



# The Impact of Flexible Human Resource Management on Employees' Innovative Behavior Is as Follows—Cross Layer Research Based on the HLM Model

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## Abstract

As the shape of the organizational structure gradually tends to be networked and platformized, enterprise development is always faced with changing external environments and severe emergencies. In solving these important problems, artificial intelligence, cloud computing, and other technical means are widely used, forcing enterprises to constantly adjust their organizational structure, and the way of enterprise management must also change with the changes in organizational structure. How to realize the rapid adaptation of enterprise employees to the needs of the new era through an efficient human resource management model, and how to quickly deploy and integrate internal and external resources to stimulate the innovation ability of employees, improve their work efficiency, and ultimately realize the long-term survival and development of the enterprise and maintain its competitive advantage are practical issues that Chinese enterprises need to explore and deal with urgently nowadays.

## Keywords

Flexible human resource management; organizational climate; leadership style; innovative behavior

## Introduction

In order to cope with the primary problems of labor shortage and high employee mobility, corporate human resource management departments have begun to notice and practice flexible human resource management to improve the efficiency of employees and stimulate their innovative behaviors. At the same time, flexible human resource management can quickly deploy staff positions and working hours, and optimize organizational capacity, so that employees and the organizational environment fit better, the sense of trust and loyalty to the enterprise and the leadership will be higher, to achieve a virtuous cycle of cooperation between the staff and the enterprise, so as to cultivate high-quality staff in the competitive market competition, improve the adaptability of the enterprise, this kind of sustained innovation can only help to achieve the long-term development of enterprises, and occupy the corresponding market position.

## 1. Research hypothesis

### 1.1 Hypothesis of the effect of flexible human resource management on employees' innovative behavior

In proposing the concept of flexible human resource management, Chang demonstrated that this model of human

resource management has a significant positive impact on the organization's absorptive capacity, ability to cope with environmental changes and organizational innovation. Ye Yijiao et al. (2020) used 357 enterprises in China as a sample, and the results of the empirical study showed that both resource flexible human resource management and coordinated flexible human resource management can positively predict organizational technological innovation. Oldham (1996) in his study found that diversity of job skills, systematicity, autonomy, and motivational potential goals can enhance employees' innovative behavior. In summary, this study proposes hypothesis one:

H1a: Coordinated flexible human resource management positively predicts employee innovation behavior

H1b: Resource Flexible Human Resource Management is a Positive Predictor of Employee Innovation Behavior.

## 1.2 Mediating role of organizational climate hypothesis

Resource Conservation Theory is one of the most important theories in the study of Organizational Behavior, which has been applied to explain stress and propose coping strategies, and has been gradually extended to the study of job burnout and employee innovation behavior. Deci and Ryan (2000) in their study suggested that employee autonomy has a significant positive effect on employee's well-being in the organization. In summary, this paper proposes the following hypotheses:

H2a: Coordinated flexible human resources management has a positive predictive effect on organizational climate

H2b: Resource Flexibility HRM positively predicts organizational climate

Woodman et al. (1993) proved in their study that a harmonious atmosphere at work can reduce individual stress and have a positive effect on inspiration and willingness to innovate at work. Regarding the mediation of organizational climate, Evans and Davis (2005) and Collins and Smith (2006) show that human resource management influences firm performance through the mediation of the internal structure of the firm.

On the basis of combing numerous literature studies and theories, high-performance work practices positively affect organizational performance through the mediating role of organizational climate. From the previous review, it can be seen that there is a correlation between the three variables of flexible human resource management, employees' innovative behavior, and organizational climate, so the following hypothesis is proposed based on the above:

H3a: Organizational climate is a positive predictor of employee innovation behavior

H3b: Organizational climate mediates the relationship between flexible HRM and employee innovation behavior

## 1.3 Moderating role of leadership style hypothesis

Leadership style directly affects employees' psychological changes, work status, and behavior generation, and is one of the most important contextual factors influencing employees' innovative behaviors. Judge et al.'s (2004) study confirms that high-quality leadership in a relaxed and inclusive organizational climate fosters trust between the employee and the leader, and is able to reduce negative emotions such as anxiety and cover-up after an employee makes a mistake. Then, employees under high-quality leadership will reduce the pressure of whether innovative behaviors can be successfully implemented or not. Based on the above research, this paper makes the hypothesis:

H4a: Transformational Leadership Moderates Between Organizational Climate and Employee Innovation Behavior

H4b: Transactional Leadership Moderates Organizational Climate and Employee Innovation Behavior

## 2. Research design

### 2.1 Purpose of the study

This study, in view of the previous research on employee innovative behavior based on the relevant research, further based on the Chinese context, explores the relationship between flexible human resource management, organizational

climate and leadership style and employee innovative behavior, and through the multi-layer linear model to analyze the influence path and the mechanism of influence between the variables, in order to increase and deepen the flexible human resource management field empirical research has important theoretical significance, and at the same time for the enterprise management how to stimulate employee innovative behavior has important theoretical reference.

