



Influence of employees' perception of differential organizational climate on knowledge hiding: Moderating effect of task interdependence

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As relational ties strengthen, the hierarchical pattern that is rooted in the relational structure of Chinese society has exerted profound effects on the daily operation and management of indigenous Chinese enterprises. In this study we drew on social information processing theory to examine the impact of employees' perception of differential organizational climate on knowledge hiding. We analyzed data obtained from 406 employees in seven Chinese enterprises. The results showed that perception of differential organizational climate positively influenced employee knowledge hiding, with relative deprivation mediating this relationship. Furthermore, task interdependence negatively moderated both the positive relationship between relative deprivation and knowledge hiding, and the mediating effect of relative deprivation between employees' differential organizational climate perception and knowledge hiding. This study contributes to a deeper understanding of the psychological mechanisms and behavioral patterns of employees in the context of indigenous Chinese management.

Keywords

hierarchical relational social structure, differential organizational climate, relative deprivation, knowledge hiding, task interdependence, Chinese enterprise

Article Highlights

- We conducted cross-cultural management research to promote knowledge-management practices worldwide.
- Relative deprivation was found to play a positive mediating role in the relationship between employees' perception of differential organizational climate and their knowledge hiding.
- Task interdependence played a negative moderating role in the positive relationship between employees' relative deprivation and knowledge hiding.

Differential leadership is prevalent in China and is a style unique to enterprises in this country. Perception of a differential organizational climate is rooted in Xiaotong Fei's theory of differential mode of association (Jiang & Zhang, 2010; Zheng, 1995), explaining the unique cognitive patterns within Chinese social networks that are centered on familial and kinship relationships. Leaders of organizations classify their subordinates based on kinship, loyalty, and talent, creating in-groups and out-groups through differential treatment. This biased behavior model leads to unequal distribution of benefits, creating a dichotomy between those who are beneficiaries and the disadvantaged parties. When a strongly differential climate exists within an organization (Chen & Dian, 2018), employees perceive the differential treatment from leaders more acutely, which affects their sense of fairness and perception of future stability in regard to resource distribution, belongingness, and social status. This perception involves not only material resource allocation but

also the employee's psychological cognition and emotional experiences, potentially reducing the individual's internal interactions, so that cognitive biases are formed and negative behavioral patterns are triggered (Serenko & Choo, 2020).

Under these circumstances, employees engage in negative knowledge-management behaviors that sometimes escalate into retaliatory interaction modes. When employees receive a request for knowledge sharing they may choose to provide misleading information or deliberately withhold critical knowledge, with the objective of gaining a personal competitive advantage (Wen & Wang, 2022). This *knowledge-hiding behavior* exposes inherent faults in organizational culture, negatively impacting knowledge-management practices and the organization's learning environment (Serenko, 2019).

Despite the increasing attention academics and industry members are paying to employees' perception of a differential climate, research remains scarce on the impact of this type of climate on employees' knowledge-management behaviors. Specifically, how does employees' perception of a differential climate affect their knowledge hiding? What are the mediating mechanisms involved and the boundary conditions of these mechanisms? These questions urgently need exploration in the fields of organizational and knowledge management.

Employees' Perception of Differential Climate and Knowledge Hiding

The differential organizational climate in Chinese enterprises manifests as managers categorizing employees based on the closeness of their relationships and their abilities, implementing differential management strategies in communication, tolerance for mistakes, and rewards. These management practices are ingrained in the organizational culture and form a differential climate through differential treatment, a hierarchical viewpoint, and biased resource allocation (Ma & Su, 2020).

When employees perceive a strong differential atmosphere, they utilize social information processing mechanisms to identify unequal treatment by leaders and colleagues. This perception impacts employees' sense of fairness and security, causing concerns about the unfair use or lack of recognition of their knowledge resources, leading to knowledge-hiding behaviors (Zhang & Li, 2024). In a differential climate, employees' perception of organizational unfairness and relational preferences can weaken their trust in leaders and colleagues. In a low-trust context, employees view knowledge hiding as a defensive strategy to protect their knowledge resources from potential adverse effects, reflecting their adaptive response to an unfavorable social environment. Thus, we proposed the following hypothesis:

Hypothesis 1: Employees' perception of a differential organizational climate will negatively influence their knowledge hiding.

Mediating Role of Relative Deprivation

The perception of *relative deprivation* arises from employees' subjective evaluation of their status and resource acquisition within the organization, and is often intensified through social comparison (Crosby, 1984). A differential organizational climate significantly impacts the quality of leader-member relationships, reinforcing hierarchical distinctions and exacerbating employees' sense of relative deprivation.

