

# The relationship between organizational learning and employee innovation performance: the dual mediating effects of knowledge-sharing propensity and the psychological contract

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## Abstract

**Purpose-** This study investigates the mediating role of knowledge sharing propensity and psychological contract between organizational learning and employee innovation performance based on social exchange theory and psychological contract theory.

**Design/methodology/methodology-** Data from 184 valid samples were collected through a three-stage follow-up corporate employee survey and statistically analyzed using statistical software SPSS 26 and Amos 24.

The study found that organizational learning has a positive impact on knowledge sharing tendencies, psychological contracts, and employee innovation performance. Both knowledge sharing tendencies and psychological contracts have a positive influence on employee innovation performance. Additionally, knowledge sharing tendencies and psychological contracts play a mediating role in the relationship between organizational learning and employee innovation performance, with the mediating effect of psychological contracts being stronger than that of knowledge sharing tendencies.

**Originality/value-** The findings provide a theoretical basis and guide practice for organizations that improve employee innovative performance.

**Keywords:** organizational learning, knowledge sharing, psychological contract, innovation performance

## 1. Introduction

The performance of employee innovation inputs and outputs has become a key indicator of a firm's ability to innovate and be sustainable in an ever-changing and competitive business environment (Van Wingerden, Derks, & Bakker, 2017). Therefore, research on how to improve employee innovation performance is a new focus for organizations and academics alike that can drive further development of theory and practice.

To stimulate employee innovation and improve employee innovation performance significant progress has been made through continuous and in-depth research by previous scholars. The research on the factors influencing employee innovation performance can be divided into the individual level and the organizational level. At the individual level, employee work commitment, employee innovativeness (Y. Zhao, Lin, & Liu, 2020), and knowledge sharing among employees can positively influence employee innovation performance (Jiang et al., 2022). At the organizational level, leadership has a direct impact on employees. When higher-level leadership aligns with employee creativity, employee innovation performance is maximized (Yuan, Wang, &

Tian, 2022). Organizational innovation climate (Y. Zhao et al., 2020) and the use of social media in organizations (T. Cheng, P. Zhang, Y. P. Wen, & L. Y. Wang, 2020), among other factors, act as positive factors that increase employee innovation performance. On the other hand, environmental uncertainty, which causes organizational turbulence and affects individual innovation, negatively impacts employee innovation performance (J. H. Wang, 2021).

Knowledge is the most strategic resource for maintaining competitive advantage and promoting innovation. Organizational learning manages the creation of knowledge within organizations by adding to the knowledge created by individuals in a holistic organizational way and transforming this knowledge into a part of the organizational knowledge system (Iebra Aizpurúa, Zegarra Saldaña, & Zegarra Saldaña, 2011). The process of transforming this knowledge into a part of the organizational knowledge system takes place within the organization, with continuous dynamic expansion between tacit and explicit knowledge, establishing the organization as an interactive community capable of creating new knowledge (Nonaka & Takeuchi, 1995). With the development of organizational capacity and the increase in knowledge, a stable internal environment is created for the development of organizational learning activities. The role of employees in participating in the process of organizational learning, changing their perceptions and behaviors to promote positive actions, has led to an increased need for organizations to learn in the new period, making organizational learning a necessary activity (Garcia-Morales, Jimenez-Barrionuevo, & Gutierrez-Gutierrez, 2012). Therefore, it is worth investigating how organizational learning, as an organizational-level factor, can affect employee innovation performance. Previous studies on organizational learning and employee innovation have focused either on the direct effect of organizational learning on employee innovative behavior (Lin & Lee, 2017) or on organizational learning as a mediating variable that mediates the relationship between transformational leadership and employee innovation (Khan & Khan, 2019). Based on these findings, this study examines the direct and indirect effects of organizational learning on employee innovation performance.

Knowledge sharing propensity is the process by which members of an organization engage in knowledge sharing beliefs to facilitate problem-solving or the implementation of organizational policies and procedures (Derin, Toker, & Gorener, 2022). Previous research on knowledge sharing and innovation has found that sharing knowledge among members of an organization is key to achieving innovation. Depending on the nature of the knowledge, knowledge sharing can be divided into explicit and tacit knowledge sharing. Research has found that both forms of knowledge sharing facilitate innovation and performance (L. Y. Hu & Randel, 2014; Z. N. Wang & Wang, 2012). As knowledge is increasingly becoming a core competency of organizations, the potential benefits of knowledge sharing, which continuously accumulates knowledge for organizations, have led organizations to invest a significant amount of time and money in knowledge management. This investment includes developing knowledge management systems that use state-of-the-art technology to facilitate the collection, storage, and distribution of knowledge (S. Wang & Noe, 2010). The need to practice drives the theoretical focus on the antecedents of knowledge sharing, which can be categorized into individual and organizational dimensions. An individual's propensity for knowledge sharing is influenced by factors such as ongoing relational experiences, awareness of the source of knowledge, expectations of relational reciprocity, and social group acceptance (Obembe, 2013). Analyzing the organizational level through the Theory of Reasoned Action (TRA), the sense of fairness, innovative belonging, leadership empowerment, self-worth sense, and altruism dimensions of organizational climate significantly influence individuals' knowledge-sharing attitudes, intentions, and behaviors (Matic, Cabrilo, Grubic-Nesic, & Milic, 2017). Employees' knowledge sharing as an individual choice tendency is influenced by factors such as leadership, individual affective commitment, and trust in the organization (Ng, 2022). Organizational learning, as an organizational-level activity, can be explained by social exchange theory, which considers the

