



# When Do Idiosyncratic Deals Promote Creativity?—Application of Data Processing in Enterprise Management

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## Abstract

Idiosyncratic deals (namely, i-deals) have received attention from organizations and scholars as a new way to manage core employees in companies. In this study, 325 employees were selected as samples, and the hypotheses were verified by mathematical statistics and analysis. Data analysis results indicate that idiosyncratic deals positively affect employee creativity; And the perceived insider status plays a mediating role. The relationship between idiosyncratic deals and perceived insider status is positively moderated by the psychological security. This study suggests that we should make full use of mathematical statistics and analysis to guide management practice.

**Keywords:** *idiosyncratic deals, perceived insider status, psychological security, creativity, data processing*

## 1. INTRODUCTION

In order to retain core employees and improve the competitive advantage, more and more organizations choose to negotiate idiosyncratic deals with employees. Studies have shown that idiosyncratic deals can improve employees' sense of self-efficacy and meet their needs [9], providing a breakthrough for how to improve creativity.

According to self-categorization Theory, the process of self-categorization is guided by two basic motivations: Self Enhancement and Uncertainty Reduction [13]. More Idiosyncratic deals serve core employees, which reflect the recognition and support of superiors and organizations for their own contributions, and provide them with opportunities for "self-enhancement" and promote employees to classify themselves and define themselves as insiders of the organization [15]. Employees with insider status are more likely to spend more time and energy on things beneficial to the organization and actively promote creativity to achieve or even exceed the expected performance of the organization. Therefore, perceived insider status may play an important mediating role in the relationship between Idiosyncratic deals and employee creativity [1].

Idiosyncratic deals not only bring better

development opportunities and platforms to these employees, but also cause jealousy from colleagues or promotes employees' perception of competitive environment and potential threats [11], which increase employees' uncertainty to a certain extent and hinder the process of self-categorization and the improvement of creativity. Therefore, if the superior can take measures to increase the psychological security of employees, so that employees will not feel excluded or threatened in the organization when completing the work content of personalized contract, it will be conducive to cater to the intrinsic motivation of "reducing uncertainty" of employees and promote positive self-categorization. It can be inferred that psychological security, as an important motivation to reduce uncertainty in self-categorization, may be an important boundary condition for the performance of personalized contract.

In summary, based on self-categorization theory, this paper introduces perceived insider status as a mediating variable, psychological security as the moderating variable, and constructs a moderated mediation model, aiming to investigate the positive impact of Idiosyncratic deals on creativity. The conceptual model is shown in Fig.1.

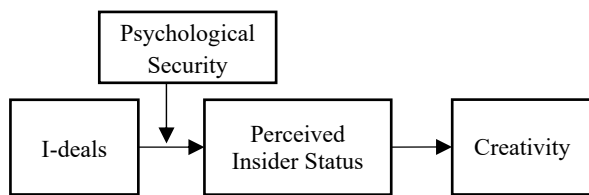


Figure 1. Conceptual model.

## 2. THEORY AND HYPOTHESES

### 2.1. *Idiosyncratic Deals and Creativity*

Competition among organizations is increasingly becoming a competition for talents. In order to attract employees, organizations have to meet the special requirements of employees in certain aspects. Therefore, idiosyncratic deals have become an important motivational strategy for organizations to attract and retain core employees [12]. Idiosyncratic deals are personalized work arrangements negotiated between enterprises and employees based on employees' abilities and needs. In view of the characteristics of idiosyncratic deals to stimulate individual potential and meet individual career development expectations, it has become an important breakthrough in the study of employee creativity.

Idiosyncratic deals reflect the trust and support of superiors to subordinates, and subordinates can stimulate stronger internal motivation when they perceive the support of superiors [14]. Moreover, idiosyncratic deals will provide employees with work tasks that give full play to their individual heterogeneity according to their needs. These targeted designs are conducive to strengthening the subordinate's field-related skills, which will prompt employees to actively explore new ideas and methods, driving creativity generation [10]. In addition, the flexible work arrangement in idiosyncratic deals can allow employees to arrange their time more flexibly, reduce the time spent on boring work, and use the more emotional and psychological resources obtained after releasing stress to participate in and experiment with creativity. Activities provide conditions for organizations to tap and cultivate high-quality human capital, so that enterprises have their own "talent savings pool", which continuously provides nourishment for creativity. Therefore, this paper proposes that:

Hypothesis 1: Idiosyncratic deals are positively related to employee creativity.