For in-group employees, although they enjoy privileges, their satisfaction is shaped by comparisons with other employees (Su et al., 2022). Even in their advantageous position, social comparison means they perceive inadequacies in resources, recognition, or career-development opportunities (Song & Liu, 2024). If they perceive their advantageous status as being diminished or threatened, they may experience a sense of deprivation, feeling that they are losing their original privileges.

Out-group employees, on the other hand, often compare themselves to in-group employees who have more resources and power, thus feeling excluded from advantageous relationships and experiencing dissatisfaction regarding their status and loss of resource-acquisition opportunities. When they recognize the unfair treatment and resource limitations that exist in the differential climate, their sense of relative deprivation increases (Cheng et al., 2021). Furthermore, if they



believe that their efforts are not valued or are insufficient to change their marginalized status, their relative deprivation is reinforced.

Relative deprivation as a psychological state reveals how employees process working in a differential organizational climate. When employees have feelings of relative deprivation, believing that their contributions and efforts are not fairly treated or recognized, this leads to distrust and emotional alienation from the organization, prompting defensive behaviors such as knowledge hiding to protect their interests and status (Gao et al., 2022). In a differential climate, knowledge hiding is seen as an effective coping strategy, and as a way to reduce perceived inequity and injustice by concealing knowledge resources (Sun & Lin, 2023). Thus, we proposed the following hypotheses:

Hypothesis 2: Employees' perception of a differential organizational climate will positively influence their relative deprivation.

Hypothesis 3: Employees' feeling of relative deprivation will positively influence their knowledge hiding.

Hypothesis 4: Employees' feeling of relative deprivation will mediate the relationship between their perception of a differential organizational climate and knowledge hiding.

Moderating Role of Task Interdependence

Task interdependence describes the structural connections needed between individuals to complete tasks within an organization, including goal linkage, process coordination, schedule synchronization, resource complementarity, and team collaboration requirements (Wageman, 1995). Jha (2014) found that task interdependence promotes frequent communication, mutual support, and information exchange among organizational members, effectively predicting organizational citizenship behavior. In a highly interdependent context, the intrinsic link between an individual's work and others' work necessitates effective communication and collaboration to complete tasks.

The emphasis in organizational collaboration is on mutual dependence and a cooperative spirit among members, which helps alleviate employees' feeling of relative deprivation, reducing perceived unfairness or marginalization. Specifically, when task interdependence is high, knowledge hiding can hinder organizational efficiency and overall outcomes, damaging individual and organizational interests. Even if feelings of relative deprivation exist, the importance and urgency of achieving team goals can reduce the tendency toward knowledge hiding. Thus, enhancing task interdependence is a mechanism to mitigate the relationship between feelings of relative deprivation and knowledge hiding (Huang & Liu, 2020).

By promoting communication and collaboration among organizational members, task interdependence reduces the necessity for knowledge hiding, aiding in achieving organizational goals (Hua et al., 2022). In the condition of high task interdependence, employees focus on common organizational goals rather than on personal grievances or feelings of marginalization. Further, task interdependence strengthens mutual reliance among organizational members, decreasing the likelihood of knowledge hiding, and influences how individuals process and interpret social information, fostering collaboration and knowledge sharing, thereby weakening the mediating effect of feelings of relative deprivation on the relationship between differential climate perception and knowledge-hiding behaviors (M. Liu et al., 2023). When task interdependence is high, the impact of employees' perception of a differential climate on knowledge hiding through feelings of relative deprivation is effectively mitigated. Therefore, we proposed the following hypotheses:

Hypothesis 5: Task interdependence will negatively moderate the positive relationship between employees' feelings of relative deprivation and knowledge hiding, such that a higher level of task interdependence will weaken this positive relationship.

Hypothesis 6: Task interdependence will negatively moderate the mediating effect of employees' feelings of relative deprivation on the relationship between perceived differential organizational climate and knowledge hiding, such that a higher level of task interdependence will reduce the strength of this mediating effect.

The theoretical model of this study is illustrated in Figure 1.

