

# The Relationship between Employee Psychological Capital and Change-Supportive Behavior—Mediating Effect of Cognitive of Change

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Received 3 April 2015; accepted 20 April 2015; published 23 April 2015

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## Abstract

For the transition period of Chinese enterprises, change has become an important part of corporate life, and employees' support for change is the key to successful business change. Psychological capital, as a core positive psychological element of employee, plays an important role in organizational change. Drawing upon the existing literature and using a sample of employees, this study investigated the relationship of employee psychological capital, cognitive of change, and change-supportive behavior. Results revealed that employee psychological capital was positively related to change-supportive behavior, with this relationship mediated by cognitive of change.

## Keywords

Organizational Change, Employee Psychological Capital, Cognitive of Change, Change-Supportive Behavior

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## 1. Introduction

With the innovation of science and technology, in order to adapt to different environment and maintain advantages in the fierce competition, change is necessary for organization. Organizational change is regarded as an important method to promote organizational structure optimization. According to the literature, the attitude and behavior reaction to change of employees is the key to the success of change (Herscovitch & Meyer, 2002) [1]. Employee resistance to change is the main cause of the failure (Wanberg & Banas, 2000; Kotter & Cohen, 2002; Van Rnippenberg *et al.*, 2006) [2]-[4]. Therefore, to ensure the smooth implementation of organizational change,

enterprise should try to reduce the resistance of employees, and actively promote the change-supportive behavior.

As a positive psychological element of individual, psychological capital has become an important way to enhance the core competitiveness of enterprises and keep sustainable competitive advantage, and it plays an important role in organizational change. This study investigated the relationship of employee psychological capital, cognitive of change, and change-supportive behavior to expand the research of psychological capital and provide the theoretical support for the reform management of enterprise.

## 2. Theory and Hypothesis

### 2.1. Employee Psychological Capital and Change-Supportive Behavior

Psychological capital represents an individual's positive psychological state of development that is characterized by four psychological resources: efficacy, hope, optimism and resilience (Luthans *et al.*, 2007) [5]. Change-supportive behavior is defined as actions employees engage in to actively participate in, facilitate, and contribute to a planned change (Kim *et al.*, 2011) [6]. Researches have generally supported a positive relationship between psychological capital and change-supportive behavior. For example, Wanberg and Banas (2000) [2] found that personal resilience (a composite of self-esteem, optimism, and perceived control) was related to higher levels of change acceptance in their longitudinal study. Herold *et al.* (2008) [7] also have provided evidence suggesting that individuals' self-efficacy had a positive effect on its commitment to change, and commitment to change was better than organizational commitment to predict employees' change-supportive behavior (Herscovitch & Meyer, 2002) [1]. Based on the above analysis, we propose the following hypothesis:

**Hypothesis 1:** Employee psychological capital positively relates to their change-supportive behavior.

### 2.2. Employee Psychological Capital and Cognitive of Change

Cognitive of change refers to the view and opinions of organization members for their organizational environment and change, according to their own experience mode. Based on the cognitive of change, individual is to choose the attitude and behavior in organizational change (Lin, 2010) [8]. According to previous researches on psychological capital and organizational change, employee psychological capital can predict their cognitive of Change. In the study of the relationship among employees' personality, organizational environment, and resistance to change, Oreg (2006) [9] has found that employees' personality traits and life background were significantly positively correlated with the attitudes toward organizational change of them. As the example of nurse, Bartunek (2006) [10] has found that employees' emotional responses would affect their perceptions of organizational change. Based on the above analysis, we propose the following hypothesis:

**Hypothesis 2:** Employee psychological capital positively relates to their cognitive of change.

### 2.3. Cognitive of Change and Change-Supportive Behavior

In line with the Planning Behavior Theory, people's behavior is the result of deliberate planning, individual's behavior can be predict and explain by their attitude. Therefore, employees' cognitive of change can predict their change-supportive behavior. And the conclusion has been confirmed by researchers. Caldwell *et al.* (2004) [11] examined individuals' perceptions of changes in 34 different organizational work units, results suggested that perception in person-environment fit could effectively predict the adaptability of employees in the change. Kim *et al.* (2011) [6] also found that employees' cognition of the potential benefits of change would have a positive influence on change-supportive behavior. Based on the above analysis, we propose the following hypothesis:

**Hypothesis 3:** Employees' cognitive of change positively relates to their change-supportive behavior.

### 2.4. Employee Psychological Capital, Cognitive of Change and Change-Supportive Behavior

Behavior Reasoning Theory indicates that individuals' beliefs and values are the basis of behavior, beliefs and values will directly affect the explanation of individual for their actions, once the individual have a positive evaluation on certain types of behavior, it would be easier to do this kind of behavior. Therefore, we believe that cognitive of change is likely to play a mediating role in the relationship of employee psychological capital and

change-supportive behavior. Using a sample of 132 employees, Avery *et al.* (2008) [12] studied the impact of psychological capital and emotional on employees' organizational change attitudes and behavior, the results showed that employee psychological capital was related to their positive emotions, and positive emotions generally mediated the relationship between psychological capital and the attitudes and behaviors. Based on the above analysis, we propose the following hypothesis:

**Hypothesis 4:** Cognitive of change mediates the positive relationship between employee psychological capital and change-supportive behavior.

To sum up, model of this study is shown in **Figure 1**.

### 3. Method

#### 3.1. Participants and Procedures

Participants for this study were enterprise leaders and employees from all over the country, the selection was based on convenience sampling. To avoid same source bias, this study divided the questionnaire into a leader questionnaire and an employee questionnaire. The leaders completed the questionnaire for change-supportive behavior to assess their direct followers' change-supportive behavior, and the employees completed the questionnaires for psychological capital and cognitive of change to evaluate their own level of psychological capital and cognitive of change.

All surveys were completed by field test and email during regular work hours. This study distributed 50 leader questionnaires and 200 employee questionnaires, and retrieved 48 leader questionnaires, 3 invalid questionnaire was eliminated, leaving 45 valid questionnaires, for a valid return rate of 90.0%; and retrieved 185 employee questionnaires, 13 invalid questionnaires were eliminated, leaving 172 valid questionnaires, for a valid return rate of 86.0%. Each leader evaluated average three to four direct employee.

The descriptive statistics of leaders are shown in **Table 1**.

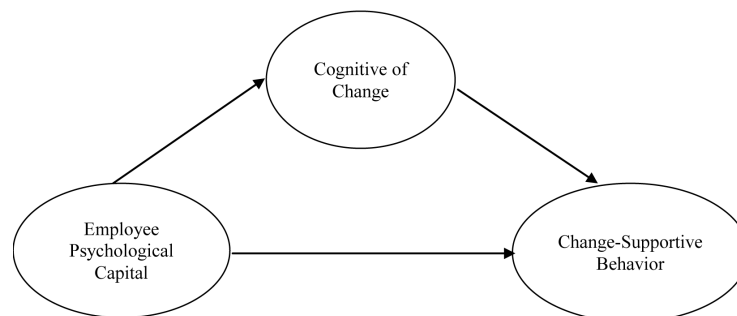
The descriptive statistics of employees are shown in **Table 2**.

#### 3.2. Measures

**Employee Psychological Capital.** We adopted a modified version of the psychological capital questionnaire (PCQ; Luthans *et al.*, 2007) [5] by Wen *et al.* (2009) [13]. The modified scale included 16 questions, measured confidence, hope, resilience and optimism four dimensions, and used a 5-point response format (1 = "strongly disagree", 5 = "strongly agree"). An example item is "I feel confident in representing my work area in meetings with management". The internal consistency reliability (Cronbach's  $\alpha$ ) estimate for the employee psychological capital was 0.885.

**Cognitive of Change.** We measured cognitive of change based on an eight-item scale developed by Wu (2009) [14] and Du (2013) [15], which included cognitive of change significance and cognitive of change effects two dimensions, respondents rated the statements on a 5-point Likert scale (1 = "strongly disagree", 5 = "strongly agree"). An example item is "It is necessary to change for enterprise, only change can improve the competitiveness of enterprise". In this study, the Cronbach's  $\alpha$  was 0.879.