continuous practice of social exchange between individuals and organizations (Thomas & Gupta, 2021).

The psychological contract is an implicit relationship between the employer and the employee outside of the formal contract. It refers to the employee's understanding of their mutual responsibilities and obligations to the organization (D. Rousseau, 1995; D. M. Rousseau & Tijoriwala, 1998).. At the individual level, the subject of the psychological contract is the employee who establishes an employment relationship with the organization, and its essence is the employee's subjective perception of the mutual implied responsibilities of the organization and the individual. In other words, the employee subjectively perceives the organization's responsibilities to the individual and the individual's obligations to the organization. Therefore, the psychological contract, as a subjective feeling, is significantly individual and idiosyncratic (Anderson & Schalk, 1998). In a psychological contract, the employee and the employer play roles for each other to fulfill the unwritten and informal understanding between them. This mutual expectation leads to job satisfaction, employee commitment, job quality, and employee productivity in the organization (Rajalakshmi & Naresh, 2018). In essence, the psychological contract consists of perceptions, expectations, commitments, and obligations and is the support the employee feels from the organization, which will impact the employee's attitude (Guest, 1998). The fulfillment of employees' psychological contract affects their behavioral choice tendencies, which, in turn, affect employee innovation performance. This study examines the mediating role of the psychological contract between organizational learning and employee innovation performance.

The contribution of this study is as follows: based on social exchange theory and psychological contract theory, a cross-level research model was constructed to explore the impact of organizational learning on employees' innovative performance through the dual mediator variables of knowledge-sharing propensity and psychological contract. It is hoped that the findings of this study will be useful for business managers.

## 2. Literature review

### 2.1 *The relationship between organization learning and employee innovation performance*

Learning is a social process, involving collaborative reflection on action and the individual's capacity to adapt and change (Limerick, Passfield, & Cunningham, 1994). Organizational learning refers to the actions taken within an organization that consciously or unconsciously impact organizational change. It encompasses four components: knowledge acquisition, information distribution, information interpretation, and organizational memory (Templeton, Lewis, & Snyder, 2002).

Organizational learning provides employees with a developmental pathway that satisfies their highest level of self-actualization, enhances their identification with the organization, and fosters a sense of emotional belonging (H. K. Wang, Tseng, Yen, & Huang, 2011). When organizations demonstrate a strong learning orientation, it promotes the exchange of organizational knowledge, leading to improved organizational innovation and performance (Hsiao & Chang, 2011). Simultaneously, organizational learning involves a process of change in thought and action. By focusing on learning, organizations build a knowledge base, manage the flow of knowledge, diffuse new knowledge throughout the organization, and acquire knowledge through the learning process to improve actions and drive the accumulation of knowledge, thus promoting innovation (Hitt, Haynes, & Serpa, 2010).

Innovation encompasses new ideas, methods, and products, and involves the behavioral process of transforming concepts into their final form (Garcia-Morales et al., 2012). From the employee perspective, job performance can be categorized as routine or innovative (Ali-Hassan, Nevo, & Wade, 2015). Routine job performance comprises the execution of mandatory tasks, duties, and responsibilities associated with the job, while employee innovative performance refers to the intentional generation, facilitation, and realization of new ideas within a job role, work group, or organization (T. Cheng, P. Zhang, Y. Wen, & L. Wang, 2020).