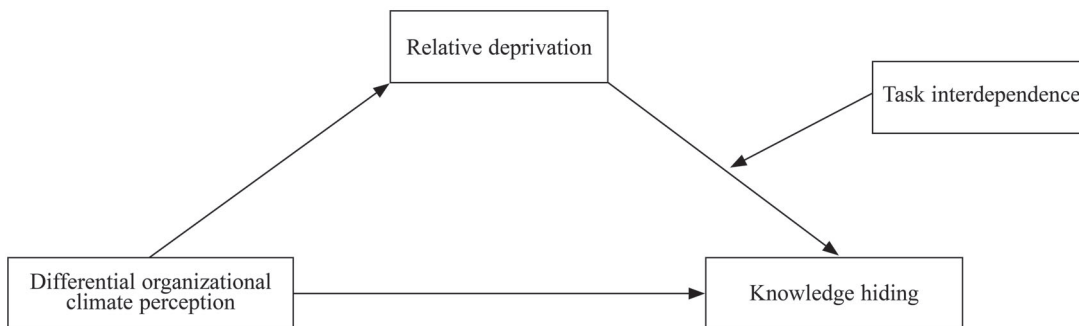


Figure 1. *Theoretical Model*

Method

Participants and Procedure

We collected data through a survey to validate the proposed hypotheses. The sample consisted of employees of seven Chinese enterprises in Shandong, Henan, Jiangsu, and Zhejiang, covering energy, manufacturing, and real-estate industries. We received the necessary ethical approvals from the Yunnan Minzu University School of Economics and Management (School of Accounting) Academic Committee, obtained the informed consent of all participants, and gave participants the right to withdraw from the study at any time. The collection and processing of research data were conducted in line with the principle of privacy protection, and all personally identifiable information was deleted or encrypted. All employees were informed of the purpose of the research. Before the survey was distributed, the research team provided detailed instructions to senior management or human resources department heads of each of the enterprises, promising absolute confidentiality of the collected information and giving assurance that the data collected would be used solely for academic research purposes. The survey was distributed using the Questionnaire Star platform, with links and instructions shared by senior management or human resources personnel through work groups, and employees filled out the survey anonymously. We distributed 480 electronic copies of the survey and 427 were returned. After excluding blank and invalid forms, we retained 406 valid surveys, resulting in response and validity rates of 88.96% and 84.59%, respectively.

The sample comprised 218 (53.69%) men and 188 (46.31%) women; regarding age, 125 (30.79%) were aged 25 years or under, 140 (34.49%) were aged 26–35 years; 95 (23.39%) were aged 36–45 years, and 46 (11.33%) were aged 45 years or over. In terms of level of education, 98 (24.14%) people had completed junior college or below, 200 (49.26%) had a bachelor's degree, and 108 (26.60%) had a master's degree or higher qualification. Regarding work experience, 25 (6.16%) had 5 years or less, 142 (34.98%) had 6–10 years, 140 (34.38%) had 11–15 years, 88 (21.67%) had 16–20 years, and 11 (2.81%) had over 20 years.

Measures

All measures were derived from existing scales and were modified to fit the research context through consulting experts for their opinion and conducting small-scale pilot tests. English-language items were back-translated. The items were revised into Chinese and back into English through literal translation and free translation by professors and associate professors of Yunnan Minzu University. Then, we asked a group of bilingual people to test the equivalence between the items in the Chinese- and English-language versions of the scales. Respondents rated the items on a 5-point Likert scale, where 1 = *strongly disagree* and 5 = *strongly agree*.

Differential Climate Perception

We used an 11-item scale developed by Z. Liu (2003). A sample item is “I think some subordinates in the team have a significant influence on the leader’s decisions.” Cronbach’s alpha coefficient in this study was .94.

Relative Deprivation

We used a five-item scale developed by Callan et al. (2011). A sample item is “Compared to colleagues around me, I feel that my salary is relatively low.” Cronbach’s alpha coefficient in this study was .89.

Knowledge Hiding

We used a 12-item scale developed by Connelly et al. (2011). A sample item is “When faced with a request for knowledge from others, I may tell them that my leader does not allow me to share this knowledge with anyone.” Cronbach’s alpha coefficient in this study was .95.

Task Interdependence

We used a six-item scale developed by Wageman and Gordon (2005). A sample item is “We work as a team, not as individual entities, to complete tasks.” Cronbach’s alpha coefficient in this study was .95.

Control Variables

Respondents’ gender, age, education level, and years of work experience were included as control variables in this study.

Results

Common Method Bias Test

Because all key variables in this study were self-reported, the relationships between variables will be influenced by common method bias. Thus, we used measures such as anonymous survey completion and minimizing ambiguity in the items, and applied Harman’s single-factor test to test for common method bias in the data collected. The test revealed that the amount of variance explained by the first factor was 34.99%, which is below the critical standard of 40%, indicating that common method bias was not a serious concern in this study.

Additionally, we performed a confirmatory factor analysis of the self-reported items. As shown in Table 1, the fit indices of the four-factor model met the minimum standards and were significantly better than the fit indices of the three-factor model, in which differential climate perception and task interdependence were combined into one factor. Thus, the four-factor model offered the best fit in this study and the variable measurement had high discriminant validity.

