

Extension of the POS-TI relationship – in the context of contemporary hotels with AI applications

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Abstract

Purpose – This study aims to extend the classic perceived organizational support (POS)–turnover intention (TI) relationship in the context of the application of artificial intelligence (AI) technology in contemporary hotels.

Design/methodology/approach – This study adopted an explanatory sequential design. Stage 1 – Quantitative Methodology. A total of 554 valid questionnaires with the random sampling technique were collected with the help of the China Hotel Association. This study combined SPSS and SmartPLS software to verify hypotheses. Stage 2 – Qualitative Methodology. This section obtained a sample size of 24 interviewees with the objective sampling technique. The researchers transcribed all interview materials into text and used NVivo version 14 to explain the results of hypothesis testing.

Findings – This study shows that POS significantly impacts employee TI in contemporary hotels with AI applications, and both the perceived value and threat of AI play partial mediating roles between the two.

Research limitations/implications – The results are conducive to providing practical enlightenment for the contemporary hotel industry with AI applications.

Practical implications – In contemporary hotels where AI technology is widely used, this study provides practical guidance for hotel managers, employees and AI technology developers from the dual perspectives of value and threat, aiming to minimize the TI among hotel employees caused by AI technology.

Originality/value – To the best of the authors' knowledge, this study is the initial attempt to design a dual mediation model with the perceived AI for the POS–TI relationship.

Keywords Perceived value, Artificial intelligence, Turnover intention, Organizational support, Perceived threat

Paper type Research paper

POS-TI 关系的延伸 —— 以人工智能应用于当代酒店为背景

摘要

研究目的 – 本研究旨在探讨在人工智能 (AI) 技术应用于当代酒店背景下, 对经典“感知组织支持 (—POS) —离职意图 (TI)”关系的扩展。

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研究方法 – 本研究采用解释性顺序设计。第一阶段为定量研究, 通过中国酒店协会协助, 以随机抽样方式共收集到554份有效问卷, 并结合 SPSS 与 SmartPLS 软件验证假设。第二阶段为定性研究, 使用目的抽样法选取了24位访谈对象, 研究人员将全部访谈内容转录为文本, 并使用 NVivo 14 版本软件对定量结果进行解释。

研究发现 – 研究表明, 在人工智能广泛应用的当代酒店中, 员工的感知组织支持显著影响其离职意图, 而对人工智能的感知价值与感知威胁在二者关系中起到部分中介作用。

研究局限与启示 – 研究结果有助于为当代酒店行业中人工智能技术的应用提供实际启示。

实践意义 – 本研究从价值与威胁的双重视角出发, 为在人工智能广泛使用的当代酒店中, 酒店管理者、员工及AI技术开发者提供实用建议, 以减少因人工智能应用而导致的员工离职意图。

研究创新 – 本研究首次构建了以人工智能感知为中介变量的双重中介模型, 对经典 POS-TI 关系进行了理论拓展。

关键词 组织支持、离职意图、人工智能、感知价值、感知威胁

文章类型 研究型论文

1. Introduction

The hotel industry has an undeniable contribution to global gross domestic product (GDP) and job creation. According to a report by the World Travel and [Tourism Council, 2023](#) (WTTC), the travel and tourism industry accounts for 10.3% of global GDP (US\$9.6tn) and a quarter of global job creation (WTTC, 2023). However, the employee turnover rate in the global hospitality industry is extremely high, especially in the hotel industry, which has become a pillar of tourism development ([Karinadewi and Martdianty, 2020](#)). Especially in China, where the average turnover rate in other industries is 20%, the hotel industry's turnover rate reaches 40% ([Yan et al., 2021](#)).

In the next 75 years, the hotel industry will be transformed by the impact of artificial intelligence (AI) technology ([Buhalis, 2020](#)). It is reported that AI has significantly helped hotels reduce operating costs by 15% and increase revenue by 10% ([WTM, 2019](#)). AI-based applications in the hotel industry are a result of the development and application of technology ([Nam et al., 2021](#)). AI robots, as representatives of AI technology, can be classified into four types ([Saputra et al., 2024](#)). They can partially replace human work ([Ivanov and Webster, 2020](#)). A typical example is the installation of virtual assistants in the Wynn Hotel in Las Vegas and Aloft, which can quickly respond to guest needs 24 h a day. Although AI technology has brought many benefits, there are also adverse effects. This is because new technologies have brought about significant changes in the work culture and environment for employees, and this anxiety about future careers has become the main reason for their intention to resign. When people face technological threats at work, they may feel psychologically tense, anxious and disappointed ([Mantello et al., 2023](#)); therefore, they may develop turnover intention (TI) due to uncertainty and insecurity ([Khaliq et al., 2022](#); [Dhoundiyal and Mohanty, 2022](#)).

This study is grounded in organizational support and social exchange theories. Organizational support theory (OST) explains how employees perceive the company's focus on their contributions and well-being, and its essential significance lies in emphasizing the organization's positive care and concern for employees. Closely related to this theory is the social exchange theory (SET), where obligations arise when an organization interacts with its employees, and employees will establish a strong psychological connection with their organization ([Agarwal, 2014](#)). In the social sciences, SET is a framework that encompasses many other theories ([Ahmad et al., 2023](#)). OST is based on SET ([Wu et al., 2023](#)). SET includes two types of social exchanges, with perceived organizational support (POS), emphasizing the employee–organization exchange relationship, being the primary focus ([Ahmad et al., 2023](#)). This has already been recognized by scholars and has validated that

increasing POS can reduce employees' TI (e.g. Georgiadou *et al.*, 2024; Karunarathne, 2024; Supi *et al.*, 2023; Nargotra and Sarangal, 2023). Therefore, these two theories are very appropriate to guide this study.

