



An Empirical Study on the Influence of Idiosyncratic Deals on Knowledge Sharing among Employees - Based on the Moderated Mediation Model

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Abstract. In this paper, a moderated mediation model was constructed, and SPSS25.0 and AMOS24.0 were used to explore the influence mechanism and boundary conditions of idiosyncratic deals on employee knowledge sharing. By analyzing 344 employee sample data of Internet enterprises, this study found that: idiosyncratic deals significantly positively affects employees' knowledge sharing by promoting psychological ownership; In addition, higher collectivism not only enhances the positive effect of idiosyncratic deals on promoting employees' psychological ownership, but also enhances the mediating effect of idiosyncratic deals on enhancing employees' knowledge sharing by promoting psychological ownership.

Keywords: Idiosyncratic deals, Promoting psychological ownership, Knowledge sharing, Collectivism.

1 Introduction

In the context of the Big Data era, the traditional employment model has become difficult to adapt to the changes in the complex environment. Idiosyncratic deals, as an emerging employment practice, is gradually gaining popularity among organizations and employees [1]. Idiosyncratic deals refers to a voluntary, non-standardized work arrangement that benefits both parties through negotiation between employees and organizations, such as: Flexible office hours and places, better training and development opportunities [2]. Such a new employment model, breaking the barriers of time, space, and information, fully meet the heterogeneous needs of employees for work, has become an important means for modern enterprises to attract and retain core employees.

The current studies are not enough to fully reveal the mechanism and boundary conditions of the impact of idiosyncratic deals on knowledge sharing. By virtue of the theory of psychological ownership and in combination with the relationship chain of "job design -- psychological ownership -- individual behavior" discovered by Pierce et al. [3], this study proposes that idiosyncratic deals can promote employees' knowledge sharing behavior by enhancing the promotion of psychological ownership. In addition, considering the differences between individuals, the individual-level collectivism is

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used as a moderating variable to explore the boundary conditions for idiosyncratic deals.

2 Theoretical background and Research Hypothesis

2.1 Idiosyncratic deals and Promoting psychological ownership

Tang and Hornung divided idiosyncratic deals into flexible idiosyncratic deals and developmental idiosyncratic deals [4]. This new type of employment relationship and work design has features such as greater autonomy, diversity of skills and importance of tasks [5]. Employees can freely negotiate with the organization to redesign their work tasks, work flexibility and career development [6], thereby giving employees a greater sense of control and belonging, and stimulating psychological ownership [7]. Secondly, the achievement of idiosyncratic deals means that the organization highly affirms the ability of employees, enhances the organizational self-esteem and sense of responsibility of employees, and thus enhances the promotion of psychological ownership. Based on this, the following research hypothesis is proposed:

H1: Idiosyncratic deals positively affects employees' motivational psychological ownership.

2.2 Mediating effect of promoting psychological ownership

According to the theory of psychological ownership, job design with five core characteristics can further affect the individual behavior of employees by influencing their psychological ownership [3]. The organization can meet the individual needs of employees as much as possible through idiosyncratic deals. In this process, the organization and employees will form high-quality exchange relations, enhance the cognition of employees' insider identity, and enhance the promotion psychological ownership of employees. When employees perceive ownership of the organization, they are likely to exhibit some extra-role knowledge sharing behaviors [8]. Based on this, the following research hypotheses are proposed:

H2: Idiosyncratic deals positively affects employees' knowledge sharing by promoting psychological ownership of sex.

2.3 Moderating effect of collectivism

According to Triandis, individuals with strong collectivist tendencies attach importance to the emotional relationship with other members of the group, and have a strong sense of identity and responsibility for the organization [9]. When employees have a strong tendency to collectivism, they believe that the achievement of idiosyncratic deals is a manifestation of their needs and trust by the organization, so they are more likely to stimulate the sense of belonging and efficacy of the organization, thus strengthening the positive impact on promoting psychological ownership. Based on this, the following research hypotheses are proposed:

H3: With the increasing collectivism, the positive effect of idiosyncratic deals on promoting psychological ownership is gradually enhanced.

According to Pierce's extension of psychological ownership theory, job design can have an impact on employee psychological ownership and further influence employee's individual behavior. When employees' collectivism is high, personalized agreements can better stimulate employees' sense of belonging and responsibility, and then carry out more organizational citizenship behaviors, Based on this, the following research hypothesis is proposed in combination with H3:

H4: The higher the collectivism is, the stronger the positive effect of idiosyncratic deals on employees' knowledge sharing by promoting psychological ownership.

The research model of this study is shown in Figure 1.