### 2.2. *Perceived Insider Status as a Mediator*

Perceived insider status reflects the level of personal space and recognition an employee has received in the organization [13]. A high level of perceived insider status stems from the sense of belonging and emotional attachment that employees feel that the organization

cares and values them. According to the self-categorization theory, when superiors show care and encouragement to subordinates, it is conducive to promoting the process of self-categorization of subordinates. Therefore, idiosyncratic deals play an important role in promoting the generation of employees' perceived insider status. On the one hand, employees who have the opportunity to sign idiosyncratic deals with organizations can enjoy more development opportunities and organizational resources [6], which is conducive to better training of personal skills and promoting employees to actively classify themselves. On the other hand, idiosyncratic deals have important means for the organization to retain core talents. Therefore, employees with idiosyncratic deals have high-quality exchange relations with the organization, which can further stimulate the motivation of self-enhancement and promote the process of self-categorization. Therefore, this paper proposes that:

Hypothesis 2: Idiosyncratic deals have a positive effect on perceived insider status.

The self-categorization theory further pointed out that individuals perceive their own insider identity to accumulate more positive emotional resources. Such positive feelings in the workplace have a positive role in promoting employees' work attitudes and behaviors, prompting employees to spontaneously seek innovative ways to exceed organizational goals, thereby positively promoting employee creativity. Therefore, this paper proposes that:

Hypothesis 3: Perceived insider status mediates between idiosyncratic deals and creativity.

### 2.3. *Psychological Security as a Moderator*

Psychological security refers to the feeling that employees believe their status, role and image will be justly evaluated when they express their opinions or present themselves in the workplace [2]. Psychological security is a psychological state that affects individual self-cognition and internal motivation [6]. Employees with higher psychological security will show higher initiative.

Idiosyncratic deals can not only promote the career development of employees, but also bring negative effects. For example, the perception of being excluded leads to the resignation of employees, which increases the uncertainty of employees and is not conducive to their self-categorization. When the psychological security of employees is high, it is beneficial to further optimize the "self-enhancement" effect of idiosyncratic deals and strengthen the emotional connection between core employees and organization. When employees realize that they can express their true selves without worrying about being ostracized and personal injury, the intrinsic motivation of employees to "reduce

uncertainty" will be stimulated. At this point, idiosyncratic deals will promote employees to actively classify themselves, thus improving employees' perception of perceived insider status [5]. When the psychological security of employees is low, they will perceive the threat of the surrounding environment. Therefore, the "uncertainty" of employees will be enhanced, which makes the positive effect of personalized contract on employees weak, and is not conducive to the initiative of self-categorization by employees. Therefore, this paper proposes that:

Hypothesis 4: Psychological security moderates the relationship between idiosyncratic deals and perceived insider status. Such that the relationship is more strongly positive in a high level of psychological security .

When an employee has a high sense of psychological security, it means that the employee perceives that the external environment is security. At this time, when negotiating idiosyncratic deals with superiors, employees are more able to view this personalized work arrangement from the perspective of optimizing work methods, improving work efficiency, and strengthening personal skills, and then they are more willing to actively classify themselves [8]. Invest more time and energy in their organization and boost creativity [7]. When employees with a low sense of psychological security accept idiosyncratic deals, they will worry about whether the special preferential treatment given by the organization and leaders to them will arouse the jealousy and exclusion of others, which will then be detrimental to the perception of "insider status". Psychological resources are spent on dealing with the threats of the surrounding environment and getting along with colleagues, which greatly depletes the motivation of employees to enhance their creativity. Therefore, this paper proposes that:

Hypothesis 5: Psychological security moderates the indirect relationship between idiosyncratic deals and creativity through the mediation of perceived insider status, the higher the psychological security, the stronger the indirect effect of idiosyncratic deals on employee creativity through perceived insider status.

### 3.METHODS

#### 3.1. Sample and Procedures

This study adopts the questionnaire survey method to collect samples, and the survey objects are management and technical personnel from five enterprises in Shanghai and Zhejiang. In order to reduce the common method bias, data were collected in three waves with a two-week interval (Reis and Wheeler, 1991), and questionnaires were strictly coded throughout the process. A total of 443 questionnaires were distributed, 328 valid questionnaires were finally

collected, and invalid samples were removed from the collected 328 samples. A total of 325 valid samples were available for statistics, with effective recovery of 73.36%. The characteristics of the sample are as follows: in terms of gender, male accounted for 59.72%; The average age was 36. In terms of educational background, bachelor's degree was the main one, accounting for 59.78%.