**Change-Supportive Behavior.** Change-supportive behavior was a one-dimensional concept, this study used a five-item scale developed by Zhang (2010) [16] to assess employees' change-supportive behavior for leaders,



**Figure 1.** Hypothesized relationships.

**Table 1.** Descriptive statistics of leaders (N = 45).

Variables	Category	Number	Percentage (%)
Sex	Male	36	80.0
	Female	9	20.0
Age	22 - 28 years old	4	8.9
	29 - 34 years old	9	20.0
	35 - 40 years old	10	22.2
	41 years old and above	22	48.9
Educational Background	College degree and below	10	22.2
	Undergraduate	26	57.8
	Master degree and above	9	20.0
Tenure	2 - 5 years	7	15.5
	6 - 10 years	6	13.3
	More than 10 years	32	71.1
Position	Basic leaders	13	28.9
	Middle leaders	29	64.4
	Senior leaders	3	6.7

**Table 2.** Descriptive statistics of employees (N = 172)

Variables	Category	Number	Percentage (%)
Sex	Male	83	48.3
	Female	89	51.7
Age	22 - 28 years old	102	59.3
	29 - 34 years old	23	13.4
	35 - 40 years old	18	10.5
	41 years old and above	29	16.9
Educational Background	College degree and below	47	27.3
	Undergraduate	97	56.4
	Master degree and above	28	16.3
Tenure	Less than 2 years	42	24.4
	2 - 5 years	68	39.5
	6 - 10 years	14	8.1
	More than 10 years	48	27.9

respondents rated the statements on a 5-point Likert scale (1 = “strongly disagree”, 5 = “strongly agree”). An example item is “This employee encourages actions to support the realization of the change”. In this study, the Cronbach’s  $\alpha$  was 0.870.

### 3.3. Analytic Strategy

This study used SPSS20.0 as an analytic tool to estimate the relationship among employee psychological capital,

cognitive of change and change-supportive behavior. And used ordinary least squares (OLS) regressions to estimate the variance explained by these variables.

## 4. Results

### 4.1. Correlation Analysis

The correlation coefficients among the variables are shown in **Table 3**. Correlation among the dimensions of employee psychological capital, cognitive of change and change-supportive behavior are significant at the 0.05 level, indicating that there is a close relationship among these variables, and no potential multilinearity problem, suitable for regression analysis.

### 4.2. Hypothesis Tests

The study used multiple regression analysis to test these hypotheses.

**Hypothesis 1:** Direct effect of employee psychological capital and change-supportive behavior. **Table 4** presents the regression analysis results testing the effect of employee psychological capital on change-supportive behavior. As shown in **Table 4**, control variable and employee psychological capital have a significant impact on change-supportive behavior ( $R^2 = 0.218$ ,  $p < 0.001$ , Model 2), Hypothesis 1 is supported. Further analysis revealed that hope ( $\beta = 0.202$ ,  $p < 0.05$ ) and optimism ( $\beta = 0.235$ ,  $p < 0.05$ ) are significantly related to change-supportive behavior, confidence ( $\beta = 0.133$ ,  $p > 0.05$ ) and resilience ( $\beta = -0.097$ ,  $p > 0.05$ ) have no significant effect on change-supportive behavior.

**Table 3.** Correlation analysis of the variables.

Variables	1	2	3	4	5	6	7
1 Confidence	1.000	-	-	-	-	-	-
2 Hope	0.589***	1.000	-	-	-	-	-
3 Resilience	0.505***	0.528***	1.000	-	-	-	-
4 Optimism	0.558***	0.555***	0.442***	1.000	-	-	-
5 Cognitive of significance	0.181**	0.157*	0.159*	0.288***	1.000	-	-
6 Cognitive of effects	0.294***	0.323***	0.217**	0.474***	0.585***	1.000	-
7 Change-supportive behavior	0.335***	0.360***	0.208***	0.398***	0.207**	0.372***	1.000