However, research on turnover rates in the hotel industry continues to emerge. It may be that the problem has never been solved well, or that the external environment is always changing. With additional insights from Ahmad *et al.* (2023): "As the work environment changes, relationships within modern organizations become increasingly complex, thereby exerting a greater influence on modern exchange processes." They specifically highlighted that the work environment represents a key future research direction for SET. In addition, in the social exchange model supported by the organization, the concept of opposing pairs – namely, positive and negative reciprocity beliefs – should also be considered (Cropanzano *et al.*, 2017). Existing research models examining the relationship between POS and TI can be broadly classified into three categories. The first category includes mediation models, which incorporate mediators such as job motivation, affective and normative commitment (Sartori *et al.*, 2023), psychological ownership (Jing and Yan, 2022) and organizational commitment (Suárez-Albanchez *et al.*, 2022). The second category encompasses moderation models, featuring moderators like gender (Li *et al.*, 2023) and workplace spirituality (Bhaskar and Mishra, 2019). The third category consists of moderated mediation models, which integrate mediators like burnout with job resources as a moderator (Wang and Wang, 2020), work engagement with age as a moderator (Li *et al.*, 2022) and adjustment with external employment opportunities as a moderator (James and Azungah, 2020). However, existing research rarely considers changes in the work environment, such as the emerging of new technologies, as mediating factors, let alone approaches them from the perspective of oppositional pair. This study distinguishes itself by considering the oppositional pair of employees' perceived value and threat of AI technology as mediating variables. Therefore, the theoretical contribution lies in its pioneering effort to develop the POS–TI relationship into a dual mediation model, with perceived AI serving as the mediator. This innovative framework provides a novel research perspective for the existing literature. In addition, the study highlights the importance for academics and practitioners to consider the psychological dimensions triggered by environmental changes, such as the application of AI technology, when exploring the POS–TI relationship. This insight not only encourages exploration of the model in different contexts but also lays a solid foundation for future-related research. Furthermore, it offers practical contributions by providing a clearer analysis of employees' perceptions of hotel support and the impact of AI technology. This, in turn, identifies management strategies for contemporary hotels using AI technology to reduce turnover rates.

2. Literature review and hypotheses development

2.1 Perceived organizational support and turnover intention

Organizational support refers to the organization's efforts to enhance the well-being of its employees (Hauth *et al.*, 2023). In contrast, POS pertains to employees' awareness of the organization's efforts and their perception that the organization is actively supporting them (Qiaoling *et al.*, 2024). It explains the relationships between organizations and employees in various cultures related to workplace organizational support (Eisenberger and Rhoadec, 2020). TI refers to the intention to leave the organization (Seema *et al.*, 2021), which is a voluntary behavior of employees (Memon *et al.*, 2021). Resigning employees may transfer their knowledge to competitors (French *et al.*, 2020).

As mentioned previously with theories such as OST and SET, as well as their interrelationship, this indicates that employees who value organizational support programs will provide positive feedback to the organization (Caesens *et al.*, 2019) and even embed

themselves into the organization (Rahimnia *et al.*, 2022). POS and TI/behavior have been a classic and theoretically supported relationship that has been verified in different research contexts (Wang and Wang, 2020; Chung *et al.*, 2021; Li *et al.*, 2023). The relationship is described as follows: obtaining sufficient organizational support can reduce employee TI. The same is true in the hotel industry: the support significantly negatively impacts employee TI at InterContinental Addis Ababa hotels (Berhane, 2021). This study still follows the relationship that has been proven. Therefore, the following hypothesis has been proposed:

H1. POS has a significant negative effect on employees' TI in this study.

2.2 Extension of the perceived organizational support–turnover intention relationship

SET is a broad conceptual paradigm that spans multiple social science disciplines, including management, social psychology and anthropology. Rather than being a single theory, SET represents a family of interconnected conceptual models. Social exchanges are often open-ended, characterized by flexibility and adaptability. With the increasing complexity of organizational operations, employee behavior and external environments, there is a growing need to update and expand SET to remain relevant (Cooper-Thomas and Morrison, 2019). Within the context of organizational support in social exchange, two types of reciprocity beliefs – positive and negative – exist as oppositional pair. These beliefs can be seen as “opportunities” for behavior change; however, reducing negativity and increasing positivity are not the same and reducing one does not automatically increase the other (Cropanzano *et al.*, 2017). This perspective challenges the unidimensional model of SET, encouraging researchers to consider social exchange relationships in a two-dimensional space. Applied to this study, this suggests that employees' perceptions of AI's value and threat are distinct thing, rather than simply the absence of one another. Focusing exclusively on positive aspects is misleading; instead, both elements of this oppositional pair must be examined independently. Furthermore, while the full impact of AI on employees remains unclear (Ivanov *et al.*, 2020; Tuomi *et al.*, 2020), existing literature indicates that employees recognize both the value of AI (Chowdhury *et al.*, 2023; Mikalef *et al.*, 2023) and the threat it poses to their work (Zhao *et al.*, 2023; Chen *et al.*, 2022). Therefore, this study adopts the perspective of oppositional pairs to propose hypotheses aimed at expanding the understanding of the POS–TI relationship.

2.2.1 Perceived value of artificial intelligence as mediator. Perceived value (PV) refers to the utility that an individual obtains from a certain technology or service (Singh *et al.*, 2021), which some scholars believe consists of utilitarianism and hedonism (Yin and Qiu, 2021). Combined with Li and Khan's (2023) viewpoint on the utility of the application of AI technology, this study defines PVAI as the subjective evaluation made by hotel employees of the value brought by AI technology.

According to the composition of PV, it is divided into utilitarianism and hedonism (Yin and Qiu, 2021), and the PVAI in this study is also based on this division. The utilitarian value of AI is reflected in work efficiency, convenience and time-saving by AI technology, while the hedonic value of AI is reflected in relaxation, surprise and increased pleasure in work by AI technology. There is no doubt that AI technology has many advantages over human labor. The application of AI technology in contemporary hotels brings value to employees, improving employee satisfaction by freeing them from tedious, routine and repetitive tasks (Zhou, 2019). Organizational support gives employees the tools they need to do their jobs more effectively, which can boost their confidence and motivation (Hong *et al.*, 2019). Therefore, this study posits that hotel support methods such as applying AI technology to work can encourage hotel employees to understand the value brought by AI technology.

