A Self-Categorization Perspective of Idiosyncratic Deals and Creativity: Mediating Role of Perceived Insider Status and Moderating Role of Psychological Safety

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Purpose: Idiosyncratic deals (I-deals), a novel human resource management implement, has significantly contributed to attracting, retaining and motivating personnel to enhance creativity. Building upon self-categorization theory, this study investigates the impact of I-deals on creativity and the moderating role of psychological safety in this process by perceived insider status.

Participants and Methods: To mitigate common method bias and causal lag effects, this study was conducted in three phases with a half-month interval for data collection. In this study, a total of 331 employees from six enterprises in China were selected to test the hypotheses using Bootstrap and Johnson-Neyman methods.

Results: Results show that I-deals have a positive influence on creativity. Perceived insider status acts as intermediary between I-deals and creativity; Psychological safety strengthens the influence of I-deals on perceived insider status and further enhances the indirect influence of I-deals on creativity through perceived insider status.

Conclusion: This study demonstrates that organizations can leverage the unique characteristics of I-deals to fully showcase the diverse talents of their personnel, while simultaneously enhancing their psychological security. This, in turn, empowers employees to confidently propose new ideas and methods, thus catalyzing the generation of creativity.

Keywords: I-deals, perceived insider status, psychological safety, creativity, self-categorization theory

Introduction

Creativity, defined as the generation of novel ideas for products, processes, and services,¹ plays a critical role in enabling organizations to sustain their long-term competitive edge in today’s rapidly evolving business landscape. Therefore, how to stimulate the internal motivation of employees, maximize their subjective initiative, and enhance their creativity is an urgent problem for modern enterprises. In recent years, Rousseau² highlighted the emergence of idiosyncratic deals (I-deals) forged through mutual negotiations between employees and employers. As a new way of working, I-deals can include working flexibly at home, providing a personalized working environment for valuable employees, meeting employees’ diversified professional needs, and so on. Prior research has indicated that this non-standardized, customized work approach can significantly address employees’ intrinsic needs³ boost their self-efficacy.⁴ These provide a new theoretical breakthrough for further analysis of ways to improve employees’ creativity.

Previous studies have explored the impact of I-deals on creativity primarily from the perspectives of self-determination theory or social exchange theory. Different from the past, this new form of work is based on the perspective of self-categorization theory, which is a further development of social identity theory in terms of cognitive mechanisms,⁵ in which an individual’s self-concept includes both personal and social identities (the perceptions, attitudes, and beliefs that an individual possesses about the group with which he or she identifies).⁶ As prior research
has demonstrated, social environments can significantly influence an individual’s self-categorization process, and cognitive processes play a pivotal role in facilitating creativity in the workplace. Given that I-deals are rooted in an individual’s self-concept, as emphasized by self-categorization theory, they reflect an individual’s perceived membership in a particular social group. That is to say, in this work mode, individuals are placed in the organizational background, and their influence on employees’ creativity is understood from the perspective of the relationship between employees and organizations. This is a place neglected in previous studies. Actually, individuals do not exist in isolation, and they give weight to their internal identity within an organization, especially in China’s regional decentralized order pattern and the family-based cultural atmosphere. As a self-concept, the identity characteristics formed by self-categorization represent the cognitive consciousness of individuals who perceive that they belong to a group. This self identity can be described by personal identity and social identity. When personal identity is significant (that is, the degree of social identity is low), individuals are more inclined to think that they are unique individuals, do not belong to any group, and are more willing to stick to their personal values than other individuals. When social identity is significant (ie social identity is high), individuals tend to belong to members of the group, and are more willing to act according to the norms and goals of the group and strive to make the behavior expected by the organization. While the confirmation of personal identity or social identity is often affected by external clues. Self-categorization theory attributes such external cues to the cognitive process of self-categorization and the motivations associated with group membership, and since subjective uncertainty leads to social comparisons and makes individuals susceptible to the influence of others, uncertainty is a central part of group-based influences. Self-categorization theory clearly points out that the reason why individuals can improve social identity is mainly due to two motives: self enhancement and uncertainty reduction.

In particular, a group-based social self-category is activated when people categorize themselves as insiders of a group. Not only do they expect further advancement and access to higher levels within the group, but they begin to define themselves as being the same as others in that category, hoping that their behavior will be consistent with that of the group members, so that the self and the other merge to form a social identity. Given the unconventional nature of I-deals, employees who are able to negotiate such arrangements with the company are considered valuable assets to the organization. These individuals are likely to garner greater respect and support from their superiors, enjoy the freedom to leverage their personal skills within the framework of their I-deals, and be motivated by an internal drive for self-improvement. Subsequently, they are encouraged to categorize themselves according to the identity traits of insider status. Employees who are viewed as insiders are more likely to focus on the organization, invest more time and effort in activities that benefit the company, and actively foster their creativity in order to meet or even surpass the performance expectations of the company. Therefore, a perceived insider position may serve as a crucial link between I-deals and creativity.