The source of knowledge plays a fundamental role in promoting employee innovation within an organization (B. Hu & Zhao, 2016). Knowledge is the outcome of the learning process by which employees acquire knowledge, while organizational learning serves as a transferable learning system among members and provides knowledge for individual learning (Shrivastava, 1983). The rules and norms of exchange form the basis of social exchange theory, defining the norms that develop or are adopted by participants in an exchange relationship. These norms evolve the relationship into one characterized by trust, loyalty, and mutual commitment (Richard & Emerson, 1976). Organizational support enhances multi-level learning and performance improvement within organizations. As the foundation and key component of organizations, employees interact and exchange ideas within the group, finding innovative thinking and problem-solving methods to enhance their personal achievement goals (Lin & Lee, 2017), which positively influences individual innovation. The social exchange relationship between organizations and employees is a balanced and strong relationship that leads to mutually beneficial and fair transactions, resulting in effective work behaviors and positive employee attitudes (Cropanzano & Mitchell, 2005). Organizational support perceived by members through social exchange positively impacts employee attitudes and innovative behavior (Zhu, Gao, & Chen, 2022). Theory suggests that positive initial actions increase mutual trust, and this increased trust promotes positive behavioral responses (Cropanzano, Anthony, Daniels, & Hall, 2017). Consequently, in a learning organization, employees can absorb sufficient new knowledge, enhancing their ability to innovate and promote individual innovation at work. Based on this, the hypothesis is formulated:

H1: Organizational learning has a positive affects employee innovation performance;

## *2.2 The relationship between organizational learning and knowledge sharing tendency*

Knowledge-sharing tendencies refer to the beliefs that drive individuals to engage in knowledge-sharing activities, including communicating their knowledge to others and seeking knowledge from others (Zhang, Xi, & Xu, 2022). Knowledge sharing is a process where individuals exchange their knowledge and co-create new knowledge, involving two core processes: knowledge donation and knowledge collection. The inclination to share knowledge is influenced by an individual's emotional state (Van Den Hooff, Schouten, & Simonovski, 2012) and their beliefs and perceived outcomes (Bock & Kim, 2002).

Social exchange theory explains that an obligation-based relationship is formed when one person receives a benefit from another, and the obligation is discharged when the benefit is reciprocated. Employees' behaviors and attitudes towards their exchange partners are influenced by the perceived support or benefits they receive from them (Kim, 2021). Organizations provide employees with various human resource management practices in exchange for positive attitudes and behaviors from employees (Zhu et al., 2022). Exchange partners rely on judgment to decide when and how to reciprocate a favor or gift to each other (Hom et al., 2009). Both parties actively fulfill their obligations by providing goods or services to receive ongoing resources from each other (Buchan, Croson, & Dawes, 2002). Organizational learning involves the internal exchange of learning within

organizations through organizational activities. It helps build, supplement, and construct knowledge and routines, and improve organizational effectiveness by enhancing the skills of employees. Employees perceive their own learning experiences at the organizational level through organizational learning (Dodgson, 1993).

Based on social exchange theory, there is an exchange relationship between organizations and employees. When organizations meet employees' expectations regarding working conditions, employees become more engaged in their work and are willing to adopt positive attitudes and behaviors (Zhu et al., 2022). In knowledge-sharing scenarios, there are implicit expectations associated with knowledge sharing from both organizations and individuals (L. Zhao & Detlor, 2021). This study argues that organizational learning provides learning paths for employees who are in a knowledge-sharing environment on a daily basis. Employees are more inclined to engage in knowledge sharing when they believe they are contributing to the common good rather than seeking mutual benefits (Serenko & Bontis, 2016). They assimilate organizational-level knowledge and receive corresponding benefits. Employees' tendency to share knowledge with others is incentivized when the costs of knowledge sharing are reduced while the benefits are increased. They are more likely to share the knowledge they have gained when they feel compelled to reciprocate the benefits they have received (Guo, Guo, Fang, & Vogel, 2017). Therefore, organizational learning positively influences employees' knowledge-sharing tendencies. Based on this, the following hypothesis is proposed:

H2: Organizational learning positively affects knowledge sharing tendency;

### *2.3 The relationship between knowledge sharing tendency and employee innovation performance*

Knowledge acquisition and sharing among employees play a crucial role in fostering employee creativity and innovative behaviors. These activities involve the exchange and organization of resources through collaborative efforts, leveraging individual creativity to drive the implementation of innovative behaviors (Huang & Liu, 2019). Knowledge sharing promotes the mutual exchange of information, ideas, suggestions, and expertise among employees, facilitating internalization and externalization processes that contribute to individual learning (B. Hu & Zhao, 2016). Knowledge plays a critical role in employee innovation as it aids in the creation and maintenance of competitive advantages.