PVAI can help improve people's intentions or decisions, which has been verified by scholars in multiple fields. For example, in consumer behavior, the PV gained from AI experiences can increase consumer purchase intention (Yin and Qiu, 2021). Similarly, the utilitarian and hedonic values provided by AI robots positively influence customer behavioral intentions (Chang, 2024). In the field of human resources management, the human resources department using AI has a positive PV, which reduces turnover rates (Baldegger et al., 2020). This is because employees believe that decisions made by AI will be fairer and more respected than those made by humans (Bankins et al., 2022). Fairness is very important for employees working in the hotel industry (Nadeem-Uz-Zamana et al., 2022). Therefore, this study posits that PVAI can reduce the TI of hotel employees.

Based on the above evidence and opinions, the following hypotheses have been proposed:

H2-1. POS has a significant positive effect on employees' PVAI in this study.

H2-2. PVAI positively impacts reducing employee TI in this study.

H2. PVAI plays a mediating role between POS and TI in this study.

2.2.2 Perceived threat of artificial intelligence as mediator. Perceived threat (PT) refers to the perceived threat caused by information technology, as explained by technology threat avoidance theory. Combined with Li's (2023) viewpoint on the threat of AI technology, this study posits that Perceived Threat of AI (PTAI) refers to the subjective evaluation by hotel employees of the threat brought by AI technology.

With changes in the external work environment of the hotel industry, such as the increasing use of AI, employees may feel psychologically distressed (Presbitero and Teng-Calleja, 2023). However, when employees feel the support of the company, their job burnout and psychological pressure are significantly reduced (Ajayi and Udeh, 2024). Therefore, this study posits that the relevant support provided by hotels can reduce employees' psychological pressure, thereby reducing their PTAI.

Technological changes are happening almost every day, and some employees may demonstrate a resistant attitude and take defensive measures (Turja et al., 2020). New technologies have brought about significant changes in work culture and environment for employees, and this anxiety about future careers has become the main reason for their intention to resign. Negative perceptions of AI among employees significantly increase their tendency to search for other positions, as employees experience job insecurity and psychological distress toward AI (Presbitero and Teng-Calleja, 2023; Kang et al., 2024). The increasing application of technology has led to a higher willingness to quit due to uncertainty to a large extent (Khaliq et al., 2022). The hotel industry cannot be an exception. When hotel employees feel anxious about their careers due to AI technology, their intention to resign will arise (Li et al., 2019). There is evidence that the work intelligence awareness of hotel employees is positively correlated with job burnout (Kong et al., 2021), which is not conducive to the management of hotel human capital. Therefore, this study believes that PTAI strengthens the TI of hotel employees to a certain extent.

Based on the above evidence and opinions, the following hypotheses have been proposed:

H3-1. POS has a significant negative effect on PTAI in this study.

H3-2. PTAI has a significant positive effect on employees' TI in this study.

H3. PTAI plays a mediating role between POS and TI in this study.

Based on the above theories and hypotheses, the conceptual model proposed in this study is shown in [Figure 1](#).

3. Research design

This study is supported by a well-established theoretical framework, and its design aims to validate hypotheses using quantitative data, followed by an in-depth exploration of these findings through qualitative analysis to provide richer contextual insights. Therefore, according to [Creswell and Clark's \(2017\)](#) principles for mixed-methods research, adopting an explanatory sequential design particularly is particularly appropriate for this study. Finally, a comprehensive conclusion is reached by integrating the quantitative and qualitative research results. The research design procedure with its stages is shown in [Figure 2](#).

Stage 1: Quantitative methodology. The target population of this study comprises employees working in five-star hotels in China. A total of 554 valid questionnaires were collected using a random sampling technique with the help of the China Hotel Association. The questionnaire consists of five parts (Refer to [Appendix 1](#)): Respondent profile; POS, which includes financial POS (FPOS) with four items, career POS (CPOS) with four items and adjustment POS (APOS) with four items ([Chen and Shaffer, 2017](#)); TI, measured by five items ([Li et al., 2019](#)); PVAI, including perceived utilitarian value (PUV) with five items and perceived hedonic value (PHV) with four items ([Yin and Qiu, 2021](#)); and PTAI, including perceived susceptibility (PSU) with three items and perceived severity (PSE) with three items ([Huang and Su, 2016](#)). All items were evaluated using a seven-point Likert scale. In this stage, the SmartPLS software was used to evaluate the conceptual model and test its hypotheses.

Stage 2: Qualitative methodology. The qualitative analysis section determines the research focus and designs the interview outline (refer to [Appendix 2](#)) based on the results of