Note: N = 172. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

**Table 4.** Results of regression analysis.

Variables	Change-Supportive Behavior	
	Model 1	Model 2
Sex	0.017	0.066
Age	0.083	-0.006
Educational Background	0.052	0.041
Tenure	0.051	0.190
Confidence	-	0.133
Hope	-	0.202*
Resilience	-	-0.097
Optimism	-	0.235*
<b>R<sup>2</sup></b>	0.041	0.218
<b>Adjusted R<sup>2</sup></b>	0.006	0.170
<b>F Change</b>	1.178	4.491***

Note: N = 172. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

**Hypothesis 2:** Direct effect of employee psychological capital and cognitive of change. **Table 5** presents the regression analysis results. As shown in **Table 5**, control variable and employee psychological capital have a significant impact on cognitive of change ( $R^2 = 0.211$ ,  $p < 0.001$ , Model 4), this result provide support for Hypotheses 2. Further analysis revealed that optimism ( $\beta = 0.383$ ,  $p < 0.001$ ) are significantly related to cognitive of change, and then confidence ( $\beta = 0.061$ ,  $p > 0.05$ ), hope ( $\beta = 0.014$ ,  $p > 0.05$ ) and resilience ( $\beta = 0.024$ ,  $p > 0.05$ ) have no significant effect on cognitive of change.

**Hypothesis 3:** Direct effect of cognitive of change and change-supportive behavior. **Table 6** presents the regression analysis results. As shown in **Table 6**, control variable and cognitive of change have a significant impact on change-supportive behavior ( $R^2 = 0.173$ ,  $p < 0.001$ , Model 6), Hypothesis 3 is supported. Further analysis revealed that cognitive of effects ( $\beta = 0.378$ ,  $p < 0.001$ ) is significantly related to change-supportive behavior, and cognitive of significance ( $\beta = -0.022$ ,  $p > 0.05$ ) has no effect on change-supportive behavior.

**Hypothesis 4** predicted that cognitive of change would mediate the relationship between employee psychological capital and change-supportive behavior. Intermediary regression analysis results are shown in **Table 7**.

**Table 5.** Results of regression analysis.

Variables	Cognitive of Change	
	Model 3	Model 4
Sex	-0.005	0.020
Age	-0.131	-0.262
Educational Background	-0.105	-0.095
Tenure	0.023	0.176
Confidence	-	0.061
Hope	-	0.014
Resilience	-	0.024
Optimism	-	0.383***
<b>R<sup>2</sup></b>	0.033	0.211
<b>Adjusted R<sup>2</sup></b>	-0.002	0.162
<b>F Change</b>	0.952	4.294***

Note: N = 172. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table 6.** Results of regression analysis.

Variables	Change-Supportive Behavior	
	Model 5	Model 6
Sex	0.017	0.014
Age	0.083	0.098
Educational Background	0.052	0.081
Tenure	0.051	0.076
Cognitive of significance		-0.022
Cognitive of effects		0.378***
<b>R<sup>2</sup></b>	0.041	0.173
<b>Adjusted R<sup>2</sup></b>	0.006	0.132
<b>F Change</b>	1.178	4.252***

Note: N = 172. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table 7.** Results of intermediary regression analysis.

Independent variable	Dependent variable				
	Change-Supportive Behavior		cognitive of change		Change-Supportive Behavior
	Model 1	Model 7	Model 3	Model 8	Model 9
<b>Step one: Control variables</b>					
Sex	0.017	0.039	-0.005	0.016	0.036
Age	0.083	0.016	-0.131	-0.197	0.054
Educational	0.052	0.004	-0.105	-0.151	0.034
Tenure	0.051	0.089	0.023	0.060	0.077
<b>Step two: The main effect</b>					
psychological capital	-	<b>0.391***</b>	-	<b>0.383***</b>	-
<b>The third step: The mediating effect</b>					
psychological capital	-	-	-	-	<b>0.317***</b>
cognitive of change	-	-	-	-	<b>0.194*</b>
R <sup>2</sup>	0.041	0.186	0.033	0.172	0.217
Adjusted R <sup>2</sup>	0.006	0.151	-0.002	0.137	0.179
<b>F Change</b>	<b>1.178</b>	<b>5.351***</b>	<b>0.952</b>	<b>4.868***</b>	<b>5.647***</b>

