Research on the Relationship Between High-Performance Work Systems, Job Autonomy, and Employees' Breakthrough Innovation Behavior

Abstract

Innovation is the key for enterprises to maintain their own advantages and competitiveness. With the rapid globalization process and increasingly fierce market competition among industries, enterprises have almost encountered many unknown opportunities and challenges, and innovation has become the main theme of the times.As the core of enterprises, employees' innovative behavior has a decisive impact on the innovation ability and competitiveness of enterprises. In order to occupy a place in the market, modern enterprises have increasingly higher requirements on employees' innovation ability and autonomy. The high-performance work system (HPWS) is composed of a series of human resource management practices, which helps to encourage employees' initiative and creativity and maintain the competitive advantage of enterprises. In recent years, the research on HPWS and employees' breakthrough innovation behavior has attracted more and more attention from scholars, but the literature investigating the relationship between HPWS, job autonomy, and employees' breakthrough innovation behavior with job autonomy as a mediating variable is still rare. Based on this, this paper constructs a research model among them by combining a large number of domestic and foreign literatures and research, and explores the relationship between HPWS and employees' breakthrough innovation behavior and the mechanism of job autonomy. This paper adopts the form of questionnaire survey to conduct research, uses SPSS21.0 statistical analysis software to conduct empirical analysis on the collected data, and draws the following conclusions: (1) HPWS has a significant positive impact on employees' breakthrough innovation behavior. (2) HPWS has a significant positive impact on employees' job autonomy. (3) Employees' job autonomy has a significant positive impact on their breakthrough innovation behavior. (4) Job autonomy plays a mediating role in the relationship between HPWS and employees' breakthrough innovation behavior.Based on this, countermeasures to enhance employees' breakthrough innovation behavior are proposed.

Keywords:High-Performance Work Systems; Work Autonomy; Employee Break-through Innovative Behavior

1. Introduction

Against the backdrop of accelerating globalization and intensified market competition, innovation has become the core driving force for corporate survival and development. The report of the 20th National Congress of the Communist Party of China emphasized the innovation-driven development strategy, as industries strive to optimize and transform their structures. Enterprises are increasingly demanding employees' innovation capabilities and autonomy. The High Performance Work System (HPWS), as a set of optimized human resource management practices, supports employee growth and development opportunities, enhances their professional competence and competitiveness, and thereby strengthens their work autonomy. Work autonomy, in turn, grants employees the authority to independently decide on work hours, methods, and standards, encouraging them to integrate personal development with corporate innovation and actively explore new solutions to problems. Based on this, this paper takes work autonomy as a mediating variable, employing questionnaire surveys and empirical analysis to explore the interrelationships among the three factors, providing management insights for enterprises.

2. Research significance

2.1 Theoretical significance

There are many studies exploring the single variables of high-performance work systems, job autonomy, and employee breakthrough innovation behavior, but there is a lack of systematic research that combines the three and uses job autonomy as a mediator. This article integrates resource-based theory and self-determination theory to construct and validate a model of their relationship, enriching the theoretical system of related fields and providing new perspectives and methods for subsequent research.

2.2 Practical significance

The breakthrough innovation behavior of employees is the key for enterprises to gain unique competitive advantages. This article clarifies the impact mechanism of high-performance work systems and job autonomy on employees' breakthrough innovation behavior through empirical analysis, providing feasible practical paths for enterprises to optimize human resource management practices, enhance employees' innovation capabilities, and strengthen market competitiveness.

3. Research methods, research content, and technical roadmap

3.1 Research methods

(1) Literature research method

Through channels such as China National Knowledge Infrastructure and campus libraries, systematically review relevant literature on high-performance work systems, work autonomy, and employee breakthrough innovation behavior, providing theoretical support for the construction of research models and hypothesis proposals.

(2) Questionnaire survey method

Select mature domestic and foreign scales to measure three core variables, and distribute and collect data in the form of online electronic questionnaires to provide empirical evidence for hypothesis testing.

(3) Mathematical and Statistical Analysis Method

Using SPSS21.0 statistical software to conduct reliability and validity analysis, correlation analysis, regression analysis, and mediation effect test on valid data, to verify the rationality of the research model and the validity of the hypotheses.