#### 3.2. Measures

In order to ensure the local applicability of the measurement, two-way translation was used and experts were invited to assess the appropriateness and rigor of the questionnaire. The four variables involved in the study were measured using a five-point Likert scale.

**Idiosyncratic deals** were measured with Hornung et al. (2010) [4] 12-item scale. Items included "I negotiated successfully with my superiors and was given a special opportunity to learn my skills." ( $\alpha = 0.962$ )

**Perceived insider status** was measured with Stamper and Masterson (2002) 6-item scale. Items included "I felt very strongly that I was part of the company." ( $\alpha = 0.897$ )

**Psychological security** was measured with Liang et al. (2012) 5-item scale. Items included "In my work unit, I can express my true feelings about work." ( $\alpha = 0.885$ )

**Creativity** was measured with Farmer and Kung (2003) [3] 4-item scale. Items included "The employee will come up with groundbreaking new ideas related to the job." ( $\alpha = 0.874$ )

**Control Variables:** this study controlled for the effects of employee demographics, including gender, age, education, tenure.

### 4.DATA PROCESSING

#### 4.1. Confirmatory Factor Analysis

This study conducted a analysis (CFA) to examine the validity of the four key variables in the model (idiosyncratic deals, perceived insider status, psychological security, creativity). As shown in Table 1, the results indicated that the absolute and relative fit indices of the four-factor model ( $\chi^2/df=1.617$ , CFI=0.973, TLI=0.970, RMSEA=0.044, SRMR=0.034) were closer to the standard values compared to the three competing models. Therefore, the scale used in this study has good discriminant validity.

The CMV factor was subsequently added to the four-factor model to assess the common method bias. It was found that the five-factor model ( $\chi^2/df=1.407$ , CFI=0.989, TLI=0.986, RMSEA=0.032, SRMR=0.029) had limited improvement in *RMSEA*, *CFI*, and *TLI*, all

of which were less than 0.02, indicating that there was no serious common method bias in this study.

**Table 1** Results of confirmatory factor analyses.

| Model              | $\chi^2$ | df  | $\chi^2/df$ | CFI   | TLI   | RMSEA | SRMR  |
|--------------------|----------|-----|-------------|-------|-------|-------|-------|
| One-factor model   | 2298.957 | 275 | 8.359       | 0.677 | 0.647 | 0.150 | 0.133 |
| Two-factor model   | 1808.313 | 274 | 6.599       | 0.755 | 0.732 | 0.131 | 0.120 |
| Three-factor model | 945.726  | 272 | 3.476       | 0.892 | 0.881 | 0.087 | 0.066 |
| Four-factor model  | 435.144  | 269 | 1.617       | 0.973 | 0.970 | 0.044 | 0.034 |

Note. One-factor model = i-deals + psychological security + perceived insider status + creativity; Two-factor model = i-deals + psychological security + perceived insider status, and creativity; Three-factor model = i-deals + psychological security, perceived insider status, and creativity; Four-factor model = i-deals psychological security, perceived insider status, and creativity; I-deals = idiosyncratic deals.

## 4.2. Descriptive Analyses

Table 2 shows means, standard deviations, and correlation analyses. Idiosyncratic deals are positively

correlated with perceived insider status ( $r=0.402$ ,  $p<0.001$ ), and creativity ( $r=0.442$ ,  $p<0.001$ ). Perceived insider status is positively correlated with creativity ( $r=0.390$ ,  $p<0.001$ ). These results preliminary provided support for subsequent hypotheses testing.

**Table 2** Means, standard deviations, and correlation analyses.

| Variable                    | 1       | 2        | 3        | 4       | 5        | 6        | 7        | 8       |
|-----------------------------|---------|----------|----------|---------|----------|----------|----------|---------|
| 1. Gender                   |         |          |          |         |          |          |          |         |
| 2. Age                      | -0.177* |          |          |         |          |          |          |         |
| 3. Education                | 0.240** | -0.508** |          |         |          |          |          |         |
| 4. Tenure                   | -0.107  | 0.858*** | -0.417** |         |          |          |          |         |
| 5. I-deals                  | 0.281** | -0.120*  | 0.131*   | -0.090  | (0.723)  |          |          |         |
| 6. Perceived insider status | -0.022  | -0.010   | -0.017   | 0.021   | 0.402*** | (0.701)  |          |         |
| 7. Psychological security   | 0.135*  | -0.162** | 0.130*   | -0.146* | 0.389*** | 0.160**  | (0.828)  |         |
| 8. creativity               | 0.033   | -0.164** | 0.076    | -0.174* | 0.442*** | 0.390*** | 0.305*** | (0.729) |
| Mean                        | 0.203   | 36.606   | 1.849    | 13.658  | 3.423    | 2.940    | 2.827    | 2.928   |
| SD                          | 0.403   | 8.220    | 0.891    | 8.869   | 0.911    | 0.597    | 0.663    | 0.627   |

Note. I-deals = idiosyncratic deals; SD = standard deviation;  $N=325$ ; \*  $p<0.05$ ; \*\*  $p<0.01$ ; \*\*\*  $p<0.001$ (two-tailed).

