

Transformational Leadership and Employee's Innovative Behavior: A Moderated Mediation Model

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Abstract: This study investigates how transformational leadership facilitates employees' innovative behavior. Survey data from 415 employees were analyzed using SPSS and AMOS. Results demonstrate that transformational leadership significantly enhances employee innovative behavior via psychological capital, with perceived organizational support positively moderating the relationship. For human resources practices, transformational leaders foster innovation by developing employees' psychological resources and are reinforced by perceived organizational support.

Keywords: Transformational leadership; Psychological capital; Innovative behavior; Perceived organizational support

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1. Introduction

Under the backdrop of promoting innovation as the core driving force of socialist modernization through the Mass Entrepreneurship and Innovation policy, enterprises, as the primary entities of innovation, face intensifying market competition challenges. Leaders, acting as helmsmen, significantly promote innovative behavior by reshaping employee values through transformational leadership^[1]. Employees exhibit higher innovation initiative when perceiving stronger organizational support. However, existing research predominantly focuses on the direct link between transformational leadership and innovative behavior, with insufficient exploration of its underlying mechanisms: on the one hand, mediating variables often emphasize self-efficacy or intrinsic motivation, neglecting the crucial role of psychological capital as an intrinsic driver; on the other hand, the moderating effect of perceived organizational support lacks systematic examination within a moderated mediation model^[2]. Consequently, precisely stimulating employee innovative behavior has become a key academic focus. From the perspective of individual factors, this study examines the impact mechanism of transformational leadership on employee innovative behavior by introducing psychological capital as a mediating variable and perceived organizational support as a moderating variable^[3]. Transformational leadership empowers employees and enhances their psychological capital, thereby driving innovative behavior. Perceived organizational support moderates this

mediating pathway, with the level of environmental support influencing employees' psychological safety and innovation output ^[4]. Based on social exchange theory, this study constructs a model to examine the influence mechanism and boundary conditions between transformational leadership and innovative behavior.

2. Theoretical analysis and research hypotheses

2.1. Transformational leadership and employee innovative behaviors

Based on the context in which leadership style guides employee behavior, transformational leadership enhances employee confidence, thereby encouraging innovative behavior through personal charisma, such as leading by example to break conventions, providing emotional support, and offering intellectual stimulation ^[1]. Such behaviors alleviate employees' fear of change and foster the generation of new ideas; simultaneously, intellectual stimulation provides employees with space for dialectical thinking, thereby strengthening critical thinking and confidence in innovation. Unlike authoritarian leadership's inclination to interrogate, transformational leadership fosters an environment of equality and trust ^[5]. Its open and inclusive stance creates a psychologically safe environment, empowering employees to proactively embrace innovation. According to social exchange theory, leadership behavior strengthens employees' motivation to emulate, forming a synergy between individual and organizational values that drives innovation. Therefore, the authors propose the following hypothesis.

H1: Transformational leadership positively influences employee innovative behavior.

2.2. The mediating role of psychological capital

Psychological capital is an individual's positive psychological resource encompassing four dimensions: hope, resilience, optimism, and self-efficacy. Transformational leadership enhances employees' psychological capital through charismatic exemplification, intellectual stimulation, and individualized consideration, thereby strengthening their willingness to innovate. Specifically, leaders' role modeling cultivates employees' resilience against setbacks, visionary inspiration reinforces goal-oriented hope, and decision-making inclusiveness bolsters confidence in innovation ^[6]. This positive mindset encourages employees to pursue challenging tasks and fosters innovative behaviors through the mechanism of socio-emotional resource exchange. According to social exchange theory, the essence of mutual trust, care, and cultivation between individuals constitutes an exchange of socio-emotional resources. When employees perceive organizational support and encouragement, their innovative behaviors achieve significantly enhanced success through organizational recognition ^[6]. Therefore, the following hypothesis is proposed.

H2: Psychological capital mediates the relationship between transformational leadership and employee innovative behavior.