Table 1. Results of Confirmatory Factor Analysis of Study Variables

Model	χ^2	<i>df</i>	χ^2/df	RMSEA	CFI	TLI	IFI
A: Four-factor model ^a	699.228	521	1.342	.029	.982	.980	.982
B: Three-factor model ^b	2825.624	524	5.392	.104	.766	.749	.766
C: Two-factor model ^c	3767.175	526	7.162	.123	.670	.648	.671
D: One-factor model ^d	5455.032	527	10.351	.152	.498	.466	.500

Note. RMSEA = root-mean-square error of approximation; CFI = comparative fit index; TLI = Tucker–Lewis index; IFI = incremental fit index.

^a Differential organizational climate perception, Relative deprivation, Task interdependence, Knowledge hiding;

^b Differential organizational climate perception + Task interdependence, Relative deprivation, Knowledge hiding;

^c Differential organizational climate perception + Relative deprivation, Task interdependence + Knowledge hiding;

^d Differential organizational climate perception + Relative deprivation + Task interdependence + Knowledge hiding.

Table 2. Reliability and Validity Analysis of Study Variables

Variable	Item	Factor loading	CITC	α after deleted items	α	AVE	CR
Differential organizational climate perception (DCP)	DCP1	.768	.739	.929	.936	.570	.936
	DCP2	.778	.763	.928			
	DCP3	.717	.706	.931			
	DCP4	.776	.738	.929			
	DCP5	.695	.669	.932			
	DCP6	.786	.769	.928			
	DCP7	.694	.684	.931			
	DCP8	.786	.742	.929			
	DCP9	.770	.742	.929			
	DCP10	.741	.726	.930			
	DCP11	.756	.724	.930			
Relative deprivation (RD)	RD1	.778	.725	.869	.890	.620	.891
	RD2	.760	.734	.867			
	RD3	.785	.739	.865			
	RD4	.778	.720	.870			
	RD5	.792	.747	.864			
Knowledge hiding (KH)	KH1	.802	.780	.948	.953	.627	.953
	KH2	.749	.738	.950			
	KH3	.794	.776	.948			
	KH4	.771	.763	.949			
	KH5	.746	.745	.949			
	KH6	.791	.790	.948			
	KH7	.813	.824	.947			
	KH8	.760	.753	.949			
	KH9	.753	.762	.949			
	KH10	.785	.790	.948			
	KH11	.759	.766	.949			
	KH12	.764	.759	.949			
Task interdependence (TI)	TI1	.879	.833	.935	.945	.742	.945
	TI2	.876	.822	.936			
	TI3	.891	.840	.934			
	TI4	.888	.838	.934			
	TI5	.873	.822	.936			
	TI6	.890	.842	.934			

Note. CITC = corrected item–total correlation; AVE = average variance extracted; CR = composite reliability. Deleted alpha coefficients indicate that the reliability coefficient of Cronbach’s alpha did not increase significantly after any item was deleted, indicating that each index item should be retained.

Table 3. Discriminant Validity of Study Variables

Variable	1	2	3	4
1. Differential organizational climate perception	.755			
2. Relative deprivation	.366**	.787		
3. Knowledge hiding	.464**	.498**	.792	
4. Task interdependence	.069**	.106**	-.062**	.861

Note. Square roots of average variance extracted are presented on the diagonal.

** $p < .01$.

Validity Analysis

In terms of reliability assessment, we adopted the mainstream approach in academia, using Cronbach’s alpha and corrected item–total correlation values for reliability testing. Specific results of the reliability and validity analysis are

presented in Table 2. Regarding the scale reliability, Cronbach’s alpha coefficients for each scale were above .80, and corrected item–total correlation values exceeded .60 (> .50), indicating high overall reliability.

We conducted tests of content, structural, convergent, and discriminant validity. For content validity, all observed variables exhibited factor loadings above .60, indicating strong content validity of the measurement model. Regarding structural validity, the Kaiser–Meyer–Olkin measure for overall observables was .95 (> .60), indicating effective information extraction from the data. Factor loadings surpassing .60 in absolute value indicate correspondence between items and factors. Regarding convergent validity, following established research standards, we calculated composite reliability (CR) and average variance extracted (AVE) values. Table 2 shows that AVE values for all observed variables exceeded .50, and CR values surpassed .80, confirming the model’s convergent validity. Discriminant validity was assessed using the square root of AVE and correlations between variables. As shown in Table 3, the square roots of AVE for all latent variables exceeded the correlation coefficients between the variables themselves and other latent variables, demonstrating good discriminant validity for the model.

Descriptive Statistics and Correlation Analysis

The results of descriptive statistical and correlation analyses are presented in Table 4. The correlations between differential organizational climate perception and relative deprivation, and between differential organizational climate perception and knowledge hiding were significant and positive. The correlation between relative deprivation and knowledge hiding was also significant and positive. These results provide preliminary support for the hypotheses proposed in this study.