In the meantime, given the high-cost and unconventional nature of I-deals, superiors are inclined to enter into such special work arrangements only with high-value core members of the organization. Employees who qualify for I-deals typically rise to a higher organizational status, cultivate closer ties with their superiors, and gain access to more organizational resources. However, the wing would break the tallest tree. The I-deals can offer these employees enhanced development opportunities, they may also precipitate negative consequences. For instance, the implementation of I-deals may trigger jealousy among colleagues or foster a perception of heightened competition and potential threats among employees. This, in turn, could lead to the exclusion and resignation of employees who sign the contract, which will partly increase the indeterminacy of employees and obstruct the self-categorization process, as well as the enhancement of innovation ability. To mitigate these risks, superiors can take proactive measures to ensure that personnel do not feel threatened, envious, or marginalized when engaging in I-deals within the organization. By enhancing the psychological safety of employees, organizations can promote a more conducive environment for creativity and collaboration. Psychological safety refers to the perception that one is in a safe environment based on personal perceptions, and that one does not have to worry about threats to one’s reputation or status in the workplace. Existing research suggests that factors such as perceived psychological safety, the meaningfulness of work, and access to resources can significantly impact employees’ positive behaviors and engagement within the organization. In the context of the I-deals work model, leaders can foster psychological safety by demonstrating trust and care towards their employees. By providing support and showing respect, leaders can create an environment where employees feel valued and secure.
increased sense of psychological safety, in turn, encourages employees to think more creatively, engage in open communication with the organization, and take calculated risks without the fear of negative consequences. Additionally, psychological safety can also reduce the ambiguity surrounding employees’ internal motivation, promote positive self-categorization, and enhance their perception of insider status. Therefore, psychological safety plays a crucial moderating role in this process by alleviating uncertainty during the self-classification process.

To summarize, this paper aims to explore the relationship between I-deals and creativity. Firstly, drawing on existing research, it establishes a positive correlation between I-deals and creativity. Secondly, on the basis of the perspective of employees’ individual self-categorization, the self-categorization theory is introduced. From two self-classification motivations, namely, self-enhancing (I-deals) and decreasing indeterminacy (psychological safety), the paper highlights the process of employees’ self-categorization under the influence of these motivations, specifically the development of perceived insider status and its positive impact on subsequent creativity. This provides a more comprehensive theoretical and practical understanding in the field of creativity research.

**Literature Review and Hypothesis Deduction**

**I-Deals and Creativity**

Idiosyncratic deals (I-deals) is a new stimulant type with particular customization features that are willingly agreed and then signed by both employees and employers after consultation. It represents a new off-standard working pattern. I-deals offer employees the opportunity to engage in open and spontaneous negotiations with their superiors. This enables them to tailor their working hours to fit their personal circumstances. Moreover, employees can make full use of their capabilities according to the task type, and find job opportunities conducive to career development in time. However, I-deals differ from cronyism and favoritism as their aim is not solely to maximize personal benefits. Instead, I-deals strive to unleash the full potential of subordinates, ultimately benefiting both the organization and individuals involved, fostering mutually beneficial and win-win outcomes. I-deals have emerged as a significant area of study in employee creativity research due to their unique characteristics. These arrangements have the potential to stimulate personal potential, address employees’ surplus capacity, and fulfill individuals’ aspirations for professional growth. As such, I-deals represent a significant breakthrough in understanding how to enhance employee creativity within organizations.

Firstly, in the classic framework of creativity, Amabile et al. points out that intrinsic motivation, domain skills and creative skills are the three essential elements of creativity. Studies by many scholars have shown that I-deals, a work method tailored to individuals, is conducive to enhancing creativity by improving employees’ intrinsic motivation, domain skills and creative skills. Specifically, firstly, due to the high cost and non-standard particularity of I-deals, employers often only sign with employees who can create more value for the organization. This way of working conveys a special signal, that is, the trust of superiors to subordinates, and that superiors attach importance to the employee and believe that he has the potential for further support and training. After feeling this trust and encouragement, subordinates position themselves as insiders of the organization, which is conducive to stimulating their initiative, spontaneously completing the tasks assigned by the organization and increasing internal motivation. Secondly, I-deals assign employees duties that are conducive to fully utilizing their personal talents on the basis of their personal demands. This targeted design is helpful to enhancing the domain skills and creative skills in the field of creativity and promoting them to explore new methods that can complete tasks efficiently. Thirdly, the I-deals does not stipulate fixed working hours or locations, and is based on the personal requirements of employees. It can focus more on meeting employees’ internal expectations and provide good opportunities for employees to improve their creativity.

Secondly, previous research indicates that I-deals is a significant antecedent variable of employees’ self-efficacy, which is vital in stimulating employees’ creative ability. I-deals may boost employees’ sense of self-efficacy by making them more confident and believing they have the capacity to innovate, ultimately stimulating creativity. Specifically, first of all, the unconventional work content of I-deals often encourages employees to actively explore new ideas and ways, providing them with more opportunities to acquire knowledge. With the accumulation of innovative ideas and innovative knowledge, they become more confident in dealing with complex problems, thus improving their innovative self-efficacy. In addition, I-deals are not normal. Only core employees with relatively high status among colleagues have the
opportunity to obtain them. Employees who sign such agreements are often more valued by leaders and enjoy more resources, information, and opportunities from their superiors and organizations. This external motivation can also improve individual self-efficacy, ultimately promoting the generation of creativity. In summary, I-deals have the potential to enhance employees’ self-efficacy, leading to increased confidence and capacity for innovation. Ultimately, this can stimulate creativity and promote organizational success.

