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# Relationship between Organizational Incentives and Individual Innovation

## -- The Mediating Effect of Innovative Psychological Involvement

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## Abstract

**Objective: To explore the mediating role of innovative psychological involvement between organizational motivation and individual innovation . Methods: 340 subjects were surveyed by the Organizational Motivation Scale, the Innovation Psychology Involvement Scale and the Individual Innovation Scale. Results: There was no significant gender difference in the individual innovative behavior of the subjects; both the organizational innovation incentives and the innovative psychological involvement of the subjects were significantly positively correlated with the individual innovative behavior, and they could jointly predict the individual innovative behavior; Organizational innovation incentives and individual innovation behavior play a partial mediating role, and the mediating effect value is 15.58%. Conclusion: Organizational incentives not only have a direct impact on employee innovation , but also indirectly affect individual innovation through the involvement of innovative psychology.**

## Keywords

**Organizational incentives, Individual innovation, Psychological involvement in innovation, Mediation effect.**

## 1. Introduction

Innovation psychological involvement refers to the degree of psychological investment of individuals in innovation activities, including individual attitudes, interests, self-efficacy, and innovation motivation to innovation activities . Individual innovation behavior refers to the improvement of existing work and lifestyle or the creation of brand new work and lifestyle by introducing new ideas, new methods, and new technologies in work and life. The relationship between the two is inseparable.

In modern society, innovation has become an important force to promote social progress and economic development. Therefore, it is of great significance to study the relationship between innovative psychological involvement and individual innovative behavior. On the one hand, innovative psychological involvement can promote the individual's investment in innovative activities, thereby improving the individual's innovative ability; on the other hand, individual innovative behavior can also affect the individual's innovative psychological involvement in turn .

At present, scholars have studied the relationship between innovative psychological involvement and individual innovative behavior from different perspectives. For example, some scholars believe that an individual's sense of self-efficacy can promote their investment in innovative activities, thereby improving their innovative ability. Other scholars have found that with the support of the organizational climate, individuals are more likely to display positive innovative behaviors. In addition, some scholars have found that under different

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cultural backgrounds, the relationship between individuals' psychological involvement in innovation and individual innovation behavior shows different characteristics.

In conclusion, the study of the relationship between innovative psychological involvement and individual innovative behavior is of great significance for promoting social progress and economic development. In the future, we need to explore this field more deeply and formulate more scientific and reasonable policies to promote people's better participation in innovation activities.

## 2. Research Methods

### 2.1. Research object

Distribute online questionnaires in Dongguan, Guangzhou, Shenzhen, Huizhou, Zhongshan and other cities , and distribute 450 questionnaires in total. Distribute online questionnaires in enterprises in Dongguan, Guangzhou, Shenzhen, Huizhou, Zhongshan and other cities. A total of 450 questionnaires were distributed, and 340 valid questionnaires were recovered (190 males, accounting for 55.9%; 150 females, accounting for 44.1%). There are 184 people with a junior college degree , 105 people with a bachelor degree , and 51 people with a graduate degree.

### 2.2. Research tools

Organizational Motivation Scale: adopts the Chinese version of the Organizational Motivation Scale revised by Li Ruihua et al . ( Li Ruihua , Wang Yan , 2015), a total of 6 items, using Likert 5-point scoring, in which 1 represents "strongly disagree" and 5 represents " Very much agree". The internal consistency reliability of the scale is 0.854. The Cronbach 's α coefficient for this scale in this study is 0.862

Creative Psychology Involvement Scale : The Creative Psychology Involvement Scale developed by Guo Xiaomin, Wang Yan and Zhao Lijuan was adopted ( Guo Xiaomin et al., 2015). The scale consists of 3 items and is scored using a 5-point Likert scale, where 1 represents "strongly disagree" and 5 represents "strongly agree". The higher the score, the higher the psychological involvement of general innovation. The Cronbach 's α coefficient of the scale in this study is 0.852;

Individual Creative Behavior Scale : using the scale developed by Wang Xiangdong et al . The scale consists of 5 items and uses a 5-point Likert scale, where 1 represents "strongly disagree" and 5 represents "strongly agree". The higher the total score , the stronger the satisfaction. The Cronbach 's α coefficient for this scale in this study was 0.81. In addition, this study also self-made demographic variables questionnaire, including gender, education level, working years .

### 2.3. Statistical methods

In this study, SPSS21.0 software was used for descriptive statistics, Harman common method deviation test and correlation analysis of variables and other data statistical analysis, and Process 4.20 program was used to test the mediation effect.