The process of knowledge acquisition entails the mutual exchange of knowledge among colleagues, encompassing both tacit knowledge that cannot be transmitted through formal channels and the flow of ideas that stimulate innovative thinking. Knowledge sharing enhances the effectiveness of problem-solving processes, while the absence of knowledge-sharing abilities hinders the utilization of experience and expertise (Zamir, 2019). Thus, individuals with a stronger tendency to share knowledge in mutual exchanges at the individual level are more likely to engage in frequent knowledge-sharing interactions with their colleagues. This continuous exchange facilitates the dissemination of knowledge and provides employees with constructive feedback, thereby promoting the application of knowledge in innovation (Liao, Fei, & Chen, 2007). Particularly for tacit knowledge, sharing experiences and skills among employees helps individuals integrate existing knowledge with others' insights, serving as a key input for individual innovation projects and facilitating innovation through the interaction of existing and new knowledge (Dahlander, O'Mahony, & Gann, 2016). Based on this, the following hypothesis is formulated:

H3: Knowledge sharing tendency positively affects employee innovation performance;

#### *2.4 The relationship between organizational learning and psychological contract*

The concept of the psychological contract was first introduced by Argyris in the 1960s, describing it as an informal and implicit relationship between employers and employees (Argyris, 1960). With the emergence of "people-centered" management, the theory of psychological contracts has undergone continuous refinement. At the individual level, the psychological contract refers to the subjective perception of mutual obligations between employees and employers, creating an expectation that these obligations will be fulfilled (Al-Abrow, Alnoor, Ismail, Eneizan, & Makhamreh, 2019). A psychological contract is formed when an individual perceives that their contributions to the organization require reciprocal responses. Reciprocity beliefs are a fundamental requirement for the existence of a psychological contract, while an individual's belief in the obligation to reciprocate forms the contract. This belief is unilateral, held by a particular individual, and does not bind the beliefs of other parties in the relationship (D. M. Rousseau, 1989). Psychological contracts are commonly classified as transactional or relational. Transactional contracts entail explicit and direct agreements regarding duties, deliverables, rewards, and deadlines, with greater emphasis on material goods, pay levels, and job security. They typically involve short-term, task-based employment relationships. On the other hand, relational contracts involve more indirect, informal, and ambiguous agreements that imply emotional and material investments, emphasizing trust, respect, and commitment. These contracts are associated with long-term, relationship-oriented employment (D. Rousseau, 1995).

According to psychological contract theory, employees' perceptions of the organization influence their behavioral tendencies (Yu, 2022). The assessment criteria for organizational learning can be summarized into four factors: commitment to learning, shared vision, open-mindedness, and knowledge sharing within the organization. These factors serve as active and operational guidelines for organizational learning, fostering a conducive learning environment for members within the organization (Calantone, Cavusgil, & Zhao, 2002; Lin & Lee, 2017). When employees perceive that the organization has a favorable learning climate, it increases their access to new knowledge, thus enhancing their transactional psychological contract. Additionally, organizational learning leads to the development of a shared vision within teams, improving team cohesion and subsequently promoting employees' relational psychological contract. In summary, the following hypothesis is proposed:

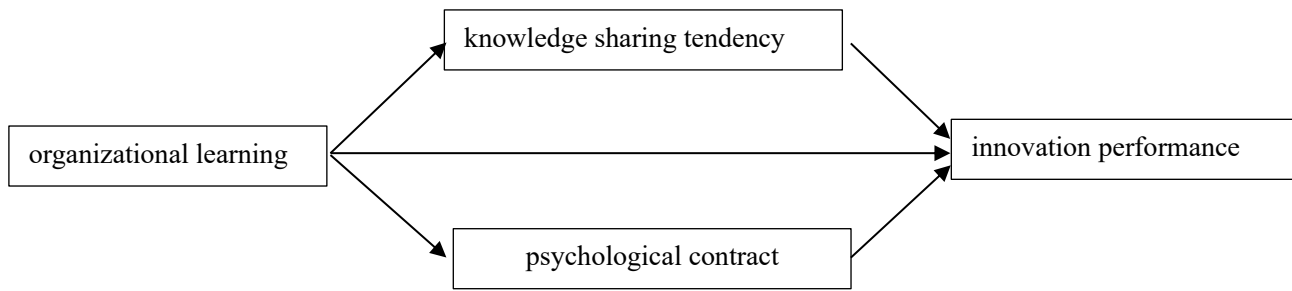
H4: Organizational learning positively affects psychological contract;

#### *2.5 The relationship between psychological contract and employee innovation performance*

Based on the classification of the psychological contract, employees who fulfill the relational psychological contract enhance employees' trust in the organization. Organizational learning shifts employees into key roles in knowledge management, fosters a culture of knowledge sharing, and encourages the utilization of innovative thinking based on trust relationships. As a result, employees' ability to innovate is increased (O'Neill & Adya, 2007). In other words, the relational psychological contract strengthens the relationship between organizational learning and employees' innovative performance. Employees who fulfill the transactional psychological contract prioritize the exchange relationship with the organization. Due to the explicit nature of the employment relationship (Liao & Chen, 2018), these employees utilize all available resources within the organization to implement innovative ideas and enhance employee innovation performance. Based on this, the following hypothesis is formulated:

H5: Psychological contract positive affects employee innovation performance.

**Figure 1**  
*Conceptual model*



**3. Method**

SPSS26 and AMOS statistical software were used to analyze the data in this study.