Finally, the flexible job assignment within I-deals empower individuals to better manage their time, reducing time spent on repetitive and inefficient tasks. This allows employees to focus on tasks that enhance innovation performance and work efficiency, leading to optimized benefits. Using more psychological resources obtained after relieving pressure for trying creative thinking has a positive role in promoting creativity. Furthermore, the flexibility afforded by I-deals in arranging working hours and balancing work-family relationships can alleviate concerns and sustain motivation for innovation. This creates an environment where employees are free from worries and maintain continuous drive to innovate, laying the foundation for enterprises to access and nurture high-quality human capital. This ability to cultivate a talent pool empowers organizations to consistently fuel their innovation processes. In light of these factors, this paper proposes the following hypothesis:

H1: I-deals has a positive impact on creativity.

The Mediating Role of Perceived Insider Status
As previously mentioned, I-deals are non-standard work arrangements tailored to meet the unique needs of employees. This can help organizations retain valuable employees, as this type of work agreement reflects a high-quality exchange relationship between employees and their employers or organizations. Unlike theories such as leader-member exchange theory, social exchange theory, and psychological contract, I-deals describe the relationship between organizations and employees from a more concrete standpoint. This enables employees to more clearly perceive the significance and recognition that their employers place on their work. Employees’ perceived importance and affirmation of their work by their employer, combined with individual employee experiences, values, and cognitive structures will positively contribute to individuals’ categorization of themselves and others. Unlike the rejection of other groups (called out-groups), an individual’s identification with the group to which he or she belongs (called an in-group) places more emphasis on his or her similarity to the members of the in-group, and salient social identities make people susceptible to the in-group’s influences in accepting the viewpoints of a group.

Considering that a person’s perception of his or her insider status within an organization can determine that person’s identity and to some extent reflect the cognitive dimensions of self-concept, with reference to Zhao et al study, this paper proposes that perceived insider status may be an important potential mechanism to explain the positive relationship between I-deals and creativity. Stamper et al proposed the concept of insider status perception, which reflects employees’ self-evaluation, that is, employees’ personal recognition in the organization. Self-categorization theory believes that when superiors show supportive behaviors such as care and encouragement for subordinates and take measures to meet the intrinsic motivation of subordinates’ self-enhancement, it is beneficial to foster the process of subordinates’ self-categorization. Simultaneously, because of the particularity of I-deals, subordinates will feel the importance and differential treatment from the organization. Under the background of internal and external differences in corporate culture in China, creating an environment where employees feel like insiders of the organization, think about problems with the organization as the center, and devote more energy to work beneficial to the organization is highly beneficial. Thus, I-deals, which represents a positive relationship between employees and the company, unquestionably have a significant part in fostering the formation of perceived insider status. Employees who have the opportunity to enter into I-deals with their supervisors benefit in multiple ways. Firstly, it signifies a high-quality exchange relationship with the organization, demonstrating the company’s support and investment in employee development, which is conducive to meeting employees’ expectations (such as job responsibilities and development chances that may fully use each individual’s abilities). This provides good opportunities for employees to exercise their personal skills to a great extent, and promotes employees to constantly improve themselves, realizes their own value, enhances organizational self-esteem, and enables employees to bring their talents into full play, thus generating a higher perception of insider status;
On the other hand, as highlighted by Hui et al, the support of superiors and organizations plays a pivotal role in how subordinates perceive insider status. Organizations can leverage I-deals, characterized by their high cost, non-routine nature, and personalized arrangements, to effectively retain key talents. Consequently, employees who engage in such agreements with their superiors cultivate a higher quality exchange relationship with them, receiving additional support, care, and potentially enjoying an elevated position within the organization. This differential treatment is instrumental in fostering employees’ perception of being valued and nurtured by the organization, granting them access to prioritized promotion opportunities and solidifying their identity as insiders within the organization.

Moreover, the self-categorization theory highlights that perceived insider status promotes the acquisition of richer positive emotional resources. This kind of positive emotion has a beneficial promoting effect on the attitude and behavior of employees at work, and urges employees to actively undertake the tasks assigned by the organization, and even spontaneously seek innovative methods to exceed the organizational goals. Then it plays a beneficial part in promoting the creativity of employees. Accordingly, this paper puts forward the following hypothesis:

H2: The positive relationship between I-deals and creativity is mediated by perceived insider status, meaning that I-deals influence creativity indirectly through perceived insider status.

The Moderating Role of Psychological Safety

Psychological security, a crucial concept in positive psychology, pertains to individuals feeling confident that their views and expressions will be evaluated fairly in the workplace. It fosters an environment where employees believe their image, role, and status will be justly considered, encouraging them to engage actively and express themselves. Psychological safety emphasizes the “safety atmosphere” of the organization that individuals feel, so as to encourage employees to be proactive. Most of the previous studies investigated psychological security from the group perspective, and paid little attention to the individual characteristics of psychological safety. Kahn believes that psychological safety is a state of psychology that affects individual intrinsic motivation and self-awareness. A higher sense of psychological safety of employees often means that they will show higher proactive behavior. Therefore, this paper shifts its focus to psychological safety at the individual level, examining how perceptions of psychological safety shape the impact of superior-subordinate interactions on employee behavior. The study posits that employees’ assessments of their organizational environment influence their sense of psychological safety, consequently modulating the process through which I-deals influence perceived insider status and, ultimately, stimulate employee creativity.