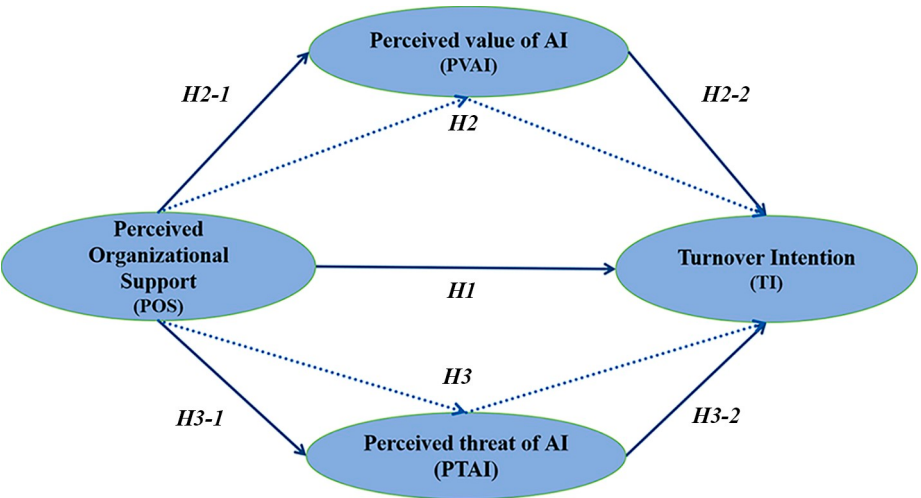


Figure 1. Conceptual model
Source: Authors' own work

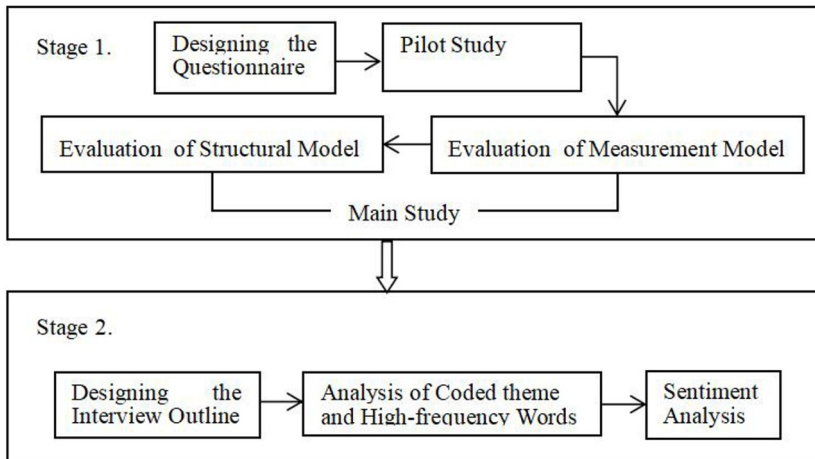


Figure 2. The research design procedure with its stages

Source: Authors' own work

the quantitative analysis. This stage is based on grounded theory and uses the objective sampling technique. The sampling criteria are as follows:

- The interviewees must be able to represent the main respondent profile. Accordingly, 15 interviewees were selected.
- The interviewees must represent the lowest, moderate and highest scores among independent variables.

Accordingly, an additional 9 interviewees were selected. Finally, this study obtained a sample size of 24 interviewees for qualitative analysis. To achieve data saturation, grounded theory qualitative studies generally include between 20 and 30 interviews (Marshall *et al.*, 2013). Therefore, conducting 24 interviews is deemed reasonable. The details of the interview activities (time, duration, notes, etc.) will be communicated and confirmed with the interviewees by telephone. The researchers transcribed all interview materials into text and used the NVivo 14 version as a text-mining tool to provide a more comprehensive explanation of the results of hypothesis testing.

4. Results

4.1 Quantitative study

4.1.1 Pilot study. The sample size of this pilot study was 30, consisting of current employees who have working for more than one year in the five-star hotels in China. As a result, some issues were found in the design of the questionnaire. Therefore, adjustments were made to some options in the response profile section, and four unqualified items were deleted. Based on the suggestion by Hair *et al.* (2019), item loadings should be greater than or equal to 0.7.

4.1.2 Descriptive statistics. This study conducted statistics on the basic information of the respondents from six aspects, as shown in Table 1.

Table 1. Respondent profile table

Name	Options	Count	%
Gender	Male	235	42.42
	Female	319	57.58
	Total	554	100
Age	18–25	37	6.68
	26–30	217	39.17
	31–35	219	39.53
	36–40	65	11.73
	41–45	13	2.35
	46–50	2	0.36
	51–55	1	0.18
	Total	554	100
Educational level	High school graduate	112	20.22
	College graduate	427	77.07
	Postcollege graduate	15	2.71
	Total	554	100
Salary level	2,001–4,000 Chinese Yuan	7	1.26
	4,001–6,000 Chinese Yuan	116	20.94
	6,001–8,000 Chinese Yuan	143	25.81
	8,001–10,000 Chinese Yuan	283	51.08
	10,001 and above Chinese Yuan	5	0.90
	Total	554	100
Department	Front Office Department	111	20.04
	Housekeeping Department	140	25.27
	Food and Beverage Department	144	26.00
	Sale Department	117	21.12
	Other Departments	42	7.58
	Total	554	100
Years of service	1–3	83	14.98
	4–6	238	42.96
	7–9	138	24.91
	10 and above	95	17.15
	Total	554	100

Source(s): Authors' own work

4.1.3 Evaluation of measurement model. The measurement model is assessed in four steps (Hair *et al.*, 2019). Step 1. The loadings should be higher than 0.7. Step 2. Composite reliability (CR) is used to evaluate internal consistency reliability, and should be greater than 0.7. Step 3. Convergence validity represents the degree of construction convergence, and the value of the average variance extraction (AVE) should be more than 0.5. Step 4. Discriminant validity is measured by the ratio of the heterotrait–monotrait (HTMT) (Henseler *et al.*, 2015), and the value should be lower than 0.9. All indicators met the criteria, indicating that the measurement model is reliable and valid, allowing for further study, as shown in Table 2.

4.1.4 Evaluation of the structural model. Collinearity can be checked to determine whether bias affects the regression results. Collinearity is assessed using the variance inflation factor (VIF), which should be ≤ 5 (Hair *et al.*, 2019). The VIF for all items in this study is less than 5, indicating that there is no collinearity problem. As a guide, R -squared (R^2) values higher than 0.75, 0.50 and 0.25 are considered substantial, moderate and weak in interpretational power. Q -squared (Q^2) values higher than 0, 0.25 and 0.50 are interpreted as

Table 2. Summary of reliability and validity

Constructs	Items	Outer loadings	Cronbach's alpha	CR	AVE	Discriminant validity (HTMT)			
						POS	PVAI	PTAI	TI
FPOS	FPOS1	0.890	0.850	0.909	0.769	–	–	–	
	FPOS2	0.867							
	FPOS3	0.873							
CPOS	CPOS1	0.857	0.904	0.932	0.774				
	CPOS2	0.886							
	CPOS3	0.900							
	CPOS4	0.874							
APOS	APOS1	0.889	0.880	0.918	0.736				
	APOS2	0.861							
	APOS3	0.840							
	APOS4	0.841							
POS	FPOS	0.862	0.933	0.942	0.598				
	CPOS	0.899							
	APOS	0.897							
PUV	PUV1	0.918	0.919	0.943	0.805	0.654	–	–	
	PUV3	0.902							
	PUV4	0.904							
	PUV5	0.864							
PHV	PHV2	0.915	0.899	0.937	0.832				
	PHV3	0.924							
	PHV4	0.897							
	PUV	0.930							
PVAI	PHV	0.867	0.916	0.793	0.666				
	PSU1	0.929							
PSU	PSU2	0.902	0.901	0.938	0.835	0.649	0.447	–	
	PSU3	0.909							
	PSE1	0.900							
PSE	PSE2	0.899	0.885	0.929	0.813				
	PSE3	0.906							
	PSU	0.921							
PTAI	PSE	0.918	0.913	0.932	0.696				
	TI1	0.861							
TI	TI2	0.878	0.894	0.926	0.759	0.771	0.710	0.649	–
	TI3	0.867							
	TI4	0.877							

Source(s): Authors' own work

small, medium and large in terms of the predictive relevance of the PLS-path model. F -Square (F^2) values higher than 0.02, 0.15 and 0.35 are considered small, medium and large in terms of their effect size for explaining mediation (Wen *et al.*, 2016). All indicators meet the requirements, as shown in Table 3.

