The Impact of Paradoxical Leadership on Employee Innovative Behavior: A Mediated Moderation Model

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Abstract. Drawing on paradox theory and role theory, this study explores the mechanism of how the interaction between paradoxical leadership(PL) and role breadth self-efficacy(RBS) affects flexible role orientation(FRO)from the matching degree between leadership style and employee characteristics. Further, this study explores the mediating effect of FRO between the above interaction terms and employee innovative behavior(EIB), and thus establishing a mediated moderation model. The hypotheses of the study were tested through a questionnaire survey. The data were collected through a survey randomly distributed among 444 managers and employees of various enterprises in China. And the data analysis was conducted through SPSS 26.0 and AMOS 24.0 software. Analysis results show that PL has a positive impact on employees' FRO, thus enhancing EIB, while RBS moderates the relationship between PL and FRO. This study not only enriches the theoretical exploration of the positive impact of PL, but also responds the call to explore the mediating variables of PL from a new theoretical perspective and reveals when and how PL promotes EIB.

Keywords: Paradoxical leadership · Flexible role orientation · Role breadth self-efficacy · Employee innovative behavior

1 Introduction

In the context of increasingly complex today's market environment, employee innovative behavior(EIB) has become the cornerstone of organizational innovation and sustainable development, and how to stimulate and promote EIB has also become an important practical problem faced by enterprises. EIB refers to employees consciously generating, promoting and implementing beneficial and novel ideas in their work, which are beneficial to their role performance, team and organization [1] and it is an out-of-role behavior. As the master of key resources and development opportunities in the organization, leaders have an important impact on stimulating EIB [2], the gradually prominent and persistent contradictions and conflicts within the organization pose new challenges to the leadership management practice. In such an external and internal environment, managers with a single dimensional leadership style seem to solve the current dilemma not so well. Paradox theory provides a new perspective on this issue by emphasizing the

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idea of 'both/and' and encouraging employees to find connections between seemingly opposing elements [3]. Paradoxical leadership (PL), a new type of leadership, refers to the seemingly opposing and interrelated behavior of leaders that over time can meet both organizational requirements and subordinate needs [4]. It can effectively alleviate the various tensions faced by employees during the innovation process, thus promoting EIB and driving organizational innovation.

Previous research had mainly argued that PL can promote EIB by enhancing their sense of prosperity at work based on self-determination theory [5]. Some also pointed out that PL can promote EIB by creating role models based on social learning theory [6], and seldom discussed from the perspective of employees' role switching. Role theory points out that social roles are consistent with people's social status and identity [7]. PL permits others to share the leadership role [4], employees will be expected to be "followers" or "leaders" under different tasks. And they need to switch personal roles dynamically and identify when to lead or to follow others. And employees with high flexible role orientation (FRO) have broader goals outside of their personal core work [8], which promotes the generation of ideas, enhances EIB [9, 10].

Some scholars pointed out that the extent to which PL is effective may be influenced by differences in employee perceptions [5].Role breadth self-efficacy(RBS) means the perception of ones' ability to perform a series of work tasks beyond the requirements of one's role[9].According to role theory, individuals with high RBS dare to try to complete tasks other than core tasks, help to switch their role better, so as to strengthen their FRO.

In summary, by collecting 444 data from random managers and employees, this study extends the research of PL from a new perspective and to explore the boundary conditions of its effectiveness, hoping to provide new explanatory paths for future empirical studies.

2 Theory and Model

2.1 Paradoxical Leadership and Employee Innovative Behavior

PL can set a role model for employees by using paradoxical thinking to deal with complex problems flexibly, reduce employees' confusion and sense of conflict when facing complex problems, make them more confident, urge them to adopt active and flexible strategies to solve work problems [4], enhance their sense of control, and encourage them to pursue broader goals outside their core work [9]. In addition, it also gives employees a certain degree of work autonomy, and creates a working atmosphere of trust and respect, thus strengthening their FRO and further promoting EIB. In conclusion, we assume that:

Hypothesis 1: PL is positively associated with EIB.

2.2 The Mediating Role of Flexible Role Orientation

PL only controls the overall work direction, but does not control the specific process of completing the work, which makes employees have more control over the work. Research shows that FRO means how people view their ownership of their works [11], and the perception of control is the key foundation of broader role development [12]. PL provides employees with a certain degree of work autonomy, and proper leadership

authorization has a positive effect on employees' FRO [12]. Previous studies show that the level of trust among distinct levels of organization is crucial for FRO [10]. PL respect and support their subordinates, and create a trust and harmonious working atmosphere [4], which may encourage individuals to try things outside their core tasks. [12], and they will also be more open to change and control. In this environment, individuals are more willing to take risks with broader goals. Therefore, PL promotes FRO.

Previous studies have shown that FRO is a positive cognitive-motivational state variable, which has a positive impact on EIB [13], and FRO can promote the generation of creativity and the generation of EIB. Accordingly, we assumed the following hypotheses.