*3.1 Participants and procedure*

In this study, convenience sampling was utilized, and the questionnaire was distributed electronically. The participants were employees from Chinese companies, primarily using Questionnaire Star ([www.wjx.cn](http://www.wjx.cn)) to create electronic questionnaires. Additionally, the researchers leveraged their personal social connections via WeChat to reach out to employees in these companies. Prior to commencing the study, we ensured that all participants provided their consent, and we guaranteed the confidentiality of their identities. The questionnaire distribution period spanned from 30 January, 2023, to 15 March, 2023.

The questionnaires for this study were distributed in three waves, with each wave separated by a 15-day interval. The first wave encompassed questions related to basic demographic information about the participants and organizational learning. Out of the distributed questionnaires, 219 were returned. The second wave covered questions concerning the propensity to share knowledge and the psychological contract. A total of 208 questionnaires were returned for this wave. Lastly, the third wave included questions pertaining to the dependent variable, resulting in 194 returned questionnaires. These three waves of questionnaires were merged into one sample based on email addresses, with missing values removed, resulting in a final sample of 184 cases.

Females constituted 75.5% of the sample, with the highest percentage (87%) found within the age group under 26 years old. In terms of education, individuals with a bachelor's degree accounted for the largest proportion (65.8%). Regarding work experience, the majority (84.8%) had less than 3 years. From a job sector perspective, the distribution was relatively dispersed across all positions, with the Finance Department exhibiting the highest percentage (14.7%). Private enterprises constituted the largest proportion in terms of enterprise type (45.7%). Team sizes were predominantly above 25 people (44.6%). From a monthly income perspective, the stage of 3001-5000 yuan accounted for the highest proportion (42.4%).

*3.2 Measures*

This research utilized a 5-point Likert scale to measure organizational learning, knowledge sharing propensity, psychological contract, and employee innovation performance. The scale ranged from 1 (strongly disagree) to 5 (strongly agree).

The Organizational Learning Scale was developed based on Garcia-Morales et al. (2012) and

comprised 4 items. For instance, one item stated, "The organization has acquired and shared a substantial amount of new and relevant knowledge that gives it a competitive advantage." The Cronbach's alpha for this scale was 0.887.

The knowledge sharing propensity scale was developed based on Zhang et al. (2022) and consisted of 8 items that assessed employees' inclination to share and absorb knowledge from others. For example, one item stated, "When I need specific knowledge, I seek assistance from my colleagues." The Cronbach's alpha for this scale was 0.876.

The scale for the psychological contract was developed based on Coyle-Shapiro and Kessler (2003) and encompassed transactional and relational dimensions. The transactional psychological contract had four items, such as "The organization offers fair compensation compared to other organizations employing individuals in similar roles." The relational psychological contract comprised 4 items, for example, "I find my current job to be interesting." The Cronbach's alpha for this scale was 0.926.

The scale for employee innovation performance was developed based on Janssen and Van Yperen (2004) and included 8 items. One item stated, "I generate novel ideas to facilitate improvements." The Cronbach's alpha for this scale was 0.945.

**Control Variables.** Considering that individual differences may influence employee innovation performance, the data analysis accounted for factors affecting the dependent variable, as identified through a literature review. The control variables were categorized into organizational and individual levels. At the organizational level, factors included organizational size (Montani & Staglianò, 2022), firm type, and industry attributes (Jing, Hou, Zhang, & Zhao, 2022). At the individual level, factors encompassed age, gender, education, years of experience, and department (Y. L. Wang & Ellinger, 2011).

## 4. Results

### 4.1 Common method deviation test

In this study, sample data were collected using a multi-temporal approach to mitigate potential common method bias, and a simple test for common method bias was conducted. Harman's single-factor test was employed to factor analyze all the observed indicators of four variables: organizational learning, knowledge sharing propensity, psychological contract, and employee innovation performance. The results indicated that five factors were extracted, with the first factor explaining only 46.091% of the total variance, which did not meet the empirical standard. Additionally, the one-way structural equation model showed poor fit for the four variables ( $\chi^2/df=4.303$ , RMSEA= 0.134, GFI= 0.67, NFI= 0.611, CFI= 0.67, TLI= 0.644). Therefore, the issue of common method bias in the sample data is not significant enough to warrant further statistical testing.

### 4.2 Confirmatory factor analysis

In this study, a validation factor analysis of the model was conducted using Amos 24 to verify whether the model fit was good. In order to examine the discriminant validity of the four latent variables of worker organizational learning, knowledge sharing tendency, psychological contract and employee innovation performance, nested structural models were constructed to test the model fit, and the results are shown in Table 1. Among the nested models, each fitting index of the

four-factor model reached the good level of the empirical standard, and compared with other models, the four-factor fit was the best ( $\chi^2/df=2.212$ , RMSEA=0.081, CFI=0.877, NFI=0.798, and TLI=0.866), so there was a high degree of discriminant validity between the four main variables of the present study.