3.2 Research content

The research content of this article is divided into six parts: ① Introduction: elaborating on the research background, significance, methods, and innovative points; ② Literature review: Sort out the concepts, measurement dimensions, and research status of three core variables; ③ Research models and hypotheses: Based on theoretical foundations, propose research hypotheses and construct models; ④ Research Design: Explain the questionnaire design, scale selection, and data collection process; ⑤ Empirical analysis: testing hypotheses through statistical methods; ⑥ Conclusion and Prospect: Summarize the research results, propose practical suggestions, point out research shortcomings and future directions.

3.3 Technical roadmap

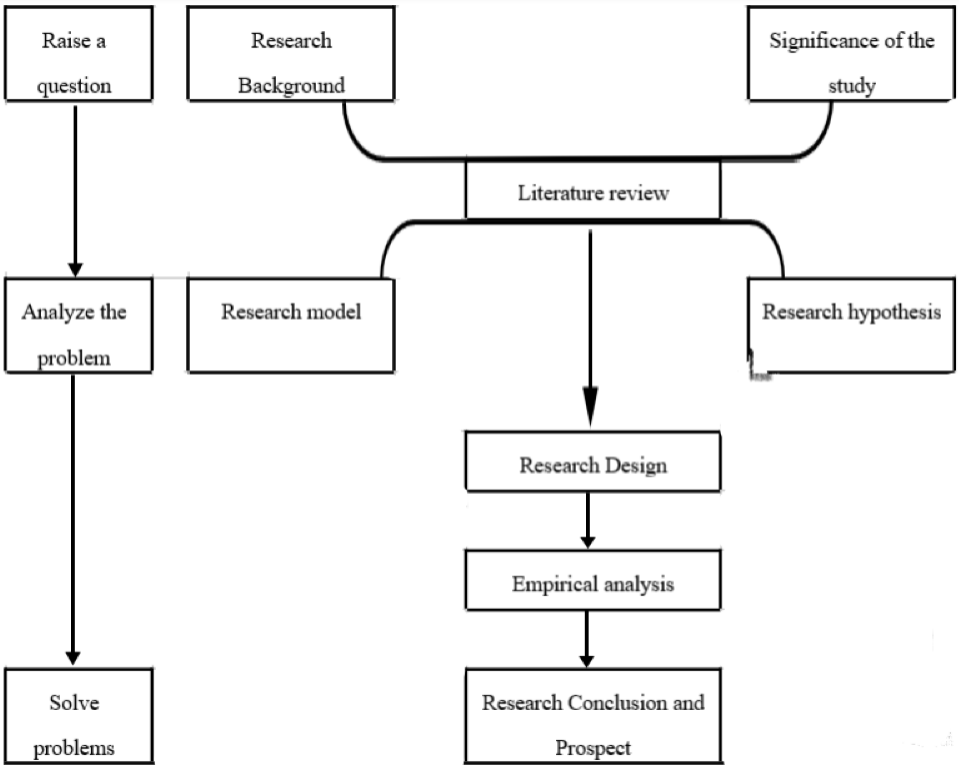

Figure 1-1 Technical Roadmap

4. Literature review

4.1 Concept of high-performance work system

The high-performance work system originated in the United States in the 1980s and is an organic whole composed of a series of human resource management practices. Its core goal is to improve organizational performance and competitive advantage by optimizing employee management. Takeuchi (2009) believes that high organizational performance can be achieved by integrating human resource management practices; Miao Rentao et al. (2020) emphasized its internal fit and external synergy characteristics, providing support for the company's competitive advantage by influencing employees. Although scholars have different definitions, they all recognize its core function of empowering employees and improving organizational performance through human resource management practices.

4.2 Measurement and Dimensions

The measurement of high-performance work systems is mostly based on the perspective of employee perception, and foreign scales are widely used, but they need to be adjusted in conjunction with the Chinese context. The 18 item scale designed by domestic scholars Zhang Junwei and Long Lirong (2017) has been widely adopted due to its adaptability to the characteristics of local enterprises. In terms of dimension division, scholars often approach from the perspectives of employee selection, training, communication, and authorization. Some studies combine the differences between Chinese and Western contexts to optimize dimension design and enhance measurement

applicability.