Particularly, the negotiation of I-deals between employers and employees plays a pivotal role in aligning individuals with suitable roles and fostering their professional growth. However, this kind of unconventional contract will also have adverse impacts, such as the feeling of exclusion, which will lead to employees’ resignation, increase the nondeterminacy of employees and affect their self-categorization. Consequently, the impact of I-deals on self-enhancement is greatly amplified within an environment characterized by high psychological safety, thereby cultivating a stronger psychological bond between key talents and the organizations. Moreover, when individuals realize that they can freely express their opinions and take measures to express their true selves without fear of being excluded, a higher sense of psychological security can stimulate employees’ internal motivation to reduce uncertainty. At this time, the I-deals will encourage employees to proactively categorize themselves, and take the initiative to classify themselves as the insiders of the organization. When psychological safety is low, they may think that the surrounding environment is threatening, their position in the organization will be excluded, and their words and behaviors will also lead to the conflict with others. At this time, the uncertainty of employees will increase, and there will be an estrangement from the organization. Therefore, I-deals has a weak influence on employees, which is not conducive to employees’ active self-classification. This undermines the perception of employees as insiders.

Psychological safety continues to be a focus of attention for many scholars in recent research into more creative ways of working, such as virtual teams and hybrid work. Psychological safety is closely related to the workplace and is highly susceptible to factors such as organizational culture, climate of trust and perceived safety, and leadership. In addition, the positive relationship between psychological safety and team performance and innovation, information sharing and adaptability within organizations has been confirmed by many scholars. In this study, we will further
explore the role of psychological safety in the relationship between I-deals and employee creativity. When psychological safety is high, it indicates that the employee believes the surrounding environment is secure, and they perceive minimal risks associated with their speech and behavior. At this point, employees can consider strengthening personal skills, improving work efficiency and modifying working methods more than before when negotiating I-deals with their leaders and dealing with personalized work arrangements. After positive self categorization, they will choose to devote more time and energy to the organization, clarify the direction of efforts, focus on goals and tasks, actively explore new ideas and methods to solve problems, and improve their creativity. When psychological safety is low, employees may fear that preferential treatment from the organization and leaders could provoke jealousy and rejection among their colleagues, leading to an incompatible work atmosphere and strained relationships. Thus, the interaction effect between employees and the organization becomes worse, which is not conducive to the perceived insider status, and employees are also timid when dealing with work. Spending more psychological resources in coping with workplace risks and dealing with interpersonal relationships may consume a lot of employees’ motivation to actively explore and improve their creativity.

To sum up, combined with H2, this paper puts forward the following assumptions:

H3: Psychological safety moderates the intermediary effect of perception of insider status, that is, the improvement of psychological safety will enhance the indirect influence of I-deals on creativity through perception of insider status.

This paper’s theoretical model is shown in Figure 1.

**Participants and Methods**

**Participants and Procedures**

In this study, questionnaires were used to collect samples, go deep into enterprises for field observation, and distribute and collect the questionnaire on site. The survey time is from April 10, 2022 to May 26, 2022. The respondents were managers and technicians from six domestic enterprises in China. Considering that I-deals is a relatively new and flexible management strategy, which requires enterprises to have a relatively flat organizational structure and flexible management means, the types of enterprises selected are mainly IT enterprises. This study adopts a multi-source time-delay approach for data collection to reduce the deviation from common methods. The measurement time points of time1, time2 and time3 were used respectively, with an interval of half a month. Among them, I-deals items, gender, age, education and tenure were measured in the first time period (time1), 463 sets of questionnaires were distributed and 433 sets of effective questionnaires were collected, with a recovery ratio of 93.52%. After half a month, the psychological safety and perceived insider status items were measured in the second time period (time2). 433 sets of questionnaires recovered in the time1 were distributed, and 388 sets of questionnaires were collected, with an effective recovery ratio of 89.61%. After another half month, the creativity items were measured in the third time period (time3). 388 sets of questionnaires recovered in the time2 were distributed, of which 334 were valid, and the recovery rate was 86.08%. The invalid samples were removed from the 334 samples collected. Finally, statistics were provided for 331 valid samples, and the effective recovery rate was 71.49%.

![Theoretical model](https://doi.org/10.2147/PRBM.S439404)
The features of this sample are as follows: from the perspective of gender, men account for 59.72% and women account for 40.28%; In terms of age, the average age is 33 years old; In terms of tenure, the average tenure is 8 years; In terms of education, undergraduate degrees are the main, accounting for 47.69%. Since the objects of this study are enterprises with high flexibility such as IT enterprises, and the samples are also from the core departments of these enterprises, the proportion of I-deals is generally accepted.

**Measures**

The scale comes from mainstream foreign literature and has been verified to have local applicability. First, we hired professors from the School of Foreign Languages and foreign experts to translate the English scale using the reverse translation method. Second, using the reciprocal translation method, the Chinese scale was translated back into English, and multiple rounds of English-Chinese translation were repeated to ensure semantic integrity and fluency. Finally, the scale was distributed to a small group of current companies for local practical pre-testing, while ensuring that the scale met academic standards and that the content of the questions was as easy to understand as possible. In addition to the control variables, the variables were measured with Likert five level scale, ranging from 1 (extremely disagree) to 5 (extremely agree). Before the measurement, the confidentiality of the results is guaranteed to the employees, so that the employees can express their true feelings as much as possible. The main questionnaire measurements are shown in Appendix 1.