Table 4. Descriptive Statistics and Correlation Analysis for Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Gender	1.463	0.499	1							
2. Age	2.059	0.946	.120*	1						
3. Education	2.034	0.716	.204**	.103*	1					
4. Work experience	2.047	0.989	.101*	.649**	.085	1				
5. Differential organizational climate perception	2.083	0.902	.184**	.054	.058	.076	1			
6. Relative deprivation	2.331	1.099	.076	.046	.122*	.149**	.366**	1		
7. Knowledge hiding	2.369	1.059	.102*	.028	.110*	.106*	.464**	.498**	1	
8. Task interdependence	3.205	1.314	.073	.206**	.237**	.133**	.069	.106*	-.062	1

Note. *N* = 406.

* *p* < .05. ** *p* < .01.

Hypothesis Testing

Direct Effect of Differential Organizational Climate Perception on Knowledge Hiding

We tested the main effect of differential organizational climate perception on knowledge hiding using hierarchical regression analysis, following the approach of Baron and Kenny (1986). As shown in Table 5, Model 2, after controlling for gender, age, level of education, and years of work experience, differential climate perception had a significant positive effect on knowledge hiding, thus supporting Hypothesis 1.

Mediating Effect of Relative Deprivation

First, we explored the linear relationship between differential organizational climate perception and relative deprivation. According to Model 1, differential climate perception had a significant positive effect on relative deprivation, supporting Hypothesis 2. Second, we performed a regression analysis of the relationship between relative deprivation and knowledge hiding. As shown in Model 3, relative deprivation had a significant positive effect on knowledge hiding,

supporting Hypothesis 3. Finally, relative deprivation was introduced into Model 2, creating Model 4. The results indicate that relative deprivation had a significant positive effect on knowledge hiding, and differential organizational climate perception still significantly influenced knowledge hiding; however, the coefficient decreased. Thus, differential organizational climate perception effectively promoted knowledge hiding, and relative deprivation partially mediated the positive effect of differential climate perception on knowledge hiding. Therefore, Hypothesis 4 had preliminary support.

To further validate Hypothesis 4, we applied the mediation test proposed by Wen and Ye (2014), using 5,000 bootstrapped resamples to test the indirect effect of differential organizational climate perception on knowledge hiding through relative deprivation. The results indicate that relative deprivation significantly mediated the effect of differential organizational climate perception on knowledge hiding, with a 95% confidence interval excluding zero. Consequently, Hypothesis 4 received further support.

Moderating Effect of Task Interdependence

To test the moderating effect of task interdependence, we standardized relative deprivation and task interdependence and their interaction, and then introduced these variables into the regression equation through stepwise regression. As shown in Model 6, the interaction term between relative deprivation and task interdependence had a significant negative effect on knowledge hiding, indicating that greater task interdependence weakened the positive effect of relative deprivation on knowledge hiding. Additionally, adopting the approach of Preacher et al. (2007), we performed simple slope analysis to explore the direction and degree of the moderating effect of task interdependence on the relationship between relative deprivation and knowledge hiding. The results show that the regression slope of high task interdependence was smaller than that of low task interdependence, indicating that when the level of task interdependence was high, the positive impact of relative deprivation on knowledge hiding was relatively weak. Thus, task interdependence negatively moderated the positive effect of relative deprivation on knowledge hiding, such that greater task interdependence reduced the positive effect of relative deprivation on knowledge hiding. Therefore, Hypothesis 5 was supported.

Using the SPSS PROCESS macro developed by Hayes (2017), we tested the mediating effect by extracting the 95% confidence interval of the mediating effect, estimated with 5,000 resamples. As shown in Table 6, task interdependence significantly moderated the effect of relative deprivation on knowledge hiding, indicating that the influence of relative deprivation on knowledge hiding decreased as task interdependence increased. Consequently, Hypothesis 6 was supported.

Table 5. Results of Hierarchical Regression Analysis

Variable	Relative deprivation			Knowledge hiding		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender	-.034	-.001	.120	.011	.121	.091
Age	-.112	-.090	-.041	-.050	-.011	-.007
Education	.153*	.122	.058	.067	.100	.042
Work experience	.197**	.125*	.052	.055	.049	.034
Differential organizational climate perception	.433**	.533**		.380**		
Relative deprivation			.465**	.354**	.475**	.473**
Knowledge hiding					-.111**	-.165**
Relative deprivation × Task interdependence						-.167**
<i>F</i>	1.559**	23.886**	27.341**	34.706**	24.842**	26.047**
ΔR^2	.121	.199	.255	.113	.017	.042

Note. *N* = 406.

* *p* < .05. ***p* < .01.