## 4.3. Hypothesis Testing

We use Spss22.0 and Mplus7.4 to verify the above assumptions. The results of hierarchical regression analysis are shown in Table 3.

As shown in Table 3, firstly, idiosyncratic deals in model 3 are positively correlated with creativity ( $\beta=0.318$ ,  $p<0.001$ ), thus hypothesis 1 is supported. Model 1 shows a significant positive correlation between personalized contract and insider identity perception ( $\beta=0.293$ ,  $P<0.001$ ), thus hypothesis

2 is supported, model 4 showed that the positive impact of idiosyncratic deals on creativity declined but was still significant ( $\beta=0.242$ ,  $P<0.001$ ) when the internal identity perception entered the equation, indicating that the internal identity perception played a partial mediating role between individualized work agreement and creativity. To further test the significance of the mediating effect, Bootstrap sampling analysis (sample number=5000) was used to test the mediating effect of perceived insider status. The test shows that the mediating effect value is 0.067, and the 95% confidence

interval is [0.034, 0.108], which does not contain 0. Thus, hypothesis 3 is supported.

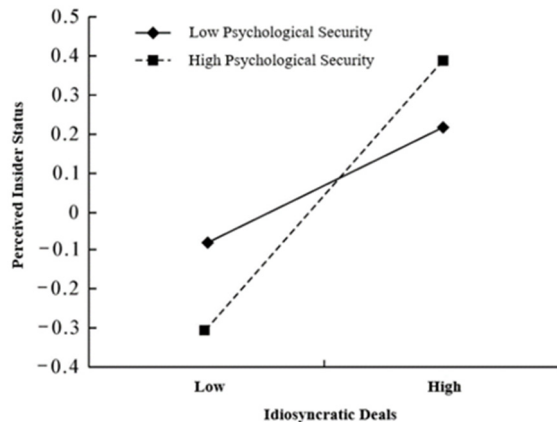
**Table 3** Hierarchy regression analysis.

| Independent variables           | Perceived insider status |           | Creativity |           |
|---------------------------------|--------------------------|-----------|------------|-----------|
|                                 | Model 1                  | Model 2   | Model 3    | Model 4   |
| Constant                        | 0.044                    | 0.057     | 0.289      | 0.278     |
| Gender                          | -0.201*                  | -0.188*   | -0.170*    | -0.119    |
| Age                             | 0.002                    | 0.001     | -0.003     | -0.003    |
| Education                       | -0.029                   | -0.033    | -0.020     | -0.013    |
| Tenure                          | -0.003                   | -0.001    | -0.009     | -0.008    |
| I-deals                         | 0.293***                 | 0.269***  | 0.318***   | 0.242***  |
| Psychological security          |                          | -0.017    |            |           |
| I-deals* Psychological security |                          | 0.160***  |            |           |
| Perceived insider status        |                          |           |            | 0.256***  |
| R <sup>2</sup>                  | 0.184                    | 0.215     | 0.226      | 0.274     |
| ΔR <sup>2</sup>                 | 0.182                    | 0.031     | 0.195      | 0.048     |
| F                               | 14.344***                | 12.374*** | 18.588***  | 19.999*** |

Note. Coefficients in the table are non-standardized coefficients; \* p<0.05; \*\*\* p<0.001(two-tailed).

Model 2 shows that the interaction coefficient between idiosyncratic deals and psychological security is significant ( $\beta=0.160, p<0.001$ ). Psychological security has a positive moderating effect on idiosyncratic deals and perceived insider status, and H4 is supported. To

further verify the moderating effect of psychological security, the slope of the regression line was significantly estimated for high (M+SD) and low (M-SD) psychological security. The specific moderating effect was shown in Fig. 2.



**Figure.2** The moderating role of psychological security.

Hypothesis 5 aims to reveal the moderating effect of psychological security. The mediating effect that was adjusted in the first stage was tested, and the test results were shown in Table 4.