Hypothesis 2a: PL positively affects FRO.
Hypothesis 2b: FRO positively affects EIB.
Hypothesis 2c: FRO positively mediates the relationship between PL and EIB.

2.3 The Moderating Role of Role Breadth Self- Efficacy

RBS is the driving force for employees to actively participate in creative activities [10, 14]. The reason why employees are willing to participate in creative activities outside their job responsibilities to help the organization develop better is out of a proactive attitude [13].

For individuals with high RBS, they may regard PL as a good opportunity to obtain resources, have confidence in their own abilities, and dare to try to complete tasks other than core tasks, thus strengthening their FRO. Previous studies have pointed out that employees with high RBS are more inclined to make active behavioral responses to work or background environment [10], and it is easier to break the established role constraints and perform integrated tasks, and enhance FRO, finally promote EIB. For individuals with low RBS, they don't believe that they have the ability to work beyond the established requirements, thus weaken FRO, finally reduce EIB. In short, the following hypotheses are assumed.

Hypothesis 3a: RBS positively moderates the relationship between PL and FRO, i.e., the higher the employee's RBS, the greater the effect of PL on FRO.

Hypothesis 3b: RBS positively moderates the mediating effect of FRO between PL and EIB, i.e., the higher the employee's RBS, the greater the mediating effect of FRO.

To conclude, this study constructs a model as shown in Fig. 1.

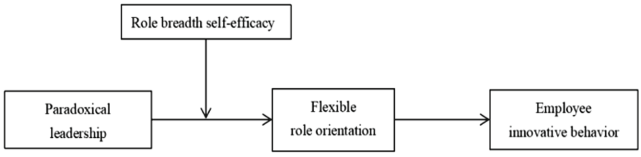

Fig. 1. Research model.

3 Research Methodology

3.1 Sample Size and Procedure

We collected data from four types of enterprises of China, and collected supervisor-subordinate matching data, that is, each set of questionnaires contained 1 supervisor questionnaire and 4–7 employee questionnaires, and the supervisor questionnaire was annotated with detailed filling guidelines and codes to ensure the correctness of the pairing. Every employee completed the questionnaires including PL,FRO and RBS. The manager rated employees' EIB during work. Questionnaires were distributed to 92 managers and 530 employees. Questionnaires that cannot be paired, missed or multiple choices and filled with clearly consistent responses were removed. At last, 444 pairs of manager and employees are matched for the ultimate source of data analysis.

3.2 Measure of Constructs

The measurement tools for the variables in this study were obtained from mature scales abroad. All scales were evaluated using the Likert-7-point scoring method.

PL measured by 22 items under five dimensions [4]. Sample items included "My manager shows a desire to lead, but allows others to share the leadership role" and so on. Cronbach's coefficient α was 0.853.FRO measured by 3 items such as "It is my job to develop new ideas and to test them"[13]Cronbach's coefficient α was 0.743.RBS measured by 7 items[9].A sample item is "I can actively provide information to other colleagues". Cronbach's coefficient α was 0.776.EIB measured by 6 items and was rated by their managers [15]. Sample items included "This employee generates creative ideas". Cronbach's coefficient α was 0.825.

4 Results and Findings

4.1 Validation Factor Analysis

For the sack of checking the validity of variable measurement, a series of confirmatory factor analysis of main variables is carried out by AMOS24.0 software in this paper. Results of analysis are shown in Table 1, which shows that compared with other models, the four-factor model is optimal, which means that the four variables involved have high discrimination validity.

Table 1. Verifies the results of the factor analysis

Model	Factor	2	df	$X^{2/df}$	RMSEA	RMR
Four-factor model	PL;FRO;RBS;EIB	1286.118	659	1.952	0.046	0.038
Three-factor model	PL;FRO;RBS + EIB	1409.546	662	2.129	0.050	0.039
Two-factor model	PL;FRO + RBS + EIB	1438.777	664	2.167	0.051	0.040
One-factor model	PL + FRO + RBS + EIB	1560.025	665	2.346	0.055	0.042

4.2 Variable Descriptive Statistics

Table 2 shows the mean, standard deviation and correlation coefficient of the variables studied.

4.3 Hypothesis Test

In Table 3, M4 shows the total effect of PL on EIB was significant ($b = 0.620$, $p < 0.001$). Therefore, Hypothesis 1 was supported.M2 shows PL positively effected FRO ($b = 0.589$, $p < 0.001$), which supported Hypothesis 2a.Further,M5 shows the stronger FRO is,the stronger EIB is ($b = 0.512$, $p < 0.001$),the indirect effect is significant.And in M6,the direct effect of PL on EIB is significant($b = 0.474$, $p < 0.001$),which supported Hypothesis 2b and 2c.

In order to further test the mediating effect of FRO, this study uses PROCESS to carry out Bootstrap test. After 5000 samples, the results show that the indirect effect of PL on EIB through FRO is significant, with an indirect effect value of 0.1653, and the confidence interval at 95% level is [0.0113,0.3478], excluding 0,showing that FRO plays a partial mediating role in PL and EIB.