4.1.5 Hypothesis testing. Compared to PROCESS, resample bootstrapping in partial least squares - structural equation modeling (PLS-SEM) can provide more accurate results (Sarstedt *et al.*, 2020). Therefore, it is appropriate to use 5,000 resampled bootstrap programs to evaluate PLS (Hair *et al.*, 2019). According to Hair *et al.* (2021), the testing steps for mediating effects in PLS show that the results for $H6$ and $H7$ indicate partial mediation. The Variance Accounting For (VAF) indicates the degree of mediation effect, with a VAF value greater than 80% indicating full mediation, $20\% \leq \text{VAF} \leq 80\%$ indicating partial mediation, and VAF less than 20% indicating no

Table 3. The results of R^2 , F^2 and Q^2

Variables	Subvariables	R^2	Q^2	F^2
POS	FPOS	0.743	0.567	To PVAI, 0.580
	CPOS	0.808	0.621	To PTAI, 0.560
	APOS	0.805	0.588	To TI, 0.166
	–	–	0.000	–
PVAI	PUV	0.865	0.692	To TI, 0.169
	PHV	0.751	0.619	–
	–	0.367	0.242	–
PTAI	PSU	0.848	0.702	To TI, 0.088
	PSE	0.842	0.680	–
	–	0.359	0.247	–
TI	TI	0.606	0.5455	–

Source(s): Authors' own work

mediation (Hair *et al.*, 2014). The results showed that PVAI ($t=8.540$, $p=0.000$, effect size = 28%) and PTAI ($t=6.261$, $p=0.000$, effect size = 20%) play significant mediating roles, as shown in Table 4.

4.2 Qualitative study

4.2.1 Basic information of the interviewees. Basic information about the interviewees included gender, age, educational level, years of work experience, department, salary level, regional distribution, interview format and word count. The detailed information is shown in Table 5.

4.2.2 Visual analysis results of full text. 4.2.2.1 Coded theme and high-frequency words of full text. The first step is to manually encode the themes using the automatic encoding function of NVivo software. In total, 18 themes have been identified: hotel, support, threat, work, value, department, turnover, intention, level, job, technology, AI, industry, salary, system, customer, skills and service, as shown in Figure 3.

A word cloud was generated by analyzing the frequency of words (Figure 4). The number after each word indicates its frequency of occurrence. The six highest-frequency words are: artificial intelligence (351 times), support (283 times), intention (197 times), value (161 times), turnover (137 times) and threat (128 times). These six highest-frequency words are consistent with the core words in the theoretical model and are also included in the 18

Table 4. The results of hypothesis testing

Hypothesis	Relationship	Path coefficient	SD	T-value	p-value	BCI LL	BCI UL	Effect size	Results
H1	POS → TI	–0.368	0.039	9.316	0.000	–0.388	–0.216	–	Accepted
H2-1	POS → PVAI	0.606	0.026	23.674	0.000	0.554	0.654	–	Accepted
H2-2	PVAI → TI	–0.326	0.034	9.577	0.000	–0.390	–0.260	–	Accepted
H2	POS → PVAI → TI	–0.197	0.023	8.540	0.000	–0.244	–0.154	28%	Accepted
H3-1	POS → PTAI	–0.599	0.026	23.364	0.000	–0.649	–0.548	–	Accepted
H3-2	PTAI → TI	0.233	0.035	6.642	0.000	0.167	0.304	–	Accepted
H3	POS → PTAI → TI	–0.140	0.022	6.261	0.000	–0.187	–0.099	20%	Accepted

Source(s): Authors' own work

Table 5. Basic information of the interviewees

No.	Gender	Age	Educational level	Years of work experience	Department	Salary level	Regional distribution	Interview format	Word count
1	Female	27	College graduate	1	Other	4,001–6,000	Southern	Writing	1,013
2	Male	33	College graduate	7	Sale	8,001–10,000	Southern	Dictation	1,759
3	Female	36	College graduate	6	Food and beverage	6,001–8,000	Southern	Dictation	1,008
4	Male	25	College graduate	1	Housekeeping	4,001–6,000	Northern	Dictation	1,345
5	Male	37	High school graduate	9	Food and beverage	6,001–8,000	Southern	Writing	964
6	Female	41	College graduate	7	Food and beverage	6,001–8,000	Northern	Writing	701
7	Female	31	Postcollege graduate	6	Other	10,000	Northern	Dictation	2,078
8	Male	36	High school graduate	14	Food and beverage	6,001–8,000	Northern	Writing	1,043
9	Male	25	College graduate	2	Front office	6,001–8,000	Southern	Dictation	1,007
10	Male	23	College graduate	1	Housekeeping	4,001–6,000	Southern	Dictation	775
11	Male	29	College graduate	7	Sale	8,001–10,000	Southern	Writing	821
12	Female	42	High school graduate	11	Food and beverage	8,001–10,000	Southern	Writing	1,244
13	Female	25	High school graduate	4	Sale	8001–10000	Northern	Writing	661
14	Male	25	College graduate	4	Front office	4,001–6,000	Northern	Dictation	962
15	Male	33	College graduate	9	Front office	8,001–10,000	Northern	Writing	739
16	Male	35	College graduate	7	Sale	8,001–10,000	Northern	Writing	1,455
17	Male	27	College graduate	2	Housekeeping	4,001–6,000	Southern	Dictation	1,406
18	Female	35	College graduate	10	Housekeeping	8,001–10,000	Northern	Writing	762
19	Female	31	Postcollege graduate	3	Food and beverage	6,001–8,000	Northern	Writing	656
20	Female	24	College graduate	5	Other	8,001–10,000	Northern	Dictation	1,251
21	Male	32	High school graduate	5	Sale	6,001–8,000	Southern	Writing	1,349
22	Female	29	Post-college graduate	4	Front office	8,001–10,000	Southern	Writing	1,173
23	Female	28	College graduate	5	Housekeeping	8,001–10,000	Southern	Writing	1,063
24	Male	25	High school graduate	3	Housekeeping	4,001–6,000	Southern	Writing	1,090