## 2.2 Subjects of the study

**Table 1. Descriptive statistics of basic employee information**

Variant	Form	Number of people	Percentage
Distinguishing between the sexes	Male	310	50.6
	Women	303	49.4
(a person's) Age	Under 30	413	67.3
	31 and over	200	32.6
Education attainment	Bachelor's degree and below	512	83.5
	Master's degree or above	101	16.5
Years of experience	Less than a year	133	21.7
	1-3 years	236	38.5
	4-8 years	128	20.9
	More than 8 years	116	18.9

**Table 2. Descriptive statistics of basic information of business managers**

Variant	Form	Number of people	Percentage
Distinguishing between the sexes	male	34	54.8
	women	28	45.2
(a person's) Age	21-30 years	17	27.4
	41 and above	45	72.6
Education attainment	Undergraduate and below	49	79
	Master's degree or above	13	21
	financial sector	7	11.3
The industry you belong to	Real Estate/Construction	10	16.1
	Computer/Internet	11	17.7
	education industry	14	22.6
Nature of business	(sth. or sb) else	20	32.3
	nationalized business	8	12.9
	private business	16	25.8
	Foreign (joint) ventures	8	12.9
Years of experience	private business	30	48.4
	Less than a year	2	3.2
	1-3 years	21	33.9
	4-8 years	15	24.2
	More than 8 years	24	38.7

The sample data of this study comes from the questionnaire survey, and in order to improve the accuracy and representativeness of the sample, enterprises of different natures (private enterprises and private enterprises, etc.), different industries (education industry, Internet, etc.), and all over the country are selected as samples in the research. The valid samples used for research and analysis through the survey come from 62 managers and 613 employees in 62 enterprises, and the descriptive statistics of the samples are analyzed as shown in Tables 1 and 2.

In the research process, not only to have an overall understanding of the data samples but also to statistically analyze the local characteristics of the sample data, through the above table can be clearly seen in the research subject subjects of the academic degree to bachelor's degree, in the nature of the enterprise, mainly private, private enterprises, belonging to the industry, including computers, the Internet, real estate and so on.

### 2.3 Research methodology

In this study, the questionnaire method was used to obtain a large amount of data, and the scales were all mature scales widely used at home and abroad, and all the questions in the questionnaire were scored using the Likert five-level scale. In this study, SPSS, AMOS, and HLM were used for the statistical analysis of the sample data, firstly, SPSS was used for data entry, correlation analysis, and checking the reliability of each scale; secondly, AMOS was used for the validity of each scale by validation factor analysis, and finally, HLM was used for the multilevel regression analysis.

## 3. Analysis of results

### 3.1 Common method deviation test

In this study, the common method bias was tested by using Harman one-way test to put all the question items of the four variables in the study into an exploratory factor analysis at the same time, and in the results of the unrotated factor analysis, the total variance explained by all the factors with an eigenroot greater than 1 was 70.569, and the first of them had a variance explained by the first factor of 28.367, which was lower than 40%. Therefore, common method bias had little effect on the results of this study.

### 3.2 Descriptive statistics for each variable

Table 3. Descriptive statistics and correlation analysis of variables

	Average value	(statistics) Standard deviation	trade-off	Resource (such as manpower or tourism)	Organizational climate	Employee Innovation Behavior	Transformational Leadership	Transactional Leadership
Trade-off	3.556	0.794	1					
Resource (such as manpower or tourism)	3.374	0.644	.162**	1				
Organizational climate	3.980	0.882	.267**	.203**	1			
Employee Innovation Behavior	3.514	0.825	.313**	.344**	.502**	1		
Transformational Leadership	2.273	0.918	0.035	.115**	0.05	.240**	1	
Transactional Leadership	2.319	0.819	.209**	.160**	.087*	.220**	.329**	1

Notes: \* $p < 0.05$ , \*\* $p < 0.01$ .