I-deals. Using the twelve-item scale developed by Hornung et al. A sample item is: “I successfully negotiated with my superiors and got a special opportunity to learn skills”. Cronbach’s alpha was 0.953.

Psychological safety. Using the five-item scale developed by Liang. A sample item is: “In my work unit, I can express my true feelings about work”. Cronbach’s alpha was 0.885.

Perceived insider status. Using the six-item scale developed by Stamper et al. A sample item is: “I can feel strongly that I am a member of the company”. Cronbach’s alpha was 0.887.

Creativity. This was measured by four-item developed by Farmer, and the superior assesses the employees’ creativity of the team. A sample item is: “In daily work, the employee will often exchange some new work-related ideas with his superiors and try to put them into practice”. Cronbach’s alpha was 0.864.

Control variables: In order to avoid the causal relationship between variables in this paper from being affected by some irrelevant variables, the influence of demographic variables such as gender, age, education and tenure on the study is controlled.

**Results**

**Confirmatory Factor Analyses**

The results of confirmatory factor analysis are shown in Table 1. Taking the four factor model with all variables separated independently as the benchmark model, three competition models were constructed: the three factor model (I-deals + psychological safety, perceived insider status, creativity), the two factor model (I-deals + psychological safety + perceived insider status, creativity) and the single factor model (four factors are perfectly correlated). Amos22.0 was used for confirmatory factor analysis. The discriminant validity between variables was tested. The findings demonstrate

<table>
<thead>
<tr>
<th>Table 1 Results of Confirmatory Factor Analyses</th>
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<tbody>
<tr>
<td>Model</td>
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<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>1-factor model (ID+PIS+CRE+PS)</td>
</tr>
<tr>
<td>2-factor model (ID+PIS+PS, CRE)</td>
</tr>
<tr>
<td>3-factor model (ID+PIS, PS, CRE)</td>
</tr>
<tr>
<td>4-factor model (ID, PIS, PS, CRE)</td>
</tr>
<tr>
<td>5-factor model (4-factor +CMB)</td>
</tr>
</tbody>
</table>

**Abbreviations:** ID, I-deal; PIS, Perceived Inside Status; PS, Psychological Safety; CRE, Creativity; CMB, Common Method Bias.
that all the indexes of the four-factor model meet the requirements of the criterion ($X^2/df=1.613$, $CFI=0.974$, $TLI=0.9711$, $RMSEA=0.043$, $SRMR=0.035$), and its fitting impact was superior to that of other models. In addition, the discriminant validity of variable measurement was high, so the four-factor model was the best fitting model.

Although the data collection process of this study adopts the multi-source time-delay method, it may still be affected by the deviation of common methods. Therefore, in order to test whether the deviation of common methods would pose a threat to the research results, the practice of Podsakoff et al\textsuperscript{47} was used for reference, and the common method factors were added on the basis of the four factor structure to build a five factor model structure. The results showed that the fitness was improved ($X^2/df=1.441$, $CFI=0.978$, $TLI=0.974$, $RMSEA=0.041$, $SRMR=0.033$), which showed that there was a certain degree of common method deviation, but the improvement of $RMSEA$, $CFI$, $TLI$ and other indicators was limited, less than 0.02, so the common method deviation would not pose a threat to the interpretation of the research results.

**Descriptive Statistics**

As shown in Table 2, spss22.0 was used to analyze the correlation of I-deals ($x$), perceived insider status ($m$), psychological safety ($w$), employee innovation ($y$) and control variables. The results showed that the Pearson correlation coefficient of $x\rightarrow y$ was 0.431, $p<0.001$; The Pearson correlation coefficient of $x\rightarrow m$ was 0.413, $p<0.001$; The Pearson correlation coefficient of $m\rightarrow y$ was 0.389, $p<0.001$. Moreover, the correlation coefficient between each variable was less than 0.7. The results preliminarily supported H1 and H2.

**Hypothesis Testing**

Using spss2.0 and mplus7.0 as analysis tools, this paper used hierarchical regression to verify the above assumptions.\textsuperscript{48,49} The results of hierarchical regression analysis are shown in Table 2. In addition, we also used model 7 in process v4.3 for SPSS to test SEM models.

As shown in Table 3, first of all, I-deals and creativity in model 3 ($\beta=0.329$, $p<0.001$). Therefore, H1 was verified.

Model 1 shows that there was a significant positive correlation between I-deals and perceived insider status ($\beta=0.282$, $p<0.001$). And then, in order to test the mediating effect of perceived insider status, this paper used the method of Baron and Kenny\textsuperscript{50} to verify. Firstly, there was a significant positive correlation between I-deals and creativity ($\beta=0.329$, $p<0.001$). Secondly, there was a significant positive correlation between I-deals and perceived insider status ($\beta=0.282$, $p<0.001$), and when perceived insider status entered the regression equation (model 4), the positive impact of I-deals on creativity decreased ($\beta=0.232$, $p<0.001$), but still significant. Therefore, perceived insider status mediated the impact of I-deals on creativity, and H2 was true. In order to further verify the intermediary effect, this paper also used bootstrap sampling analysis\textsuperscript{51} (bootstrap=5000) to test the intermediary effect of perceived insider status. According to test results, the value of the intermediary effect was 0.078, and the 95% confidence interval was [0.045, 0.119], and the interval did