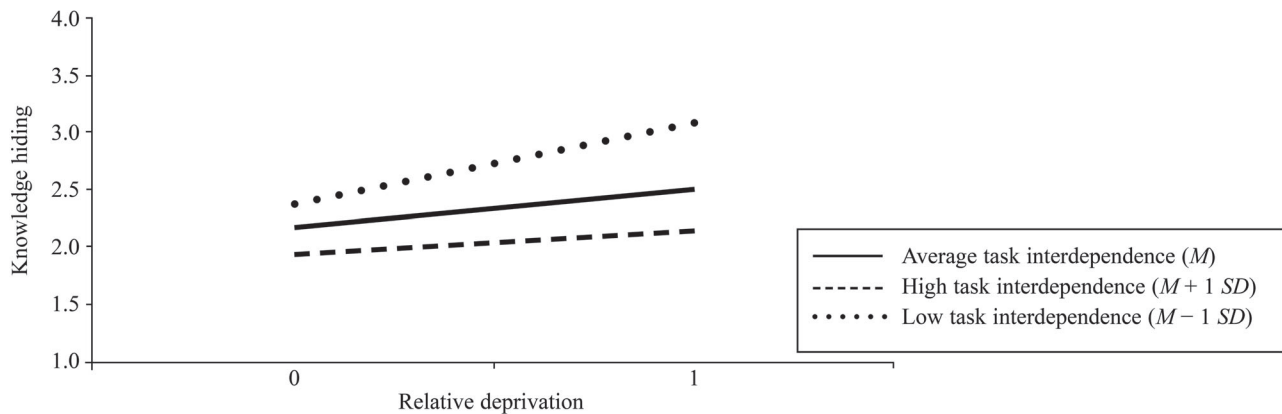


Figure 2. Moderating Effect of Task Interdependence on the Relationship Between Relative Deprivation and Knowledge Hiding

Table 6. Moderated Mediation Effect Analysis

Level of TI	Effect	SE	95% CI	
			LL	UL
<i>M + 1 SD</i>	.075	0.029	0.022	0.138
<i>M</i>	.159	0.030	0.106	0.224
<i>M - 1 SD</i>	.242	0.047	0.160	0.346

Note. TI = task interdependence; CI = confidence interval; LL = lower limit; UL = upper limit.

Discussion

This study was grounded in social information processing theory (Salancik & Pfeffer, 1978). We constructed a model of employees' differential organizational climate perception leading to knowledge hiding and empirically examined the influencing mechanisms and boundary conditions. The results revealed that perception of a differential organizational climate positively influenced knowledge-hiding behavior and feelings of relative deprivation, and the feelings of relative deprivation positively impacted knowledge hiding. Feelings of relative deprivation also mediated the relationship between differential organizational climate perception and knowledge hiding. Furthermore, task interdependence negatively moderated the positive effect of feelings of relative deprivation on knowledge hiding, indicating that as task interdependence increased, the positive effect of feelings of relative deprivation on knowledge hiding weakened. Task interdependence also negatively moderated the mediating effect of feelings of relative deprivation between perception of differential climate and employees' knowledge hiding, suggesting that as task interdependence increased, this mediating effect weakened.

Theoretical Contributions

First, we have broadened the research perspective on differential organizational climate. The focus in academic debate has been on whether this climate positively or negatively affects employee behavior. Some scholars have stated that a differential climate in the organization can promote employees' creative territorial behavior (Q. Liu & Tang, 2024), whereas others reported that a differential climate can lead to employees engaging in unsafe behavior (Wang & Liang, 2023). Our study provides a new perspective on the impact of organizational climate on employee behavior, and also provides evidence for rating climate as a localized management framework in China.

Second, we have enriched the study of knowledge hiding in the context of Chinese organizational culture. The focus in previous research on knowledge management has been predominantly on Western contexts, with insufficient attention given to mechanisms and influencing factors in China. Significant differences between Western and Asian work and organizational cultures mean that Chinese employees may develop unique mechanisms for knowledge hiding. We responded to calls from scholars like Tian et al. (2024), and examined knowledge hiding based on leadership style and organizational culture within Chinese enterprises. By introducing employees' perception of differential climate as a precursor variable, we have provided a regional cultural perspective for knowledge management, emphasizing how organizational culture and psychological climate shape employees' knowledge-management behavior according to cultural background. By doing so, we have advanced cross-cultural management research and offered insights for knowledge-management practices globally.

Third, we have expanded the research pathway of mechanisms that weaken knowledge hiding. The primary focus in existing research has been on the initial stage of knowledge hiding, with limited attention given to the weakening mechanisms. We responded to calls from scholars like Wen et al. (2022), and used social information processing theory, introducing task interdependence as a moderating variable to explore the boundary conditions of the relationship between employees' perception of differential organizational climate and knowledge hiding. We have enriched the application of social information processing theory in organizational behavior research and empirically demonstrated that task interdependence can weaken the impact of employees' perception of differential climate on knowledge hiding. The results highlighted the role of job design and organizational structure in mitigating the negative impact of organizational climate, providing insights for optimizing knowledge-management practices.