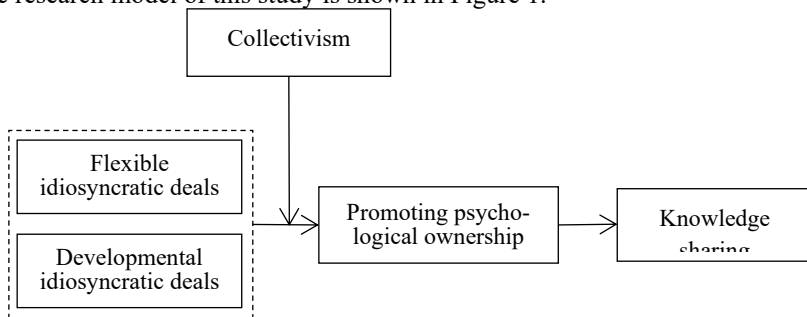


Fig. 1. Research Model

3 Research Design

3.1 Sample Collection

This study collected data through questionnaire survey. In this study, a total of 400 questionnaires were distributed from December 2022 to February 2023, and 344 were effectively collected with an effective recovery rate of 86%. From the distribution of the survey samples, in terms of gender, females accounted for 53.5% and males 46.5%; In terms of age, the population was 5.5% under the age of 25, 26.2% from 26 to 30, 41.6% from 31 to 35, 24.7% from 36 to 40, 1.7% from 41 to 45, and 0.3% from 46 years of age or older; In terms of educational background, bachelor's degree and master's degree are the majority, accounting for 92.2%; In terms of years of working, 28.8% had 5 years or less, 36.6% had 6-10 years and 34.6% had 11 years or more. To avoid homologous method bias, Harman single factor test was performed on the questionnaire. The results of unrotated factor analysis showed that there was not a common factor in the factor structure, so there was no common method bias.

3.2 Measurement of variables

Variables in this study were all selected from the classical maturity scale, and Likert 5-point scale was used for measurement.

Idiosyncratic deals : The idiosyncratic deals scale developed by Tang and Hornung (2015) is adopted, including two aspects: developmental idiosyncratic deals and flexible idiosyncratic deals, with 12 items[4]. The scale of the Cronbach $\alpha=0.965$.

Knowledge sharing: The scale developed by Lin et al. (2006) was adopted, with 8 items[10]. The scale of the Cronbach $\alpha=0.852$.

Promoting psychological ownership: The scale developed by Avey et al. (2009) was adopted, with 12 items[11]. The scale of the Cronbach $\alpha=0.887$.

Collectivism: The scale developed by Srite and Karahanna (2006) was adopted, with a total of 6 items[12]. The scale of the Cronbach $\alpha=0.740$.

Control variables: Referring to previous research experience, this study controlled four demographic variables: gender, age, education background and working years.

4 Results

4.1 Confirmatory factor analysis

Validity was tested using AMOS24.0.Based on the independent separation of the four factors of idiosyncratic deals, promoting psychological ownership, knowledge sharing and collectivism as the benchmark model, three competitive models are constructed: three-factor model, two-factor model, and single-factor model. AMOS24.0 was used for confirmatory factor analysis to test the discriminative validity between variables. The results showed that the fitting indexes of the four-factor model were the best, with $\chi^2/df=4.003$, CFI=0.940, TLI=0.923, IFI=0.940, RMSEA=0.094.

4.2 Descriptive Statistics

In this study, the mean value, standard deviation and Pearson correlation coefficient between the variables involved in the study are summarized in Table 1.As can be seen from Table 1, idiosyncratic deals is positively correlated with promoting psychological ownership ($r=0.58,p<0.01$), and knowledge sharing ($r=0.43,p<0.01$).Promoting psychological ownership was positively correlated with knowledge sharing ($r=0.64,p<0.01$).The results of correlation analysis between variables preliminarily support the hypothesis proposed in this study.

Table 1. Analysis of mean value, standard deviation and correlation coefficient of each variable

Variables	M	SD	1	2	3	4	5	6	7	8
1. Gender	1.53	0.50	1							
2.Age	2.92	0.90	0.21**	1						
3. Educational background	3.30	0.69	0.19**	0.23*	1					
4. Working life	3.97	0.97	0.04	0.76*	0.20*	1				
5. idiosyncratic deals	4.16	0.69	0.04	-0.09	0.19*	-0.10	1			
6. Promote psychological ownership	4.33	0.41	0.02	0.15*	0.31*	0.13*	0.58*	1		

7. Collectivism	4.15	0.46	-0.07	-0.09	-	0.22*	-	0.19*	0.28*	1
8. Knowledge sharing	4.00	0.48	0.01	0.15*	-	0.29*	-	0.43*	0.64*	0.38**

Note: N = 334; *p < 0.05, **p < 0.01

4.3 Hypothesis Testing

In this study, SPSS25.0 and PROCESS was used as an analysis tool and hierarchical regression was adopted to further verify the above research hypotheses, and centralized processing was carried out for idiosyncratic deals, collectivism tendencies, catalytic psychological ownership and knowledge sharing. The hierarchical regression analysis results are shown in Table 2.