**Table 1**  
*Confirmatory factor analysis*

Model	Factor	$\chi^2$	DF	$\chi^2/df$	RMS							
					EA	RMR	RFI	NFI	CFI	IFI	TLI	
Four-factor model	OL KST PC EIP	882.679	399	2.212	0.081	0.044	0.78	0.798	0.877	0.878	0.866	
Three-factor model	OL KST+PC EIP	1103.00	2	402	2.744	0.098	0.057	0.727	0.748	0.822	0.824	0.808
Two-factor model	OL+KST+P C EIP	1280.88	1	404	3.17	0.109	0.06	0.685	0.707	0.778	0.779	0.76
Single factor model	OL+KST+P C+EIP	1622.33	8	377	4.303	0.134	0.073	0.582	0.611	0.67	0.672	0.644

Note: OL refers to organizational learning, KST refers to shared tendency, PC refers to psychological contract, and EIP refers to employee innovation performance

#### 4.3 Convergent validity

In this study, composite reliability (CR) and average variance extracted (AVE) were used to test the convergent validity of the variables. From Table 2, the factor loadings of all the items ranged from 0.576 to 0.857 which is above the benchmark value of 0.5 (Bagozzi & Yi, 1988). The CR values for all variables were above the criterion value of 0.6. the AVE scores were all greater than 0.36 (Fornell & Larcker, 1981). In summary, all variables in this study have convergent validity.

**Table 2**  
*Convergent validity index*

variables	Items	Factor Loading	CR	AVE
Organizational learning	4	0.779-0.857	0.8879	0.6646
Knowledge sharing tendency	8	0.576-0.779	0.8775	0.4743
Psychological contract	9	0.717-0.808	0.9257	0.5809
Employee innovation performance	9	0.770-0.855	0.9451	0.657

#### 4.4 Correlation and discriminant validity

The correlation results, as shown in Table 3, indicate a positive correlation between the variables. The diagonal represents the square root of average variance extracted (AVE), which is higher than the correlation coefficients found in the corresponding rows and columns. This suggests a strong discriminant validity among the variables.

**Table 3**  
*Correlation and discriminant validity*

Variable	1	2	3	4
1.Organizational learning	0.815			
2.Knowledge sharing tendency	0.592**	0.689		
3.Psychological contract	0.595**	0.623**	0.762	
4.Employee innovation performance	0.555**	0.595**	0.669**	0.811

Note: \*\* indicates  $p < 0.01$ ,

#### 4.5 Hypothesis testing

Multiple regression analysis was used for the initial validation of the main effect mediation effect, and the SPSS macro program Process was used for the closer validation of the mediation effect, and the results are shown in Table 4. In Model 6, organizational learning significantly and positively affects employee innovation performance ( $\beta=0.501$ ,  $p<0.001$ ), therefore, Hypothesis H1 is supported; in Model 2, organizational learning positively and significantly affects knowledge sharing tendency ( $\beta=0.535$ ,  $p<0.001$ ), therefore, Hypothesis H2 is supported; in Model 8, knowledge sharing tendency positively and significantly affects employee innovation performance ( $\beta= 0.555$ ,  $p<0.001$  ), therefore, hypothesis H3 is tested; in model 4, organizational learning positively and significantly affects psychological contract ( $\beta=0.557$ ,  $p<0.001$  ), therefore, hypothesis H4 is tested; in model 10, psychological contract positively and significantly affects employee innovation performance ( $\beta=0.555$ ,  $p<0.001$  ), therefore, hypothesis H5 is tested. Model 7 introduces organizational learning and knowledge sharing tendency, and finds that organizational learning still has a positive and significant effect on employee innovation performance, but the coefficient decreases from 0.501 to 0.286 compared to model 6, indicating that knowledge sharing tendency partially mediates the relationship between organizational learning and employee innovation performance; similarly, it can be obtained that the coefficient of organizational learning decreases to 0.214 compared to model 6 in model 9, and the psychological contract partially mediates the positive effect of organizational learning on employee innovation performance.