Note: N = 172. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

We followed the three-step procedure for mediation described by Wen *et al.* (2004) [17]. Step 1, employee psychological capital needs to be related to change-supportive behavior. Regression results revealed that employee psychological capital was significantly related to change-supportive behavior ( $\beta = 0.391$ ,  $p < 0.001$ , Model 7). Step 2 requires that employee psychological capital be related to cognitive of change. This requirement was supported by the results of regression analysis ( $\beta = 0.383$ ,  $p < 0.001$ , Model 8). Finally, Step 3 requires that the significant relationship between employee psychological capital and change-supportive behavior (Step 1, Model 7) be reduced (partial mediation) or eliminated (complete mediation) when cognitive of change is introduced in the same model. Regression results revealed that cognitive of change was significantly related to change-supportive behavior ( $\beta = 0.194$ ,  $p < 0.05$ , Model 9). And the effect of employee psychological capital on change-supportive behavior was also significant after introducing cognitive of change in the same model ( $\beta = 0.317$ ,  $p < 0.001$ , Model 9). These results suggested that cognitive of change partially mediated the effect of employee psychological capital on change-supportive behavior. Hypothesis 4 is supported.

## 5. Discussion

This study examined how and in what ways employee psychological capital contributed to cognitive of change and change-supportive behavior. The results revealed that employee psychological capital was positively associated with their change-supportive behavior, and this relationship was partially mediated through employees' cognitive of change.

### 5.1. Theoretical Implications

Adding to the existing research on psychological capital, our work extends psychological capital research into a new organizational setting—transformational organization, our findings extend earlier work that focused on the employee level of psychological capital to their cognitive of change and change-supportive behavior, and provide the theoretical support to change management for the enterprise.

### 5.2. Practical Implications

Our results suggest several practical implications. First, our findings suggest that managers who wish to enhance

the change-supportive behavior of their employees should pay attention to the development of employee psychological capital, the higher employees' psychological capital, the more change-supportive behavior. Second, employees' cognitive of change positively relates to their change-supportive behavior, organizations need to focus on how to better foster a good organization atmosphere so as to accelerate employees' positive cognitive of change and more change-supportive behavior in the change.

### 5.3. Study Limitations

Although this study has achieved some valuable conclusions, there are still some limitations. First, the shortage of sample. Due to time and resource limited, this study only had 172 samples, and these samples were not all in line with the requirements of transformational organization.

Second, in terms of research method. This study was not longitudinal study but transversal study. In general, employee psychological capital, cognitive of change, and change-supportive behavior are a kind of interaction and dynamic process, will change with time and environment. Therefore, the transverse research may reveal the relationship between these variables incompletely.

Finally, in terms of research variables. Although this study explored the relationship and mechanism among employee psychological capital, cognitive of change, and change-supportive behavior, lacked of the discussion of employee psychological capital and other important outcome variables.

### 5.4. Suggestions for Future Research

We offer several suggestions for future research. First, whereas we considered only employee psychological capital and individual change-supportive behavior in this study, future research might investigate the influence of leader psychological capital on employees' change-supportive behavior, or the influence of employee psychological capital on other work outcomes.

Second, future work should delve deeper into understanding how or why employee psychological capital influences change-supportive behavior. In this study, cognitive of change mediated the relationship between employee psychological capital and change-supportive behavior, future work should explore the moderating and mediating effects of other variables in the relationship of employee psychological capital and change-supportive behavior.

Finally, future work should conducted longitudinal study. Longitudinal study can reveal the changes of employee psychological capital and cognitive of change in different change periods, and investigate the relationship of employee psychological capital, cognitive of change, and change-supportive behavior more comprehensively and accurately.

In sum, it is important that researchers continue to investigate how positive psychological capital can be developed and applied to address challenges confronting managers and employees.

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