Source(s): Authors' own work

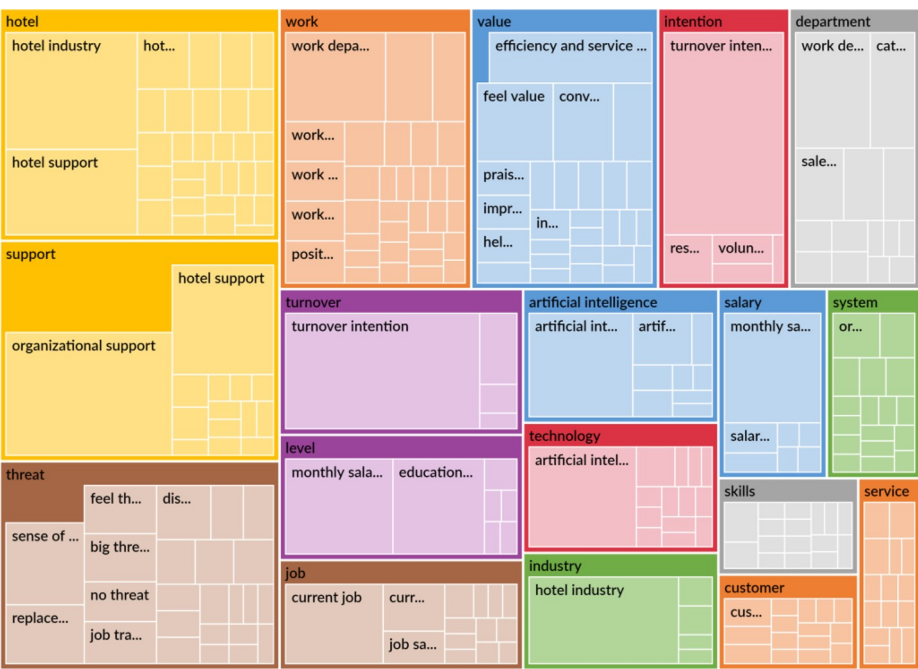


Figure 3. Coded theme of full text
Source: Organized by the authors with NVivo software (14)

encoded themes, this indicating that the interviewees were able to respond in line with the topic and that the core influence mechanisms are perceived hotel support, TI, AI of value and AI of threat.

4.2.2.2 Sentiment analysis of full text. In this section, NVivo software with an emotion rating system for sentiment analysis was used to analyze the emotional types of all 24 interview materials. This study divides the interview data into four different emotional categories: very negative, relatively negative, relatively positive and very positive. Neutral sentences are automatically deleted and do not participate in sentiment analysis. As shown in Table 6, 350 emotion-related sentences were recognized, with a negative proportion of 18.86% (66 sentences) and a positive proportion of 81.14% (284 sentences). The conceptual model proposed in this study has five direct relationships, four of which have positive effects, accounting for 80%, which is close to the positive sentiment ratio of 81.14%. This further confirms the results of the quantitative analysis.

5. Discussion and conclusions

5.1 Conclusions

This research combines the results of quantitative and qualitative studies. The conclusion is ultimately presented in Table 7. All hypotheses have been supported.

This study confirms that POS in the hotel industry is beneficial for reducing employee TI (Finding 1). It also confirms that the PVAI and PTAI play significant partial mediating roles: Perceived support from hotels is conducive to improving employees’ PVAI, thereby



Emotional types	Count (%)
Negative	66 (18.86)
Relatively negative	43 (12.29)
Very negative	23 (6.57)
Positive	284 (81.14)
Relatively positive	145 (41.43)
Very positive	139 (39.71)
Total	350 (100)

Regarding finding 1: This study confirms the significant negative impact of POS on TI in the hotel industry, which is consistent with previous studies (Putri *et al.*, 2023; Sharma and Panicker, 2022; Chung *et al.*, 2021; Berhane, 2021). This finding is consistent with the principles of organizational support theory, which is rooted in SET (Wu *et al.*, 2023). Based on the theoretical explanations provided by Agarwal (2014) and in light of the background of this study, the following elaboration is offered: Organizational support theory explains employees' perceptions of the support they receive from the hotel when faced with the application of AI technology, while SET clarifies that employees, after perceiving support from the hotel, reciprocate by strengthening their psychological connection to the organization. This reciprocation is reflected in their TI. This exchange relationship strengthens the negative correlation between POS and TI, supporting the reliability and universality of the conclusions of this study.

Table 7. The comprehensive results

Quantitative study		Qualitative study		Comprehensive results
Hypotheses	Results	Questions	Results	
H1: POS → TI	Accepted	Q1: POS-TI	Positive	Accepted
H2-1: POS → PVAI	Accepted	Q2: POS-PVAI	Positive	Accepted
H2-2: PVAI → TI	Accepted	Q3: PVAI-TI	Positive	Accepted
H2: POS → PVAI → TI	Accepted	Q2–Q3	Positive–Positive	Accepted
H3-1: POS → PTAI	Accepted	Q4: POS-PTAI	Positive	Accepted
H3-2: PTAI → TI	Accepted	Q5: PTAI-TI	Negative	Accepted
H3: POS → PTAI → TI	Accepted	Q4–Q5	Positive–Negative	Accepted

Source(s): Authors’ own work

Regarding finding 2: As [Cooper-Thomas and Morrison \(2019\)](#) suggested, the increasing complexity of external environments necessitates adjustments and expansions in SET to better account for the exchange relationships between organizations and employees, particularly in the context of technological change. This aligns with [Ahmad et al. \(2023\)](#), who advocate for exploring diverse pathways within the framework of SET. This study highlights new pathway emerging from changes in the work environment, such as the integration of AI technology. Traditional SET often conceptualizes the relationship between organizations and employees as relatively direct and linear. However, when faced with rapidly changing external factors like AI technology, a single theoretical framework may fall short in fully explaining the POS–TI relationship. In this context, organizational support plays a dual role: not only does it directly reduce TI but it also indirectly influences TI by enhancing employees’ PVAI technology. By providing support and training, the organization enables employees to better understand and recognize the value of AI technology. This recognition, in turn, fosters employees’ loyalty and sense of belonging to the organization.