<table>
<thead>
<tr>
<th>Table 2 Means, Standard Deviations, and Correlation Matrix for Key Measures</th>
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<tbody>
<tr>
<td><strong>variables</strong></td>
</tr>
<tr>
<td>1.gender</td>
</tr>
<tr>
<td>2.age</td>
</tr>
<tr>
<td>3.education</td>
</tr>
<tr>
<td>4.tenure</td>
</tr>
<tr>
<td>5.I-deals</td>
</tr>
<tr>
<td>6.perceived insider status</td>
</tr>
<tr>
<td>7.psychological safety</td>
</tr>
<tr>
<td>8.creativity</td>
</tr>
<tr>
<td>M</td>
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<tr>
<td>SD</td>
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</tbody>
</table>

**Note:** N=331, *P<0.05, **P<0.01, ***P<0.001.
not contain 0. Therefore, it can be seen that perceived insider status played a positive mediating role, and I-deals positively affected creativity through perceived insider status. Therefore, H2 was further verified.

To prove H3, we further observed that model 2 in Table 2 showed the interaction coefficient between I-deals and psychological safety ($\beta=0.159$, $p<0.001$), and psychological safety had a significant intermediary effect on the positive relationship between I-deals and perceived insider status. In order to reveal the intermediary effect of psychological safety more comprehensively, we used Johnson Neyman (J-N) method to discuss the specific forms of the moderating effect, as shown in Figure 2. The J-N method made up for the deficiency of the traditional point tracing method in testing the moderating effect.

<table>
<thead>
<tr>
<th>Table 3 Hierarchical Regression Results</th>
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<tbody>
<tr>
<td>Variables</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Intercept</td>
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<tr>
<td>Gender</td>
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<tr>
<td>Age</td>
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<tr>
<td>Education</td>
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<tr>
<td>Tenure</td>
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<tr>
<td>I-deals</td>
</tr>
<tr>
<td>Psychological Safety</td>
</tr>
<tr>
<td>I-deals*Psychological Safety</td>
</tr>
<tr>
<td>Perceived Insider Status</td>
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</tbody>
</table>

**Note:** *P<0.05 ***P<0.001.

Figure 2 The Moderating Role of Psychological Safety (J-N).
Table 4 Analysis Results of Moderated Mediating Effect

<table>
<thead>
<tr>
<th>Variable</th>
<th>First Stage</th>
<th>Second Stage</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X→M</td>
<td>M→Y</td>
<td>X→Y</td>
<td>(P_{XM}\times P_{MY})</td>
<td>P_{XY}+ (P_{XM}\times P_{MY})</td>
</tr>
<tr>
<td><strong>High Psychological Safety (+1s.d.)</strong></td>
<td>Estimate 0.342</td>
<td>0.257</td>
<td>0.181</td>
<td>0.087</td>
<td>0.268</td>
</tr>
<tr>
<td></td>
<td>95% CI [0.239, 0.439]</td>
<td>[0.125, 0.394]</td>
<td>[0.051, 0.315]</td>
<td>[0.044, 0.158]</td>
<td>[0.128, 0.412]</td>
</tr>
<tr>
<td><strong>Low Psychological Safety (−1s.d.)</strong></td>
<td>Estimate 0.124</td>
<td>0.282</td>
<td>0.207</td>
<td>0.034</td>
<td>0.241</td>
</tr>
<tr>
<td></td>
<td>95% CI [0.043, 0.228]</td>
<td>[0.110, 0.429]</td>
<td>[0.097, 0.315]</td>
<td>[0.024, 0.084]</td>
<td>[0.115, 0.345]</td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td>Estimate 0.218</td>
<td>−0.026</td>
<td>−0.026</td>
<td>0.053</td>
<td>0.027</td>
</tr>
<tr>
<td></td>
<td>95% CI [0.083, 0.318]</td>
<td>[−0.213, 0.157]</td>
<td>[−0.213, 0.157]</td>
<td>[0.016, 0.114]</td>
<td>[−0.154, 0.212]</td>
</tr>
</tbody>
</table>

**Note:** Bootstrap=5000.

effect, and helped us mine more information by providing a simple confidence band of slope. It can be seen from Figure 2 that in the part where psychological safety was greater than −1.010, the confidence band (upper and lower limits of 95% confidence interval) of the simple slope line did not contain 0, so the adjustment effect of psychological safety was significant, and the simple slope line was greater than 0 and tilted upward to the right, indicating that when the psychological safety was higher, the positive impact effect of I-deals on perceived insider status was stronger. Furthermore, this study used the method of Bjornson et al52 to test the mediated effect regulated in the first stage, and followed the suggestions of Edwards et al53 and used mplus7.0 software to analyze its moderating effect (Bootstrap=5000). The test results was shown in Table 4 and Table 3 shows that in the case of low psychological safety (−1s.d), the 95% confidence interval of indirect effects (P_{XM}\times P_{MY}) was [0.024, 0.084] excluding 0. In the case of high psychological safety (+1s.d), the 95% confidence interval of indirect effect (P_{XM} \times P_{MY}) was [0.044, 0.158] excluding 0. There were significant differences in indirect effects (P_{XM}\times P_{MY}) under different levels of psychological safety (estimate=0.053, the 95% confidence interval [0.016, 0.114] excluding 0). Therefore, psychological safety moderated the indirect effect of I-deals on creativity via perceived insider status. H3 was verified.