As can be seen from Table 3, coordinated flexible HRM is significantly positively correlated with organizational climate ( $r = 0.267$ ,  $p < 0.01$ ), resource flexible HRM is significantly positively correlated with organizational climate ( $r = 0.203$ ,  $p < 0.01$ ); coordinated flexible HRM is significantly positively correlated with employee innovative behavior ( $r = 0.313$ ,  $p < 0.01$ ), resource flexible HRM is significantly positively related to employee innovative behavior ( $r = 0.344$ ,  $p < 0.01$ ), and organizational climate is significantly positively related to innovative behavior ( $r = 0.502$ ,  $p < 0.01$ ).

### 3.3 Polymerization test analysis

Organizational climate, transformational leadership, and transactional leadership are all organizational-level variables, but the data source is filled out by employees, so the variables need to be tested before data aggregation. Significant between-group differences between variables are the basis for data analysis using multilayer linear models, in order to verify whether the measurements of individual variables can be aggregated to the team level, this study used the coefficient of intra-group consistency Rwg (J) and the coefficient of between-group differences ICC (1), ICC (2) to determine that, after calculating, the mean of the Rwg (J) of the organizational climate, transformational leadership, and transactional leadership is respectively 0.879, 0.830, and 0.880, indicating good intra-group consistency of the variables, and the values of ICC1 were 0.281, 0.274, and 0.357, and the values of ICC2 were 0.788, 0.782, and 0.841, respectively, and Cohen proposed that  $0.01 \leq ICC \leq 0.059$  is a low correlation;  $0.059 \leq ICC \leq 0.138$  is a moderate correlation;  $ICC \geq 0.138$  is high association. According to this criterion, it indicates high intra-group correlation and significant inter-group differences. The above results indicate that the individual data of organizational climate, transformational leadership, and transactional leadership in this study were able to be aggregated to the team level for two-level linear model statistical analysis.

**Table 4. Analysis of aggregation test**

Variant	RWG	ICC1	ICC2
Organizational climate	0.879	0.281	0.788
Transformational leadership	0.830	0.274	0.782
Transactional leadership	0.880	0.357	0.841

### 3.4 Zero model test

The null model is a model that does not contain any predictor variables and a two-level model with only dependent variables is used to test for the presence of hierarchical effects. As can be seen in Table 5, the null model was used to test the intra- and inter-group variance of employee innovative behavior, where the intra-group variance was 0.445 and the inter-group variance was 0.261, thus the ICC1 was  $0.261 / (0.445 + 0.261) = 0.370$ , indicating that 37.0% of the variance in employee innovative behavior comes from team-level differences, thus necessitating the use of a multi-level regression model to conduct the analysis.

**Table 5. Zero model test**

Employee Innovative Behavior Null Model	
Intercept term	3.505
R(Sigma_squared)	0.445
U (Tau)	0.261
CHI-square	385.849
Deviance	1363.637

### 3.5 Main effects analysis

As can be seen from Table 6, individual-level gender, age, education, job position, and years of experience were added as control variables on the basis of the null model to obtain Model 1; Model 2 added organizational-level control variables on the basis of Model 1; and Model 3 added team-level coordinated flexible human resource management and resource flexible human resource management on the basis of Model 2, in which coordinated flexible human resource management has a significant positive effect on employee innovative behavior ( $\gamma = 0.290, p < 0.001$ ), and resource flexible human resource management has a significant positive effect on employee innovative behavior ( $\gamma = 0.406, p < 0.001$ ), and compared with model 1  $1 - (0.447 + 0.127) / (0.447 + 0.264) = 0.1926$ . indicating that the inclusion of several explanatory variables explains 19.26% of the variance in employee innovative behavior.

**Table 6. Analysis of the impact of coordination, resource flexible human resource management on the innovative behavior of employees**

Independent variable		Employee Innovative Behavior (Independent Variables vs. Dependent Variables)		
		Model 1	Model 2	Model 3
Intercept term		3.416***	3.681***	1.356*
Layer 1	distinguishing between the sexes	-0.023	-0.028	-0.022
	(a person's) age	0.079	0.087	0.097
	education attainment	0.012	0.012	0.013
	Job Title	0.037	0.039	0.043
	years of experience	-0.058	-0.059	-0.065
Layer 2	distinguishing between the sexes		-0.001	-0.080
	(a person's) age		0.029	-0.036
	education attainment		-0.057	-0.080
	Job Title		0.146	0.121
	years of experience		-0.205	-0.088
	trade-off			0.290***
	resource (such as manpower or tourism)			0.406***
Statistic	R(Sigma_squared)	0.447	0.447	0.447
	U (Tau)	0.264	0.267	0.127
	CHI-square	385.849	357.978	197.257
	Deviance	1363.637	1389.272	1360.753

Notes: \*p&lt;0.05, \*\*p&lt;0.01, \*\*\*p&lt;0.001.