Practical Implications

First, strengthening employees' perception of fairness and reducing their perception of differential climate are essential for a healthy organizational culture. Managers should establish transparent communication and fair decision-making processes, ensuring equal access for all to information and resources, and equitable evaluations. This can reduce employees' perception of deprivation and unfairness, thereby decreasing knowledge-hiding behaviors. Fairness training and awareness-raising activities for managers could also enhance trust and teamwork.

Second, promoting a knowledge-sharing workplace culture is crucial. Organizations should encourage sharing, innovation, and collaboration by recognizing and rewarding employees' knowledge-sharing behaviors. Incorporating these behaviors in performance evaluations and utilizing and building internal knowledge-management systems can facilitate knowledge capture, storage, and dissemination.

Third, refining human resource management strategies is necessary. Conducting regular employee satisfaction surveys and psychological safety assessments can address issues that a differential climate causes. Having clear career-development paths and effective training plans can reduce employees' perception of deprivation. Promoting diversity and inclusivity will ensure all employees feel valued, thus reducing knowledge-hiding behaviors.

Limitations and Future Research Directions

The cross-sectional research approach we used in this study did not allow us to track changes over time in employees' perception of a differential organizational climate, feelings of relative deprivation, and knowledge-hiding behavior. Future studies could adopt longitudinal methods to observe these dynamic relationships and clarify the causal relationships between variables. We also focused on individual-level behavior, revealing internal mechanisms and dynamics of individual responses. However, to gain a full understanding of the impact of organizational climate, researchers could extend the analysis to the team level to reveal how team interactions and group dynamics influence behavior and decision making. Finally, the scales used in this study were derived from Western organizational environments. Despite a rigorous translation process and use of pilot surveys to reduce semantic ambiguities, scales developed in Western contexts may have limitations for research in China. Future researchers could consider revising these scales or developing new ones based on the unique organizational environment in China to reveal commonalities and differences in various cultural contexts.



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References

- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>.
- Callan, M. J., Shead, N. W., & Olson, J. M. (2011). Personal relative deprivation, delay discounting, and gambling. *Journal of Personality and Social Psychology*, 101(5), 955–973. <https://doi.org/10.1037/a0024778>
- Chen, Z., & Dian, Y. (2018). Organizational differential atmosphere: Concept, measurement, and mechanisms [In Chinese]. *Foreign Economics & Management*, 40(6), 86–98. <https://doi.org/10.16538/j.cnki.fem.2018.06.007>
- Cheng, K., Lin, Y., Xia, Q., & Guo, L. (2021). How does supervisor–subordinate guanxi affect unethical pro-supervisor behavior? A study based on the Chinese cultural context [In Chinese]. *Foreign Economics & Management*, 43(4), 34–49. <https://doi.org/10.16538/j.cnki.fem.20201028.301>
- Connelly, C. E., Zweig, D., Webster, J., & Trougakos, J. P. (2012). Knowledge hiding in organizations. *Journal of Organizational Behavior*, 33(1), 64–88. <https://doi.org/10.1002/job.737>
- Crosby, F. (1984). Relative deprivation in organizational settings. *Research in Organizational Behavior*, 6(4), 51–93. <https://psycnet.apa.org/record/1984-30207-001>
- Gao, Z., Ding, J., Xu, Y., & Liu, Q. (2022). The influence mechanism of fair leadership behavior on employee knowledge sharing behavior: The mediating role of status competition motivation and the moderating role of individual relative deprivation feeling [In Chinese]. *Techno-Economics*, 41(6), 164–175.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.
- Hua, C., Luo, J., & Yan, L. (2022). Research on the role and influence mechanism of paradoxical leadership on innovation of R&D teams from the perspective of knowledge power [In Chinese]. *Science & Technology Progress and Policy*, 39(2), 139–149. <https://doi.org/10.6049/kjbydc.2020110286>
- Huang, Y., & Liu, X. (2020). How does human resource management motivation attribution promote employee knowledge sharing [In Chinese]? *Technology Economics*, 39(10), 181–188. http://www.jishujingji.cn/technology_economics/article/abstract/J200683?st=search
- Jha, S. (2014). Transformational leadership and psychological empowerment: Determinants of organizational citizenship behavior. *South Asian Journal of Global Business Research*, 3(1), 18–35. <https://doi.org/10.1108/SAJGBR-04-2012-0036>
- Jiang, D., & Zhang, Y. (2010). Chinese hierarchical leadership and subordinate effectiveness [In Chinese]. *Indigenous Psychological Research*, 33, 109–177. <https://www.docin.com/p-767944356.html>
- Liu, M., Yu, X., & Wu, S. (2023). The influence of high-quality interpersonal connections on virtual cooperation: The roles of team information exchange and task interdependence [In Chinese]. *Soft Science*, 37(4), 121–128. <https://doi.org/10.13956/j.ss.1001-8409.2023.04.17>
- Liu, Q., & Tang, J. (2024). The impact of differential leadership on the creative territorial behavior of new generation