2.3. The regulatory role of perceived organizational support

Perceived organizational support refers to employees' overall assessment of the multidimensional organizational support they receive, including remuneration benefits, life care, and spiritual encouragement. It possesses dual moderating functions: enhancing work motivation while simultaneously promoting innovative behavior through boosting psychological capital levels. Organizational justice significantly strengthens employees' perceptions of organizational support, whereas a positive work climate directly fosters willingness to innovate ^[2]. Material support and spiritual encouragement enhance job satisfaction and perceived competence, respectively. When employees simultaneously perceive both types of resources, their sense of belonging and perceived obligation to

reciprocate intensify, thereby integrating individual goals with organizational development under transformational leadership^[6]. Based on social exchange theory, in contexts of high perceived organizational support, the affective/status resources transmitted by leaders complement institutional organizational support, increasing the efficiency with which psychological capital translates into innovative behaviors, such as actively exploring new methods and setting high-performance standards. Conversely, low perceived organizational support weakens resource reception efficacy, leading to diminished psychological safety, erosion of psychological capital, and suppression of innovation investment, as manifested through reduced frequency and quality of creative output^[3]. Therefore, we propose the following hypothesis.

H3: Perceived organizational support moderates the effect of transformational leadership on employee innovative behavior through psychological capital, such that the effect is stronger when perceived organizational support is high than low.

3. Data and variables

3.1. Research sample

This study selected five enterprises operating across multiple provinces (covering real estate, energy, and pharmaceutical industries) and implemented stratified sampling via an electronic questionnaire platform. The questionnaires were distributed in November 2022. A total of 457 responses were collected. After excluding invalid and incomplete questionnaires, 415 valid samples were ultimately obtained, yielding an effective response rate of 90.6%.

3.2. Measurement

All scales used in this study were derived from established instruments. A five-point Likert scale was employed for each construct, with scores ranging from 1 (“strongly disagree”) to 5 (“strongly agree”).

Transformational leadership (TL): The scale developed by Li & Shi was adopted, comprising 26 items such as “My leader shows concern about employees’ work, life, and personal growth, and sincerely provides suggestions for their development”^[3]. The Cronbach’s α for this scale was 0.95.

Innovative behavior (IB): The scale developed by was used, including items like “I frequently experiment with new approaches to solve work-related problems”^[2]. The Cronbach’s α coefficient was 0.86.

Psychological capital (PC): The 24-item scale developed by Luthans was employed, featuring items such as “When facing work difficulties, I can generate multiple solutions to overcome them”^[4]. The Cronbach’s α coefficient was 0.84.

Perceived organizational support (POS): The scale developed by Liu, containing 6 items (e.g., “The organization respects my goals and values”), was utilized, with a Cronbach’s α of 0.86^[7].

Control variables: Gender, age, education level, and organizational tenure.

4. Research results

4.1. Descriptive statistics and correlation analysis

This study collected 415 valid samples. Among the respondents, 268 were male (64.60%) and 147 were female (35.40%), indicating a predominance of male participants. In terms of age: 112 participants (27%) were aged 12–30, 203 (48.9%) aged 31–40, 72 (17.4%) aged 41–50, and 28 (6.7%) aged 51 or above, revealing the highest

concentration within the 31–40 age group. Regarding education level, 254 held junior college diplomas (64.4%), 151 held bachelor’s degrees (36.4%), 4 held master’s degrees (1%), and 6 held doctoral degrees (1.4%). Regarding organizational tenure, 392 participants (94.5%) had 0–10 years of experience, 21 (5%) had 11–20 years, and 2 (0.5%) had 21–30 years. The results of the correlation analysis are shown in **Table 1**.

