizational Behavior*, Vol.36 No.S1, pp.S72–S103.

Wong, I. A., Zhang, T., Lin, Z. C., and Peng, Q. (2023). "Hotel AI service: Are employees still needed?", *Journal of Hospitality and Tourism Managemen*t, 55, 416-424.

Whitman, M. V., Halbesleben, J. R., and Holmes IV, O. (2014). "Abusive supervision and feedback avoidance: The mediating role of emotional exhaustion", J*ournal of organizational behavior*, Vol.35 No.1, pp.38-53.

Yam, K. C., Tang, P. M., Jackson, J. C., Su, R., and Gray, K. (2023). "The rise of robots increases job insecurity and maladaptive workplace behaviors: Multimethod evidence", *Journal of Applied Psychology*, Vol.108, pp.850-870.

Yin, M., Jiang, S., and Niu, X. (2024). "Can AI really help? The double-edged sword effect of AI assistant on employees' innovation behavior", *Computers in Human Behavior,* Vol.150, pp.1-12.

Yuan, F., and Woodman, R. W. (2010). "Innovative behaviour in the workplace: The role of performance and image outcome expectations", *Academy of Management Journal*, Vol.53, pp.323-342.

Zhou, X., Ma, J., and Dong, X. (2018). "Empowering supervision and service sabotage: A moderated mediation model based on conservation of resources theory", *Tourism Management*, Vol.64, pp.170–187.