- employees: The mediating role of workplace marginalization [In Chinese]. *Productivity Research*, 6, 89–96. <https://doi.org/10.19374/j.cnki.14-1145/f.2024.06.012>
- Liu, Z. (2003). *The influence of differential organizational atmosphere on subordinates' attitudes and behaviors* (Unpublished master's thesis) [In Chinese]. Donghua University.
- Ma, W., & Su, H. (2020). The influence of the perceived climate of team cha-xu on employee innovation behavior [In Chinese]. *Science & Technology Progress and Policy*, 37(21), 136–143. <https://doi.org/10.6049/kjbydc.2019090077>
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42(1), 185–227. <https://doi.org/10.1080/00273170701341316>
- Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 23(2), 224–253. <https://doi.org/10.2307/2392563>
- Serenko, A. (2019). Knowledge sabotage as an extreme form of counterproductive knowledge behavior: Conceptualization, typology, and empirical demonstration. *Journal of Knowledge Management*, 23(7), 1260–1288. <https://doi.org/10.1108/JKM-01-2018-0007>
- Serenko, A., & Choo, C. W. (2020). Knowledge sabotage as an extreme form of counterproductive knowledge behavior: The role of narcissism, Machiavellianism, psychopathy, and competitiveness. *Journal of Knowledge Management*, 24(9), 2299–2325. <https://doi.org/10.1108/JKM-06-2020-0416>
- Song, Y., & Liu, Y. (2024). The representation, risk and governance of supervisor–student relationship in universities—An analysis from the perspective of resources [In Chinese]. *Degree and Postgraduate Education*, 5, 75–83. <https://doi.org/10.16750/j.adge.2024.05.010>
- Su, T., Deng, S., Guan, M., & Cui, X. (2022). Meta-analysis on the two-sided effect of differential leadership on subordinates [In Chinese]. *Journal of Management*, 19(12), 1801–1810. http://manu68.magtech.com.cn/Jwk_glx/EN/volumn/volumn_1332.shtml#
- Sun, J., & Lin, Q. (2023). How the perceived climate of differential team associations influences employee knowledge sabotage behavior: A moderated dual path model [In Chinese]. *Science & Technology Progress and Policy*, 40(4), 114–123. <https://doi.org/10.6049/kjbydc.2021060699>
- Tian, G., Huang, M., & Cui, M. (2024). The cost of high performance: Employee job performance and knowledge-hiding behavior—Based on self-perception theory [In Chinese]. *Journal of Shanxi University of Finance and Economics*, 46(5), 115–126. <https://doi.org/10.13781/j.cnki.1007-9556.2024.05.009>
- Wageman, R. (1995). Interdependence and group effectiveness. *Administrative Science Quarterly*, 40(1), 145–180. <https://doi.org/10.2307/2393648>
- Wageman, R., & Gordon, F. M. (2005). As the twig is bent: How group values shape emergent task interdependence in groups. *Organization Science*, 16(6), 687–700. <https://doi.org/10.1287/orsc.1050.0146>
- Wang, X., & Liang, S. (2022). The impact of differential atmosphere on the unsafe behavior of knowledge miners: The role of mindfulness and psychological contract violation [In Chinese]. *China Safety Production Science and Technology*, 19(5), 51–56.
- Wen, Z., Wang, H., Wang, K., & Cui, M. (2022). The developmental logic of knowledge hiding: A literature review [In Chinese]. *Science & Technology Progress and Countermeasures*, 39(18), 150–160. <https://doi.org/10.6049/kjbydc.2022040168>
- Wen, Z., & Ye, B. (2014). Analysis of mediating effects: The development of methods and models [In Chinese]. *Advances in Psychological Science*, 22(5), 731–745. <https://doi.org/10.3724/SP.J.1042.2014.00731>
- Zhang, S., & Li, X. (2024). Research on the influence mechanism of differential leadership on employee engagement in the Chinese context [In Chinese]. *Operation and Management*, 5, 101–110. <https://doi.org/10.16517/j.cnki.cn12-1034/f.20230512.001>



Zheng, B. (1995). Differential mode of association and Chinese organizational behavior [In Chinese]. *Indigenous Psychological Research in Chinese Societies*, 3, 142–219. <https://www.docin.com/p-2564011556.html>