Regarding finding 3: Employees’ perception of AI technology is inherently multidimensional. The PTAI technology is a critical factor affecting employees’ psychological state ([Zhao et al., 2023](#); [Chen et al., 2022](#)). While POS can alleviate employees’ anxiety and fear regarding AI technology, the PT remain a distinct dimension, independent of PV and cannot be completely eliminated by simple positive incentives. Organizational support can, however, reduce employees’ concerns about technological substitutability and job uncertainty by providing psychological security and stability, thereby diminishing TI.

Furthermore, the “oppositional pair” proposed in this study provides a new perspective for studying hotel employees’ perception of AI technology. Unlike the one-dimensional social exchange paradigm, it emphasizes that the PT is not simply the absence of value but rather an independent and complementary existence. This aligns with the two-dimensional paradigm of positive and negative reciprocal beliefs proposed by [Cropanzano et al. \(2017\)](#). This finding demonstrates that organizational support positively impacts employee behavior by reducing the perception of technological threat, independently of PV. This challenges the one-dimensional paradigm of SET and encourages researchers to explore POS–TI relationships in a two-dimensional space.

5.2 Theoretical implications

5.2.1 Extension of social exchange theory. This study, by introducing a two-dimensional perspective on employees’ perceptions of AI technology, highlights the need to move beyond traditional unidimensional exchange relationships, thereby contributing to the development

of SET. The identification of the “oppositional pair” of PV and PT underscores that positive and negative perceptions are not two ends of the same thing but exist independently. This aligns with one of the future research directions proposed by [Cooper-Thomas and Morrison \(2019\)](#), which advocates for considering external environmental changes, such as AI technology, to continuously update SET. Moreover, it corroborates the view of [Cropanzano et al. \(2017\)](#), who emphasized the need to consider social exchange relationships from a two-dimensional paradigm, suggesting that SET should not be limited to a singular theory but should instead evolve into a broader theoretical paradigm.

5.2.2 Integration of organizational support theory. The findings reaffirm OST as a foundational framework for understanding employee behavior, particularly in high-turnover industries like hospitality. By demonstrating that POS can reduce TI both directly and indirectly through the mediating roles of PVAI and PTAI, this study provides nuanced insights into how OST operates within the broader framework of SET. This dual mediation model enriches theoretical discourse by illustrating how organizational support interacts with employees’ cognitive and emotional responses to external technological changes. This contribution not only deepens the theoretical understanding of OST but also provides valuable references for examining the impact of POS on TI in dynamic work environments.

5.2.3 Focus on technological complexity. By addressing the complexity introduced by AI technology, this study advances theories on employee behavior in rapidly evolving technological landscapes. It demonstrates that traditional theoretical frameworks may require adaptation to accommodate the multifaceted influences of technology on employee perceptions, decision-making and organizational outcomes. This highlights the importance of integrating technological dynamics into behavioral theories like SET and OST.

5.3 Practical implications

5.3.1 Building a two-dimensional support. Hotel managers should move beyond traditional practices of organizational support by recognizing that reducing employees’ fears and enhancing their positive perceptions require distinct and tailored interventions. AI applications should be continually evaluated and adjusted, taking into account the dual impact on employees. Inspiration can be drawn from the coded themes of the full text in [Figure 3](#). Hotel managers should provide support to enhance AI’s value in terms of confidence, convenience, cooperation, efficiency and service quality, interesting job, opportunities and work performance. At the same time, hotel managers should also provide support to mitigate AI’s threat related to anxiety, challenge, dismissal, job risk, job transfers, psychological burden, salary issues, stress, technical threats, uncertainty, unease and the working environment.

5.3.2 Designing AI-adaptive training programs. Hotels should prioritize the development and implementation of comprehensive AI-adaptive training programs tailored to meet the diverse needs of their employees. These programs should go beyond the basic technical training required to operate AI systems and address both the practical and emotional dimensions of AI adoption. The first aspect focuses on developing technical skills. Employees should be equipped with hands-on experience and technical knowledge to effectively use AI tools in their roles. For instance, training could focus on streamlining customer service through AI applications or optimizing operations using AI-driven data analysis. Such skill-building increases employees’ PVAI by demonstrating its practical benefits in enhancing their work performance and career growth. The second emphasizes providing psychological and emotional support. AI-adaptive training programs should also tackle psychological barriers, such as fear of job loss or diminished relevance. This can be achieved through open discussions, workshops and mentoring sessions that highlight AI’s

complementary role in human tasks rather than its replacement potential. Providing real-life success stories or case studies where employees have thrived alongside AI can further alleviate concerns and reduce PTs. The third highlights fostering inclusive and continuous learning opportunities. Hotels should adopt a continuous learning model to keep employees updated on new AI developments and ensure inclusivity by customizing training sessions for different roles and skill levels. For example, frontline staff may require training focused on customer interaction with AI tools, while management might benefit from insights on integrating AI into strategic decision-making. By adopting a holistic approach to AI-adaptive training, hotels can foster a workforce that not only embraces AI technology but also thrives in a tech-driven environment, leading to greater job satisfaction, reduced turnover and improved organizational performance.

5.4 Limitations and further research

First, regarding the design of the theoretical model. This study only used a dual mediation model to investigate the impact of POS on TI. There may also be a chain mediation effect between them. In addition, what is the relationship between PVAI and PTAI? Is the greater the PV, the smaller the PT? Or is there a positive relationship between them? These questions are worth exploring. Future research should investigate the relationship between PVAI and PTAI.