## 3. Results

Common method bias: Aiming at the problem of common method bias, the procedure uses the anonymity of the questionnaire, unified test questionnaire, etc. to control, and then uses the Harman single factor test for statistical control. The items of all variables were subjected to unrotated principal component factor analysis (Zhou Hao, Long Lirong, 2004). The results show that the KMO value is 0.842, the Bartlett value is 2 232.652 ($P < 0.001$), and the characteristic roots of 4 factors are greater than 1, explaining 59.248% of the variation, and the first factor explains 35.328% of the total variation, which is less than The critical value is 40%. Therefore, there is no serious common method bias in this study.

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### 3.1. Differences in individual innovation between subjects of different genders

It was carried out on the subject 's individual innovative behavior on gender , and the results showed that there was no significant difference in individual innovative behavior on gender , Table 1

**Table 1.** Gender difference analysis table of subjects' individual innovation behavior Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | f | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| y | Equal variances assumed | .545 | .461 | -1.048 | 443 | .295 | -.07091 | .06768 | -.20392 | .06210 |
| | Equal variances not assumed | | | -1.047 | 441.079 | .296 | -.07091 | .06772 | -.20400 | .06218 |

***At the 0.001 level (two-tailed), the correlation is significant; **At the 0.01 level (two-tailed), the correlation is significant; *At the 0.05 level (two-tailed), the correlation is significant . (The same below).

x: Organizational Innovation Incentives

me: Creative Psychology Involvement

y : individual innovative behavior( (The same below).

### 3.2. Correlation analysis of organizational innovation incentives , innovation psychological involvement and individual innovation behavior

The correlation analysis of the total score of organizational innovation motivation, innovation psychology involvement and individual innovation behavior shows that there is a pairwise correlation between organizational innovation motivation, innovation psychology involvement and individual innovation behavior . See Table 2 .

analysis results of organizational innovation motivation, creative p psychology involvement and individual innovation behavior

| | x | me | the y |
|---|---|---|---|
| x | 1 | | |
| me | .590 ** | 1 | |
| the y | .333 ** | .254 ** | 1 |

### 3.3. Regression analysis of subjects' organizational innovation incentives and innovative psychological involvement on individual innovative behavior

According to the results of correlation analysis, there is a significant positive correlation between the subjects' organizational innovation incentives, innovative psychological involvement and individual innovative behavior. Therefore, multiple regression analysis is carried out with individual innovation behavior as the dependent variable and organizational innovation incentive and innovation psychological involvement as predictor variables. The results show that both innovation psychology involvement and organizational innovation

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incentives enter the regression equation, which can jointly predict 1 1.2% of the variation degree of individual innovation behavior, and innovation psychology involvement (t = 1.588, P < 0.001), organizational innovation incentives (t = 5.0818, P < 0.001) can significantly and positively affect individual innovation behavior. The linear regression equation is: individual innovation behavior = 1.634 + 0.218* organizational innovation incentive + 0.071* innovation psychology involvement , see Table 3 .

**Table 3.** The regression analysis table of organizational innovation motivation and c creative p psychology involvement on individual innovation behavior

| | Unstandardized Coefficients | Standardized Coefficients | t | P | VIF |
|---|---|---|---|---|---|
| (Constant) | 1.634 | | 12.365 | *** | |
| x | .218 | .043 | 5.0818 | *** | 1.247 |
| me | .071 | .044 | 1.588 | *** | 1.534 |
| Adjusted R Square | | 0.112 | | | |
| F | | 29.047 | | | |
| P < 0.01 | | | | | |
| Dependent variable: individual innovation behavior | | | | | |

## 3.4. Analysis of the mediating role of innovative psychological involvement in the relationship between organizational innovation incentives and individual innovative behavior

From the correlation analysis and regression analysis results of organizational innovation incentives, innovative psychological involvement and individual innovative behavior, we can know that the mediating effect analysis can be carried out among the three variables. In order to further investigate the mediating role of innovative psychology involvement between organizational innovation incentives and individual innovative behaviors, according to the mediating analysis procedure, firstly, the variables are centralized, and then the PROCESS macro program is used, referring to the Bootstrap method, with 95% as the confidence level interval, the sample size is 5000, and the mediation test is carried out (Chen Rui et al., 2013). The results show that the confidence interval of the mediation effect (LLCI = 0.0120, ULCI = 0.0890) does not contain 0, indicating that the mediation effect of innovative psychological involvement is significant. After controlling the intermediary variable of innovative psychological involvement, organizational innovation incentives still have a very significant impact on individual innovation behavior, and the confidence interval of the direct effect (LLCI = 0.1339, ULCI = 0.3028) does not contain 0, indicating that the direct effect has Statistical significance. It can be seen that the involvement of innovative psychology plays a partial mediating role in the impact of organizational innovation incentives on individual innovative behavior , and the mediating effect value is 15.58%. Therefore, organizational innovation incentives can directly and positively affect individual innovation behavior, and at the same time indirectly affect individual innovation behavior by affecting innovation psychological involvement. See Figure 1 and Table 4 .