What’s more, the results of model 7 in process v4.3 showed that ① the effect of I-deals on creativity was 0.242, p<0.001. ② the mediating role between I-deals and creativity was 0.068, the 95% confidence interval was [0.032, 0.108], excluding 0. ③ the interaction between I-deals and psychological safety was 0.159 (p<0.001). ④ the estimate of indirect effects was 0.041, and the 95% confidence interval was [0.014, 0.071], excluding 0. Therefore, from the perspective of the SEM model, H1, H2 and H3 were all supported.

**Discussion**

Based on self-categorization theory, this study aims to investigate the influence of I-deals on creativity and the moderating role of psychological safety in this process, as mediated by perceived insider status. The literature has witnessed a surge in studies focusing on employee creativity. The advent of flexible work arrangements has not only attracted scholarly attention but also become an important avenue for organizations to enhance employee creativity.54 I-deals are a new way of working, and our findings are consistent with previous research, confirming that I-deal is an important breakthrough in improving employee creativity. For organizations, the recognition and care of employees’ contribution will lead employees to categorize themselves as insiders, which in effect improves organizational effectiveness.55 Moreover, perceived insider status motivates employees to invest more time and energy in organizational work, a process that facilitates employee creativity.56 Previous studies believe that creative-efficacy is the main mediating mechanism between I-deals and creativity. However, we confirm that the perceived insider status plays an important mediating role between them. In addition, the literature on psychological safety indicates that the positive effects of team psychological safety can contribute to team performance,56 and our study further confirms that the psychological safety of individuals also has a positive moderating role on the relationship between I-deals and perceived insider status, and further enhances the indirect effect of I-deals on creativity through insider status perception.
Theoretical Implications
Firstly, this paper introduces a novel perspective by exploring the impact of I-deals on creativity through the lens of self-categorization theory, and puts forward that this new working method of I-deals is one of the important forms of employees’ self enhancement. However, given the unconventional nature of this work arrangement, employees who engage in I-deals may face envy and exclusion within the organization, which will increase their uncertainty. Therefore, it is necessary to increase employees’ psychological safety and make them aware of the low risk of their situation, which is conducive to stimulating employees’ internal motivation to reduce uncertainty and further promoting employees’ positive self-categorization. Different from previous research frameworks based on social cognitive theory and social exchange theory to study the influence of I-deals on creativity, it explains the process of I-deals’ influence from a fresh perspective of self-categorization theory, that is, employees’ perceived insider status within the organization, which broadens people’s knowledge on the internal mechanism of I-deals.

Secondly, some scholars have explored I-deals based on self-determination theory to affect the internal motivation of employees by meeting the three major needs of employees’ self-determination. However, the research on I-deals would be incomplete if the employees live in the organizational background without considering the employee’s organizational relationship. Domestic scholars Duan Jinyun et al pointed out that I-deals, as a new work arrangement, is a new perspective for studying individual organization relations. Compared with the previous LMX, social exchange theory, psychological contract and other abstract levels, the concrete work arrangement of I-deals can better describe the relationship between employees and organizations from reality, which provides a new insights and inspiration for future research in this field. Therefore, this paper creatively materializes the previous theoretical research on organization-employee relationship through I-deals, and based on the perception of insider status in the course of self-categorization, makes it highlight the good employment relationship and psychological relationship more intuitively between organization and employees in the actual operation process. Consequently, this approach brings greater clarity and stability to the relationship between the two parties, moving beyond vague and abstract notions.

Thirdly, the paper demonstrates that the crucial mediating role of perceived insider status in the relationship between I-deals and creativity. Furthermore, it provides a more suitable internal mechanism for studying the relationship between I-deals and creativity. The existing research on the impact of I-deals on employees’ creativity emphasizes that employees will repay the organization out of reciprocal norms after accepting this special work arrangement. This study further found that the positive influence of I-deals on creativity is also reflected in employees’ cognition of self-perception, that is, I-deals can promote perceived insider status, help organizations retain valuable employees, make employees choose to devote more time and energy to their work, which in turn improves creativity.

Finally, this paper also unveils the moderating function of psychological safety. This paper takes psychological safety as the internal motivation of employees to reduce uncertainty, and discusses that when psychological safety is used as the moderating role, it will have a certain enhancement effect on the incentive measures taken by the supervisor, that is, in the process of the supervisor taking I-deals to stimulate employees to actively explore creativity, if the leaders can also reduce the uncertainty in the process of creativity exploration through psychological safety. It is conducive to clearing the obstacles of employees on the path of innovation, further enhancing the incentive effect of I-deals, and providing new theoretical support for exploring and broadening this emerging work model in the future.

Practical Implications
Firstly, leaders should take the actual needs of subordinates seriously and adopt non-standardized new working methods to stimulate creativity. I-deals provides a new human resource management method for leaders. Based on the employees’ characteristics, leaders can carry out personalized management, thus promoting the development of employees’ creativity. For instance, for creative employees, we need to provide them with more opportunities to cultivate inspiration. For example, taking a result-oriented assessment method for them, and the leader can allow them to choose a suitable place and time to work. They can also choose to work in places that can easily motivate them, such as coffee shops and art exhibitions. In a word, leaders can actively encourage employees to look for ways to improve work efficiency and
optimize the workflow and allow subordinates to adjust their work content according to the actual situation, allowing them to fully utilize their heterogeneous talents.