It can be seen from Table 4 that the indirect effects ( $P_{XM} * P_{MY}$ ) under different levels of psychological security have significant differences ([0.027, 0.103]

excluding 0). In the case of low psychological security, the 95% CI of indirect effect is [0.013, 0.073] without 0. In the case of high psychological security, the 95% CI of indirect effect is [0.055, 0.147] without 0. Therefore, psychological security moderates the indirect effect of idiosyncratic deals on employee creativity through perceived insider status. Therefore, hypothesis 5 is supported.

**Table 4** The first stage was modulated by the Bootstrap test of mediating effects.

| Moderator                                  |              | Stage 1        | Indirect effects      | Total effects                |
|--|--------------|----------------|-----------------------|------------------------------|
|  |              | X→M            | ( $P_{XM} * P_{MY}$ ) | $P_{YX} + [P_{XM} * P_{MY}]$ |
| High<br>Psychological<br>Security(+1s. d.) | Effect Value | 0.353          | 0.095                 | 0.276                        |
|  | 95% CI       | [0.248, 0.441] | [0.055, 0.147]        | [0.139, 0.401]               |
| Low  | Effect Value | 0.133          | 0.036                 | 0.243                        |

|                                 |              |                |                |                  |
|---------------------------------|--------------|----------------|----------------|------------------|
| Psychological Security(-1s. d.) | 95% CI       | [0.054, 0.217] | [0.013, 0.073] | [0.126, 0.356]   |
| Difference                      | Effect Value | 0.221          | 0.060          | 0.034            |
|                                 | 95% CI       | [0.094, 0.329] | [0.027, 0.103] | [-0.165, -0.233] |

Note. Coefficients in the table are non-standardized coefficients; Bootstrap=5000

## 5.DISCUSSION

Drawing on self-categorization theory, this study provides evidence that idiosyncratic deals are positively correlated with employee creativity. The results of the study found that idiosyncratic deals can positively affect the perceived insider status and promote employee creativity. Meanwhile, psychological security positively moderated the relationship between idiosyncratic deals and perceived insider status, and further moderated the mediating role of perceived insider status between idiosyncratic deals and employee creativity.

### 5.1. Theoretical Implications

This paper innovatively studies the influence of idiosyncratic deals on employee creativity from the perspective of self-categorization, breaking the previous research on the impact of idiosyncratic deals from the reciprocity framework of social exchange, placing employees in the context of the organization, and broadening the research on the internal mechanism and outcome variables of idiosyncratic deals.

First, this paper demonstrates the important mediating role of perceived insider status, which provides a new mechanism for studying how to improve employee creativity. It reveals that the positive impact of idiosyncratic deals on employees is not only manifested in social exchange relations, but also in employees' self-concept cognition. Secondly, it confirms the boundary effect of psychological security. Psychological security as employees "uncertainty reduction" intrinsic motivation, discusses how psychological security as boundary conditions when the director take incentive measures to produce certain effect, and further enhance the personalized about the incentive effect, this for the future exploration and expand this new work mode provides a new Angle of view and the theory of boundary.

### 5.2. Practical Implications

Supervisors can flexibly use personalized work agreements to meet employees' idiosyncratic needs and promote creativity. Idiosyncratic deals can help enterprises retain talents and gain competitive advantages in the fierce market environment.

In addition, pay attention to process monitoring and counseling to maintain high quality psychological security of employees. idiosyncratic deal is both an opportunity and a challenge for employees, so

supervisors need to pay attention to the completion of idiosyncratic deals. When an employee encounters thorny difficulties, the supervisor should give targeted support and help according to the actual situation and show concern and affirmation to the employee's work content and results.

### 5.3. Limitations and Future Research

Although this paper adopted a multi-temporal data collection approach, the causal relationship between the variables is difficult to be fully determined. It is recommended that future studies use experiments to further explore this issue. In addition, this paper only discusses the mediating role of perceived insider status and the moderating role of psychological security, and further studies can explore the role of other mediating mechanisms in the relationship between idiosyncratic deals and creativity, as well as other work-related results.

## 6.CONCLUSIONS

Based on the self-categorization theory, this paper discusses the mediating role of perceived insider status and the moderating role of psychological security, thus increasing people's attention to idiosyncratic deals. We hope that our research can stimulate people's interest in idiosyncratic deals and provide theoretical basis and practical enlightenment for organizations to implement idiosyncratic deals. This paper hopes to guide enterprise management and practice through mathematical statistics and analysis.

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