Table 4 shows that the interaction effect of RBS and FRO on EIB is significant ($b = 0.232$, $p < 0.001$).As shown in Fig. 2, the relationship between PL and FRO exhibited different results when RBS was in different levels. Therefore, Hypothesis 3a was supported.

To test Hypothesis 3b, the results based on 5000 bootstrap sampling are shown in Table 5.The moderated mediation effect was significant (estimate = 0.068, 95% CI = [0.005, 0.203]). Therefore, Hypothesis 3b was supported.

Table 2. Descriptive Statistics Analysis and Correlation Coefficients

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1.Gender	1.56	0.497	1								
2.Age	3.54	1.006	0.023	1							
3.Education	3.08	0.65	0.041	-0.015	1						
4.Working years	3.25	1.161	-0.029	0.739**	0.111*	1					
5.Position	2.09	1.056	-0.049	0.458***	0.292***	0.483***	1				
6.Enterprise category	1.94	0.755	0.076	0.000	-0.123**	-0.09	-0.089	1			
7.PL	5.821	0.4509	-0.026	0.256**	0.134**	0.257***	0.239***	-0.119*	1		
8.FRO	5.887	0.5341	0.067	0.136**	0.146**	0.106*	0.169***	-0.068	0.590***	1	
9.RBS	5.884	0.5373	-0.046	0.229***	0.113*	0.248***	0.271***	-0.153**	0.677***	0.506***	1
10.EIB	5.94	0.5112	-0.008	0.213***	0.149**	0.200***	0.247***	-0.153**	0.654***	0.551***	0.875***

* $p < .05$, **$p < .01$, *** $p < .001$

Table 3. Results of process analysis

Variable	FRO		EIB			
	M1	M2	M3	M4	M5	M6
Gender	0.067	0.079	0.001	0.013	-0.033	-0.006
Age	0.132	0.038	0.151	0.052	0.083	0.043
Education	0.115	0.062	0.095	0.04	0.036	0.024
Working years	-0.056	-0.099	-0.001	-0.047	0.028	-0.022
Position	0.100	0.044	0.139	0.080	0.088	0.069
Enterprise category	-0.055	-0.001	-0.129	-0.073	-0.101	-0.072
PL		0.589***		0.620***		0.474***
FRO					0.512***	0.248***
R^2	0.054	0.364	0.100	0.444	0.348	0.483
ΔR^2	0.054	0.31	0.100	0.344	0.248	0.039
F	4.157***	35.605***	8.118***	49.771***	33.228***	50.841***

* p < .05, **p < .01, *** p < .001

Table 4. Test results for Moderation Effect

Variable	**EIB**	
	M1	M2
Gender	0.082	0.077
Age	0.04	0.075
Education	0.065	0.075
Working years	-0.107	-0.108
Position	0.023	0.003
Enterprise category	0.012	0.019
PL	0.457***	0.492***
RBS	0.207***	0.287***
PL*RBS		0.232***
R2	0.386	0.427
△R2	0.332	0.041
F	34.193***	35.896***

* p < .05, **p < .01, *** p < .001

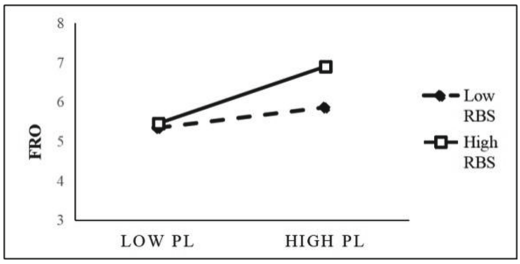

Fig. 2. The moderating effect of RBS on PL and FRO.

Table 5. Test results for Mediated Moderation Effect

	Variable		level	Effect	BootSE	BootLLCI	BootULCI
Indirect Effect	FRO	RBS	Low	0.102	0.044	0.035	0.206
			High	0.175	0.076	0.026	0.314

5 Discussion and Conclusion

Through the analysis of 444 matching data between leaders and employees, the study conclusions drawn in this paper are as follows:(1) PL has a significant positive predictive effect on EIB;(2) FRO plays a positive intermediary role between PL and EIB;(3) RBS positively regulates the relationship between PL and FRO;(4) RBS positively moderates the mediating effect of FRO between PL and EIB.

First, this study enriches the research of PL influence effects, under the framework of paradox theory and role theory, it explores the effect of PL on EIB from the perspective of role switching. Second, this study enriches the study of the mediating mechanisms of PL effects, it introduces FRO variables in the context of China. Thirdly, this study provides a powerful explanation for its boundary conditions. It discusses how RBS as a boundary condition affects the development of PL effectiveness, which conforms to the academic appeal to strengthen the development trend of studying paradoxes from an individual perspective.

This study also has some implications for organizational management practice. Leaders should strengthen the FRO of employees, guide employees to pursue broader goals in addition to completing their own work, and enhance their sense of ownership to a certain extent. Leaders can appropriately authorize employees in daily management, build a working atmosphere of trust and support, and enhance the FRO of employees, thus more effectively improve the innovative behavior of employees.

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