Secondly, leaders should focus on process monitoring and psychological guidance to safeguard the high-quality psychological safety of employees. The achievement of I-deals means that employees need to complete some unconventional work content, which is an opportunity as well as a challenge for employees. Therefore, when completing the work content of I-deals, leaders also need to pay close attention to it, so as to maintain high-quality psychological safety for employees. When employees encounter thorny difficulties in the process of I-deals and need support from leaders, leaders need to provide targeted support and assistance based on the actual situation. Under the condition of existing resources, discuss with employees whether to terminate I-deals or use other ways and resources to complete the work. At the same time, in this process, the superior can take advantage of the opportunity to provide feedback to the subordinates in time to show their concern for employees’ work process and recognition for employees’ work achievements, and can also regularly communicate with the subordinates and actively ask them what puzzles they have at present and what support they can provide.

Finally, balance the collocation of individuality and commonness in work design, and the two can not be neglected. In the climate of intense market rivalry, there are also some risks in adopting the flexible I-deals working mode. For example, employees’ work direction is unclear, and they may waste a lot of energy on behaviors unrelated to performance appraisal indicators. In the long run, employees will deviate from the organization’s track, and the results they make will fall short of the expectations and requirements of the organization. Thus, although the organization has adopted a high-cost personalized way of work, it has not received the corresponding return. Therefore, when using I-deals, we should make the personality of employees fit in with the commonness of the organization. On the one hand, in terms of commonness, we should formulate clear job requirements, provide clear performance expectations and clear assessment indicators, and take this as the basic performance assessment to ensure that employees can complete the basic work content required by the organization; On the other hand, in terms of personality, it is emphasized that on the premise of excellent completion of their own work, non-standard working methods that are conducive to their personal development can be formulated according to their personal requirements, so that employees’ heterogeneity can be brought into full play, or more personalized task requirements and career development channels can be provided for employees, so as to stimulate employees to be dissatisfied with the current situation, They are willing to actively explore new work ideas and ways to exceed the organization’s expected goals, and finally make the employee goals consistent with the organization’s direction, so as to realize the coordinated development of employee organization.

Research Limitations and Future Research Direction

Based on the motivations of self-classification theory (self-improvement and reducing uncertainty), this study examines a theoretical model of improving creativity through I-deals, supported by theoretical derivation and empirical analysis. However, the study still has several limitations. First of all, the research focuses on IT enterprises where I-deals are widely prevalent, and the samples are drawn from core departments within these enterprises. Consequently, a relatively high proportion of the research samples are recipients of I-deals. In future research, it would be beneficial to diversify the sample types. For instance, including employees from traditional industries such as automotive, apparel, and hospitality sectors to broaden the scope of I-deals research. Secondly, in the meta-analysis of I-deals, Liao et al.\(^\text{11}\) advocates for exploring I-deals from a more diverse perspective beyond the framework of social exchange. While this study discusses the positive impact of I-deals from the perspective of self-classification, there are still numerous aspects that warrant further exploration. The positive influence of I-deals on employee creativity can be examined within alternative theoretical frameworks (eg, trait activation theory, affective event theory, etc.) in future studies.\(^\text{59,60}\) Finally, Rousseau et al.\(^\text{25}\) propose that I-deals encompass various types, such as flexibility, development opportunities, workload reduction, and task modifications. However, this study does not make a strict differentiation among these types. Subsequent research could delve into whether different types of I-deals have varying effects on employees’ work attitudes and behaviors.
Conclusion
As a new human resource management strategy that better fits employees and organizations, I-deals has received increasing attention and recognition from academia. Previous research on the interaction between employees and organizations mainly focused on leadership member exchange theory, social exchange theory, and psychological contract. The relationship between the two sides remained at the psychological perception level, lacking practical proof and agreement, which made the relationship unstable. This paper embodies the degree of fit between the organizations and employees through the I-deals actively initiated by employees. This emerging and non-standard work arrangement is essential for promoting employees’ perception of the support from the organization and strengthening their perception of insider status, and then makes personnel more willing to spend time on the work, providing a hotbed for the breeding of creativity. Additionally, psychological safety plays a moderating role in this process, and is an important boundary condition to promote I-deals to indirectly affect employees’ creativity through perceived insider status. The research findings indicate that to successfully stimulate the creativity of employees, a balance must be achieved between organizational commonality and employee personality, which provides important theoretical significance and practical enlightenment for the research of modern enterprise human resource management.

Data Sharing Statement
Both data and materials can be obtained from the correspondence author. His Email address is yuanlinlin8807@163.com.

Ethics Statement
Prior to the start of our research, we submitted our research plan to the Academic Ethics Committee of the School of Business Administration of Henan Polytechnic University, and obtained the moral approval and review of the plan content. All the participants voluntarily participated in the questionnaire survey, and the participants and institutions written informed provided consent. It is our responsibility to ensure that the guidelines outlined in the Declaration of Helsinki are followed.

Consent for Publication
All participants agreed to publish this article. The manuscript has not been published, or submitted for publication elsewhere.

Author Contributions
All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure
The authors report no conflicts of interest in this work.

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