Table 1. Correlation analysis

	Variable	1	2	3	4
1	TL	-			
2	PC	0.59**	-		
3	IB	0.47**	0.73**	-	
4	POS	0.49**	0.63**	0.61**	-

N=415; * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

4.2. Hypothesis test

As shown in **Table 2**, Model 1 indicates that, after controlling for gender, education, age, and tenure, transformational leadership has a significant positive effect on employee innovative behavior ($\beta = 0.47$, $P < 0.001$). Hypothesis 1 was thus supported. Model 3 demonstrates that after introducing psychological capital, the standardized coefficient β of transformational leadership on employee innovative behavior decreased from 0.47 to 0.06, while the positive relationship remained significant ($P < 0.01$). Hypothesis 2 was therefore supported. Model 6 reveals a significant positive effect of the interaction term between transformational leadership and perceived organizational support on psychological capital ($\beta=0.01$, $P < 0.001$), confirming Hypothesis 3.

Table 2. Regression analysis results

IB	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender	-0.12	0.21	-0.05	0.21	0.01	-0.10*
Education	0.04	0.08	-0.01	0.08	0.7	0.02
Age	0.03	0.53	0.02	0.52	0.86	0
Work time	0.08	0.17	-0.03	0.16	0.23	0.01
TL	0.47***	0.68***	0.06**		0.30**	0.31**
PC			0.69***			
POS					0.52***	0.52**
TL*POS						0.01**
R ²	0.25	0.55	0.54	0.65	0.32	0.52
ADJ-R ²	0.24	0.55	0.54	0.65	0.31	0.31
F	26.62***	44.96***	83.37***	83.37***	32.28**	9.48**

N=415; * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

5. Conclusion

This study investigated the relationship between transformational leadership and employee innovative behavior

through paired surveys of 415 employees. First, a significant positive correlation exists between transformational leadership and employee innovative behavior; Second, psychological capital mediates this relationship; Third, POS moderates the mediating effect, specifically, high POS amplifies the indirect impact of transformational leadership on innovative behavior through psychological capital.

The moderated mediation model empirically confirms that transformational leadership has a positive influence on innovation. Organizations should implement transformational leadership styles to establish trust through charismatic influence and moral modeling; Develop systematic training programs integrating domestic and international expertise; Enhance employee' psychological capital through tiered interventions targeting optimism, hope, and resilience; Foster leader-employee interaction cycles where role modeling reduces innovation risk perception; Provide resource support, innovation fault-tolerance mechanisms, and holistic care to strengthen leader-organization synergy. These evidence-based practices catalyze employee innovation, converting psychological resources into sustainable competitive advantages.

Disclosure statement

The authors declare no conflict of interest.

References

- [1] Amabile TM, Pratt MG, 2016, The Dynamic Componential Model of Creativity and Innovation in Organizations: Making Progress, Making Meaning. *Research in Organizational Behavior*, 2016(36): 157–183.
- [2] Zhang Y, Yao YH, 2021, Psychological Capital and Transformational Leadership on Employee Innovative Behavior: The Moderating Role of Work Values. *Research on Financial and Economic Issues*, 62(7): 138–139.
- [3] Li CP, Shi K, 2005, The Structure and Measurement of Transformational Leadership in China. *Acta Psychologica Sinica*, 37(6): 803–811.
- [4] Luthans F, Norman SM, Avolio BJ, 2008, The Mediating Role of Psychological Capital in the Supportive Organizational Climate-employee Performance Relationship. *Journal of Organizational Behavior*, 29(2): 219–238.
- [5] Allen G, Brian RS, Mark V, 2017, Charisma as Signal: An Evolutionary Perspective on Charismatic Leadership. *The Leadership Quarterly*, 28(4): 473–485.
- [6] Liang F, Li SW, 2016, The Influence Mechanism of Transformational Leadership on Employee Innovative Behavior: A Cross-level Model. *Science & Technology Progress and Policy*, 33(21): 147–153.
- [7] Liu ZQ, Deng CJ, Liao JQ, et al., 2015, Organizational Support, Status Perception and Employee Innovation: A Perspective of Employment Diversity. *Journal of Management Sciences in China*, 18(10): 80–94.

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