**Table 7. Analysis of the impact of coordinated, resource-flexible human resources management on organizational climate**

Independent variable		Organizational climate (independent variable vs. mediator)	
		Model 1	Model 2
Intercept term		4.027***	2.030**
Layer 2	distinguishing between the sexes	-0.060	-0.102
	(a person's) age	-0.019	-0.084
	education attainment	-0.067	-0.106
	Job Title	0.146	0.136
	years of experience	-0.049	0.053
	trade-off		0.310***
	resource (such as manpower or tourism)		0.294**
Statistic	R(Sigma_squared)	0.319	0.213

Notes: \*p&lt;0.05, \*\*p&lt;0.01, \*\*\*p&lt;0.001.

As can be seen from the analysis in Table 7, Model 1 incorporates organizational-level control variables; Model 2 is based on Model 1 with the inclusion of team-level coordination and resource-flexible human resource management, in which there is a significant positive effect of coordination flexible human resource management on employee innovative behavior ( $\gamma=0.310$ ,  $p<0.001$ ), and resource flexible human resource management on employee innovative behavior has a significant positive effect ( $\gamma=0.294$ ,  $p<0.01$ ), compared to model 1  $1-0.213/0.319=0.3323$ , suggesting that the inclusion of several explanatory variables explains 33.23% of the variance in organizational climate.

## 4. Discussion

This study takes corporate employees and managers as research samples, based on organizational learning theory and job adaptation theory, through combing and analyzing the existing literature on flexible human resource management and employee innovative behavior, constructs the theoretical model of this paper and puts forward hypotheses, clarifies the influence of flexible human resource management on employee innovative behavior, the mediating role of organizational climate and the moderating role of leadership style, and through the cross-level analysis of the method to empirically test the hypotheses and obtain important research conclusions.

### 4.1 There is a positive effect of flexible human resource management on employee innovation behavior

This study is consistent with the previous empirical results of Ye Yijiao (2020), Cao Rui (2018), et al. Flexible human resource management can positively affect product innovation, workflow, and other innovations, which can integrate and enhance employee innovation.

### 4.2 Analysis of the mediating role of organizational climate

Through the empirical research in this paper, it is concluded that organizational climate has a significant positive impact on employee innovation behavior and plays a mediating role between flexible human resource management and innovation behavior. Innovation behavior is an important factor to enhance the competitiveness of enterprises, enterprises will improve innovation behavior with the help of auxiliary innovation, the findings of this paper are consistent with the conclusions of Wang Yanfei, Zhu Yu (2006), and others, which further proves that the mediating role of organizational climate has a positive impact on the innovation behavior of employees.

### 4.3 Analysis of the moderating role of leadership style

In the findings of this paper, both transactional and transformational leadership can improve employees' innovative behavior, but there is some variability in the degree of influence, and the moderating effect of transactional leadership style on employees' innovative behavior is more prominent compared to transformational leadership style. Honghui Miao (2019) pointed out in his study that both transformational and transactional leadership are significantly positively correlated with individual innovative behavior, and transactional style has a greater impact on employee innovative performance than transformational leadership.

## 5. Conclusion

This study adopts the literature review method and questionnaire survey method, based on 62 managers and 613 employees of 620 enterprises as the research object to match the survey, verifies the hypotheses in the text through HLM multi-layer analysis, confirms the relationship between flexible human resource management, organizational climate, leadership style, and employees' innovative behaviors, and draws the following conclusions:

- (1) Coordinating flexible human resource management positively predicts employees' innovative behavior.
- (2) Resource Flexibility HRM positively predicts employees' innovative behavior.
- (3) Organizational climate plays a partial mediating role between flexible human resource management and employee innovative behavior.
- (4) Transformational leadership plays a moderating role in the organizational climate and the innovative behavior of employees.
- (5) Transactional leadership plays a moderating role between organizational climate and employee innovative behavior.

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