Table 2. Hierarchical regression results

Variables	Promote psychological ownership		Knowledge sharing	
	Model1	Model2	Model3	Model4
Gender	0.057	0.067	0.039	0.007
Age	-0.094	-0.111	-0.045	0.007
Educational background	-0.209**	-0.178**	-0.214**	-0.096**
Working life	0.036	0.061	-0.038	-0.058
idiosyncratic deals	0.534**	0.609**	0.381**	0.081
Collectivism		0.155**		
idiosyncratic deals×Collectivism		0.219**		
Promote psychological ownership				0.563**
R2	0.377	0.433	0.229	0.425
ΔR2	0.386	0.058	0.240	0.195
F	42.474**	17.635**	21.357**	116.086**

Note: N = 334; *p < 0.05, **p < 0.01

H1 check. In Table 2, Model 1 increases with the increase of idiosyncratic deals (β=0.534, p<0.01), thus H1 is established.

H2 mediation effect test. Model 3 in Table 2 shows that idiosyncratic deals positively affects knowledge sharing (β=0.381, p<0.01), model 1 shows that with the enhancement of idiosyncratic deals, the promoting psychological ownership is also significantly enhanced (β=0.534, p<0.01), and model 4 shows that when the inclusion of the promoting psychological ownership, The positive effect of promoting psychological ownership on knowledge sharing was significant (β=0.563, p<0.01), but the effect of idiosyncratic deals on knowledge sharing was not significant (β=0.081, p>0.05), indicating that promoting psychological ownership had a complete mediating effect between idiosyncratic deals and knowledge sharing.

Test of H3 regulation effect. According to Model 2 in Table 2, the interaction term coefficient between collectivism and idiosyncratic deals is significant ($\beta=0.219, p<0.01$), that is, the moderating effect of collectivism is significant. As shown in Figure 2, when collectivism was low (-1SD), the effect of idiosyncratic deals on promoting psychological ownership was weak ($\beta=0.271, p<0.01$). When the collectivism was higher (+1SD), the effect of idiosyncratic deals was stronger in promoting psychological ownership ($\beta=0.510, p<0.01$). Therefore, H3 is supported by data.

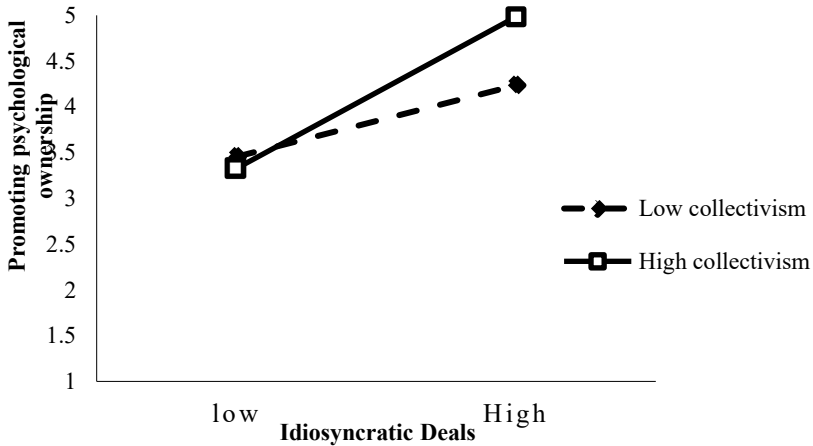


Fig. 2. The moderating effect of collectivism tendencies

Test for mediating effect of H4 modulation. As can be seen from Table 3, when the level of collectivism is low (-1SD), the indirect effect of idiosyncratic deals on promoting employees' knowledge sharing behavior through promoting psychological ownership is 0.164, 95%CI=[0.125, 0.221], excluding zero, indicating a significant mediating effect. When the level of collectivism is high (+1SD), the indirect effect is 0.317, 95%CI=[0.233, 0.413], excluding zero, and the mediating effect is significant. The difference between the two was 0.153, 95%CI=[0.078, 0.229], excluding zero, indicating a significant difference. Therefore, H4 is supported by data.

Table 3. Results of Bootstrap test for the moderated mediation

Moderated Variable	level	effect	95%confidence interval
Collectivism	lower	0.1643	[0.125, 0.221]
	higher	0.3171	[0.233, 0.413]
	difference	0.1528	[0.078, 0.229]

5 Conclusions

The paper constructed a moderated mediation model to analyze the impact of a new employment model, idiosyncratic deals, on knowledge sharing. The results show that idiosyncratic deals enhances employees' promoting psychological ownership, and significantly positively influences employees' knowledge sharing behavior through promoting psychological ownership. Collectivism not only positively moderates the relationship between idiosyncratic deals and promoting psychological ownership, but also positively moderates the mediating effect of idiosyncratic deals on enhancing employee knowledge sharing behavior by enhancing promoting psychological ownership.

This study has some implications for managers of Chinese Internet companies: companies should make full use of the new employment model of idiosyncratic deals, which is conducive to promoting knowledge sharing among employees and enhancing the competitiveness of enterprises. In addition, companies can choose to sign idiosyncratic deals with employees who have stronger collectivism, or stimulate the collectivism of employees through corporate culture and training, so that idiosyncratic deals can be more effective.

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