Second, concerning the sample distribution in the quantitative study. The sample scope of this study is hotels in 34 provincial-level administrative regions in China. However, according to the IP addresses of the respondents, Guangdong and Shandong provinces have the highest number of respondents, despite not having the highest number of hotels. This indicates an uneven geographical distribution of the respondents. In future research, the number of respondents in each region should be relatively balanced.

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Appendix 1. Questionnaire
Section A
Respondent Profile

1. Gender
☐ Male ☐ Female
2. Age
☐ 18-25 ☐ 26-30 ☐ 31-35 ☐ 36-40
☐ 41-45 ☐ 46-50 ☐ 51-55 ☐ 56-
3. What is your highest educational level?
☐ High school graduate ☐ College graduate
☐ Post-college graduate studies
4. What department do you work in now?
☐ Front Office Department ☐ Housekeeping Department
☐ Food and beverage department ☐ Sale Department
☐ Other departments
5. What is your current monthly salary level?
☐ 2001-4000 ☐ 4001-6000 ☐ 6001-8000
☐ 8001-10000 ☐ 10001-
6. How long have you worked in the hotel industry? ()
☐ 1-3 ☐ 4-6 ☐ 7-9 ☐ 10-

Section B
Survey Questionnaire

For each question, please indicates your level of agreement by checking the box that reflects the best perception of yourself. Each number represents the following description: 1- Strongly disagree, 2- Disagree, 3- Slightly disagree, 4- Normally, 5- Slightly agree, 6- Agree, 7- Strongly agree. Please select a descriptive level number from 1 to 7 that matches the situation.

Part 1 Perceived Organizational Support (POS)

[FPOS1] Our hotel has taken care of me financially.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[FPOS2] The financial incentives and allowances provided to me by our hotel are good.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[FPOS3] I have received generous financial support from our hotel.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[FPOS4] I cannot complain about the financial benefifits associated with my expatriate assignment.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[CPOS1] Our hotel takes an interest in my career.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[CPOS2] Our hotel considers my goals when making decisions about my career.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[CPOS3] Our hotel keeps me informed about career opportunities available within the company.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[CPOS4] I feel that our hotel cares about my career development.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[APOS1] Our hotel has shown an interest in my family's well-being.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[APOS2] Our hotel has provided my family with enough assistance to help them adjust to the city where I work.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[APOS3] Our hotel has provided me with many opportunities to ease the transition to the city where I work.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[APOS4] Help is available within our hotel whenever I have questions or concerns about living in the city where I work.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

Part 2 Turnover Intention (TI)

[TI1] I will leave as soon as I can get a new job with more pay.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[TI2] I think it might be time to seriously consider quitting.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[TI3] I am thinking about quitting my job frequently.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[TI4] I am looking forward to quitting.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[TI5] I will not leave my current position.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

Part 3 Perceived Value of Artificial Intelligence (PVAI)

[PUV1] With the support of AI management technology from Human Resources Department, our hotel can save me more time and cost.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PUV2] With the support of AI management technology from Human Resources Department, our hotel can save my working from costing more.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PUV3] Working on a platform supported by AI management technology from Human Resources Department improves my working efficiency in our hotel.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PUV4] AI management technology can provide me with choice, let me feel more practical in our hotel.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PUV5] With the support of AI management technology from Human Resources Department, I think working is more convenient in our hotel.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PHV1] With the support of AI management technology from Human Resources Department, working makes me feel very happy in our hotel.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PHV2] With the support of AI management technology from Human Resources Department,, working makes me feel very relaxed in our hotel.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PHV3] With the support of AI management technology from Human Resources Department, it can arouse my working desire in our hotel.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PHV4] With the support of AI management technology from Human Resources Department, it can bring me a sense of surprise and curiosity in our hotel.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

Part 4 Perceived threat of Artificial Intelligence (PTAI)

[PSU1] I am at risk for getting AI threat.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PSU2] It is likely that I will contact AI threat.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PSU3] It is possible that I will contact AI threat.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PSE1] I believe that AI threat is severe.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PSE2] I believe that AI threat is serious.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

[PSE3] I believe that AI threat is significant.

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

Source: Organized by the authors

Appendix 2. Interview outline

I. Introduction to the research situation

Thank you for participating in this interview. The study focuses on the impact of perceived organizational support on turnover intention, using a multiple mediation model based on perceptions of artificial intelligence. This interview aims to understand the mediating role of perceived organizational support on turnover intention, particularly the perceived value and threat of artificial intelligence.

The content of this interview is solely for research data analysis purposes, and both your identity and your affiliation will remain anonymous. We greatly appreciate your participation. For data processing purposes, we will record your information during the interview and keep it confidential. The interview will take approximately 1 hour. Thank you very much for your support.

II. Definition of core concepts

Before raising interview questions, it is necessary to explain the four core concepts in this study.

Perceived Organizational Support (POS): It refers to employees' perception of their organization, specifically how it values their contributions and cares about their interests. POS occurs when employees feel supported by the company. It measures how much workers feel managers care about their value and welfare.

Turnover Intention (TI): Turnover refers to the mobility of workers in the labor market among various enterprises, occupations, and jobs. It refers to the voluntary resignation of employees. It was defined as the willingness of employees to actively and consciously depart the company.

Perceived value of artificial intelligence (PVAI): PVAI in this study refers to the utility that individuals obtain from tangible products or intangible services based on AI technology.

Perceived threat of artificial intelligence (PTAI): PTAI in this study refers to the individual's perception of the threat or harm obtains caused by the application of AI technology.

If you have fully understood the connotation of the above concepts, then proceed to the formal interview.

III. Interview questions:

A. Basic information

Please introduce your personal information, such as gender, age, educational level, department, monthly salary level, and years of service in the hotel industry.

B. The relationship of variables

Question 1

Do you think the relationship between perceived organizational support and your turnover intention?

Question 2

Do you think the relationship between perceived organizational support and the perceived value of artificial intelligence for you?

Question 3

Do you think the relationship between the perceived value of artificial intelligence and your turnover intention?

Question 4

Do you think the relationship between perceived organizational support and the perceived threat of artificial intelligence for you?

Question 5

Do you think the the relationship between the perceived threat of artificial intelligence and your turnover intention?

C. Open ended questions

Question 6

Do you have anything else to talk about regarding the previous question?

Source: Organized by the authors

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