**Table 4.** Mediating Effect table of Creative Psychology Involvement on Organizational Innovation Incentive and Individual Innovation Behavior

| | Effect | BootSE | t | 95% CI for Bootstrap | |
|---|---|---|---|---|---|
| | | | | LLCI | ULCI |
| total effect | .2586 | .0348 | 7.4418 *** | .1903 | .3269 |
| direct effect | .2184 | .0430 | 5.0814 *** | .1339 | .3028 |
| Indirect effect(s) | .0403 | .0259 | | .0120 | .0890 |

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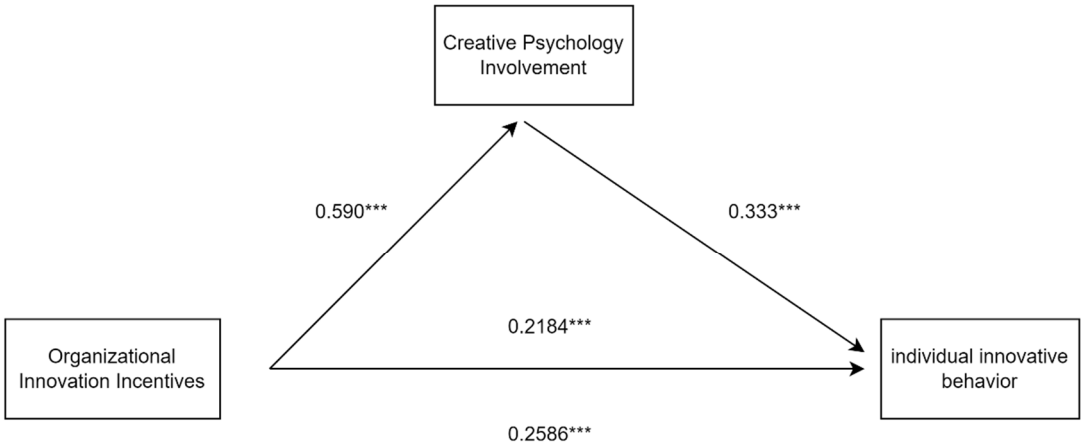


**Figure 1.** The Mediating Effect of Creative Psychology Involvement on Organizational Innovation Incentive and Individual Innovation Behavior

## 4. Conclusion

Innovation psychological involvement refers to the degree of psychological investment of individuals in innovation activities, including individual attitudes, interests, self-efficacy, and innovation motivation to innovation activities . According to the creativity model proposed by Kaufman and Beghetto , the psychological involvement of innovation can be described from four aspects . Cognitive investment: The degree of cognitive investment of individuals in innovation activities, including understanding of problems, analysis of problems, and generation of solutions. Emotional engagement: The degree of emotional engagement of individuals in innovative activities, including interest, enthusiasm, and self-efficacy in innovative activities. Behavioral investment: the degree of individual behavioral investment in innovative activities, including the degree of participation in innovative activities, action and decision-making capabilities. Environmental input: the degree of individual environmental input in innovation activities, including organizational culture, organizational support, and resource protection. These aspects interact and jointly affect the performance and results of individuals in innovation activities.

When a person has a strong interest in knowledge and skills in a certain field, and at the same time has a strong motivation for innovation, he will show a high level of innovative psychological involvement. For example, an engineer who is passionate about scientific and technological innovation will constantly pay attention to the latest technological developments, actively participate in various innovative activities, and constantly try new methods and technologies in his work to improve work efficiency and quality. This behavior is the embodiment of individual innovation behavior.

Organizational innovation incentives can directly and positively predict individual innovation behavior, and can indirectly predict individual innovation behavior by influencing psychological involvement. This is similar to previous research findings . Organizational support can promote individuals to show positive innovative behavior. Cognitive investment can promote individuals to show positive innovative behavior. Emotional engagement can promote individuals to show positive innovative behaviors. Environmental input can promote individuals to show positive innovation behavior. Factors such as organizational climate support, self-efficacy, emotional investment, cognitive investment, and environmental investment will all affect the performance and results of individuals in innovative activities. In addition, in the relationship between organizational innovation incentives and individual

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innovation behavior, there may be some other intermediary or moderating variables, which need to be studied in the future.

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