**Table 4**  
*Multiple linear regression analysis*

Variable	Knowledge sharing tendency		Psychological contract		Employee innovation performance					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Control variable										
Gender	-0.011	0.037	-0.13	-0.08	-0.0	-0.03	-0.04	0.01		
Age	0.062	-0.001	0.058	0.08	0.04	-0.01	-0.01	0.01	-0.00	0.012
Education background	-0.367**	-0.195**	-0.25	-0.07	-0.2	-0.07	-0.00	-0.03	-0.03	-0.07
Working year	-0.09	-0.032	0.058	0.118	0.1	0.15	0.16	0.09		
Work department	-0.09	-0.056	-0.13	-0.09	-0.0	-0.00	0.01	0.01	0.04	0.063
Company type	-0.017	-0.046	0.058	0.118	0.1	0.15	0.16	0.09		
Company size	0.09	0.056	0.023	0.03	0.07*	0.04	0.02	0.07	0.01*	0.045
Monthly income	0.127	0.049	0.054	-0.02	0.09	0.02	0.00	0.02	0.03	0.063
Independent variable										
Organizational learning		0.535**		0.557***		0.50	0.28		0.21	
Knowledge sharing tendency						0.40	0.55			
Mediating variable						0.33***	0.55***			
Psychological contract									0.51	0.634
									0.6***	***
R <sup>2</sup>	0.141	0.386	0.14	0.407	0.14	0.36	0.46	0.41	0.52	0.494
Δ R <sup>2</sup>	0.102	0.355	0.101	0.376	0.10	0.33	0.43	0.38	0.49	0.467

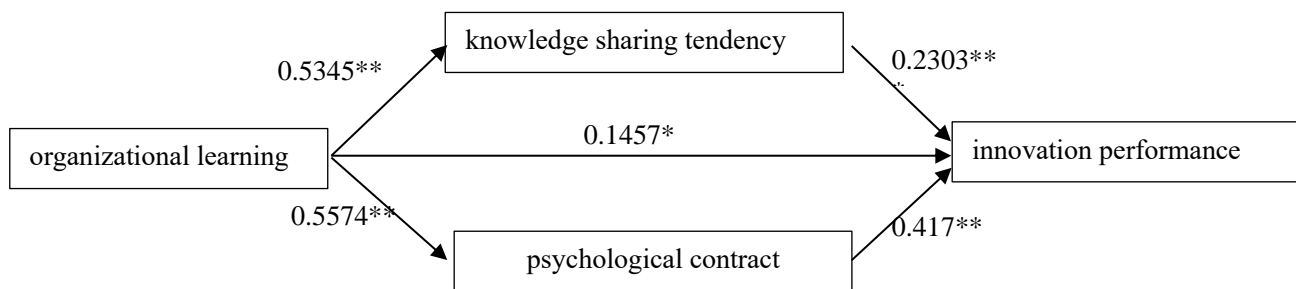
					8		1	2	3	
				13.24	3.78	11.0	14.8	13.5	18.7	
F	3.604	12.172	3.568	6	4	11	85	68	87	18.84

As shown in Table 5, Performing analysis of the proportion of mediation effects using nonparametric percentile bootstrap method with bias-corrected in the Process, and the results showed that the mediating role of organizational learning and psychological contract was significant, with a mediation effect value of 0.8529. Specifically, the mediation effect was generated through a mediation chain: firstly, the indirect effect consisting of organizational learning → knowledge sharing tendency → employee innovative performance (0.2953 ), Bootstrap 95% confidence interval does not contain 0, indicating that the mediating role of knowledge sharing tendency is significant, Hypothesis 2 and Hypothesis 3 are further verified; secondly, the indirect effect consisting of organizational learning → psychological contract → employee innovation performance (0.5576), Bootstrap 95% confidence interval does not contain 0, indicating that the mediating role of the psychological contract is significant, Hypothesis 4 and Hypothesis 5 are further verified. were further verified. The specific mediation path of organizational learning on employee innovation performance is shown in the accompanying figure.

**Table 5**  
*Double mediation model*

	Effect	BootSE	BootLLCI	BootULCI	Relative mediating effect
Total indirect effect	0.8529	0.1635	0.5451	1.1795	70.93%
OL>>KST>>EIP	0.2953	0.1064	0.087	0.5135	24.56%
OL>>PC>>EIP	0.5576	0.1342	0.3194	0.8458	46.37%

**Figure 2**  
*Double intermediate path graph*



**5. Discussion and conclusion**

*5.1 Theoretical contribution*

This study constructs a dual mediation pathway of organizational learning on employee innovation performance, enriches the social exchange theory and psychological contract theory, and verifies the direct and mediating effects of organizational learning on employee innovation at the organizational level.

The questionnaire collected in this study generated three waves of longitudinal data, and the

hypotheses were all validated through empirical research. The empirical results indicate that organizational learning positively affects employee innovation performance. Based on the social exchange theory, organizational learning is a systematic process of change, where organizations build a knowledge base by focusing on learning, providing employees with a way to learn, and their ability to get innovative sources of knowledge from the organization to promote employee innovation performance, which is in line with Lin and Lee (2017) research findings.. Organizational learning has a direct positive effect on knowledge sharing tendencies. Organizational learning is the sharing of knowledge in the organization on a daily basis through appropriate infrastructure and learning culture, and in terms of social exchange relationships, employees acquire knowledge from organizational learning, share it with organizational members by processing and converting it into new knowledge themselves, and assimilate the knowledge shared by other members, which promotes the individual's propensity to share knowledge, which is in line with Iebra Aizpurúa et al. (2011) research findings. Knowledge sharing propensity positively affects employee innovation performance, where employees output and input knowledge in the knowledge sharing process and continuously accumulate knowledge, which promotes employee innovation performance, which is consistent with Khan and Khan (2019) study.

Empirical studies have shown that organizational learning has a positive effect on the psychological contract. Organizational learning provides technical support for employees to learn new knowledge, enhances employees' sense of belonging to the organization, and enables employees to establish a psychological contract with the organization. The psychological contract positively affects employees' innovation performance, when employees have a sense of trust and belonging to the organization, from both transactional and relational perspectives, employees are more willing to apply their innovative ideas to their work, which improves their innovation performance, which is consistent with the study of Iebra Aizpurúa et al. (2011).

In a further test through mediation effect, it was found that knowledge sharing propensity and psychological contract mediate between organizational learning and employee innovation performance, and the mediation effect of psychological contract is stronger than that of knowledge sharing propensity. It indicates that the psychological contract as a unilateral reciprocal belief will generate stronger motivation than individual behavioral tendencies(Yu, 2022), when perceived material or spiritual incentives given by the organization, it promotes the employees to fulfil the psychological contract more, and according to the principle of reciprocity, the employees will be more willing to implement innovations in the organization, which enhances the innovation performance(O'Neill & Adya, 2007).

## 5.2 Practical significance

This paper takes employees as the research object, and the results of the study provide practical suggestions for managers of enterprises, which provide important insights into how to effectively motivate employees to create higher innovative performance.

First, the organization in which employees work must pay attention to the process factors involved in innovation and achieving innovation goals, stimulate employees' innovative thinking from three processes, accept employees' innovative ideas, guide employees to transform their ideas into innovative behaviors, and promote the improvement of employees' innovative performance.

Secondly, managers should actively build and update the organizational knowledge system, provide employees with new knowledge, key competencies and skills for their work, and establish a learning organization. Knowledge is increasingly becoming an important source of innovation, and it is not enough to rely only on the individual ability of employees to obtain sufficiently rich and

competitive knowledge. Therefore, collecting and organizing knowledge at the organizational level and making the system accessible to employees within the organization provides a source of innovation by enabling employees to freely access key information about their work.

Thirdly, in today's human-centered wave, managers should pay more attention to the effectiveness of employees as the main body to play, with the organizational level of learning to drive the sharing of knowledge among employees, so that employees are willing to exchange knowledge with other members of the organization, take the initiative to ask colleagues for knowledge and share their own knowledge with the organization, to obtain the latest knowledge from the two sides of the absorption and output, and to improve their own innovation ability.

Fourthly, organizations need to improve the effectiveness of employees' psychological contract, help them establish positive psychological emotions, strengthen innovation perception and innovation identity, and try to stimulate their innovation willingness and vitality, and ultimately promote innovative behaviors. Organizations should increase innovation support and enhance the sense of belonging of the new generation of employees. By strengthening and standardizing the two-way commitment between the organization and employees, and establishing a good recognition system for loyalty and responsibility commitment, efforts should be made to enhance employees' sense of innovation achievement. Organizations can provide long-term organizational care based on employees' intrinsic needs and psychological perceptions, which is to maintain and renew employees' transactional and relational psychological contracts (J. Wang, Ma, & Li, 2022).

### 5.3 Limitations and future research

Due to the condition limitations, there are still some deficiencies in this study, which need to be further improved in the subsequent research. Firstly, in terms of sample collection, this study carries out multi-temporal data collection out of the control of common method bias, and collects data of different research variables through three surveys, which solves the problem of time lag of causality in theoretical models to a certain extent, but it is still difficult to avoid homologous errors completely. In particular, employees' self-assessment of innovation performance may have a certain tendency of social approbation, and future research may consider multi-source data collection on the basis of multi-times point research to evaluate employees' behaviors through colleagues or leaders to make the empirical test more scientific and reliable, if the conditions permit.

Secondly, this study found the dual mediation path of knowledge sharing tendency and psychological contract organizational learning in employee innovation performance. Future research can be based on other theories such as self-determination theory, and dig deeper into other mediating variables such as psychological empowerment (Pacheco & Coello-Montecel, 2023), psychological distance (Berson, Halevy, Shamir, & Erez, 2015), etc.; at the same time, boundary conditions can be further explored from the perspective of individual characteristics such as learning orientation (Zahoor, Donbesuur, Christofi, & Miri, 2022), employee resilience (Liang & Cao, 2021), and creative self-efficacy (Islam & Asad, 2021).

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