4.3 Related research

In domestic research, Lin Xinqi et al. (2022) found through meta-analysis that high-performance work systems have a significant impact on the performance of different types of individuals; Zhang Xinggui et al. (2023) validated its positive effects on various dimensions of employee happiness. In foreign research, Meuer (2017) proposed four paths for high-performance work systems to enhance productivity; Oh and Kim (2022) verified through longitudinal data that it indirectly positively affects organizational performance by reducing collective turnover rates.

4.4 Concept of Work Autonomy

Hackman and Oldham (1976) first proposed the concept of job autonomy, which is widely recognized in academia as the core of employees' autonomous decision-making power over work standards, methods, and arrangements. Lu Jun et al. (2018) emphasized that it is employees' sense of control over their work style and effort level; Wu Jinnan and GuoShanshan (2022) view it as a work resource that allows employees to independently respond to job requirements. This article believes that work autonomy refers to the degree of autonomy that employees have in making decisions about work hours, standards, and methods.

4.5 Measurement and Dimensions

The measurement of work autonomy can be divided into two categories: one-dimensional and multi-dimensional. The 7-item single dimensional scale developed by Kirmeyer et al. (1986) is widely used; Breaugh (1985) divided it into three dimensions: working methods, arrangements, and standards, and this three-dimensional measurement method is widely recognized in academia.

4.6 Related research

In domestic research, Ma Zenglin et al. (2021) empirically found that job autonomy has a positive impact on employee innovation performance and on-site informal learning; Wu Chanjuan (2019) verified its positive predictive effect on employee innovation behavior and psychological availability. In foreign research, Garg et al. (2017) pointed out that work autonomy moderates the relationship between employee participation and service innovation behavior; Malinowska et al. (2018) found that it can promote positive behavior among employees, enhance work motivation and engagement.

4.7 Concept of employee breakthrough innovation behavior

Breakthrough innovation was first proposed by Peter Schumpeter, and differs from incremental innovation by emphasizing revolutionary innovation that breaks through existing technologies and models. Han Chen et al.

(2018) believe that it is a behavior of enterprises breaking through existing production technologies and applying new models, with high-risk and high-value characteristics. This article defines employee breakthrough innovation behavior as the act of breaking through traditional technologies and methods, bringing revolutionary changes to the enterprise industry or market.

4.8 Measurement and Dimensions

The current research is still in its early stages, and the 3-item scale proposed by Madjar et al. (2011) is widely used both domestically and internationally, measuring from three perspectives: creative proposal, application of original methods, and adoption of new working methods. Domestic research focuses on evaluating innovation contributions by combining local contexts through methods such as questionnaire surveys and interviews; Foreign research focuses on the combination of weight scale development with individual differences, organizational support, and other influencing factors.

4.9 Related research

In domestic research, Liu Ning and Zhang Huikang (2019) found that internal and external rewards have a positive impact on employees' breakthrough innovation through work engagement, and the organizational innovation atmosphere plays a moderating role; Peng Ling (2021) verified that high-performance work systems promote this behavior through knowledge absorption and diffusion; Liu Ye et al. (2022) pointed out that leadership innovation support influences this behavior through innovation role identification. In foreign research, Amabile (2018) emphasizes that intrinsic motivation is the core source of breakthrough innovation; Byun et al. (2021) found that technology spillover can reduce the potential cost of breakthrough innovation.

4.10 Literature Review

Existing research both domestically and internationally has identified the independent roles of the three core variables, but there is limited research on their combined effects, particularly a lack of systematic exploration mediated by work autonomy. Domestic research focuses on direct impact relationships, while foreign research pays more attention to internal mechanisms and boundary conditions. Based on existing research gaps, this article constructs a mediation model of high-performance work system work autonomy employee breakthrough innovation behavior, enriching the research system in related fields.

5. Research Model and Hypothesis

5.1 Theoretical Basis

(1) Resource based theory

This theory holds that a company's competitive advantage stems from unique tangible and intangible resources,

and rational allocation of resources can be transformed into core competencies. As an important human resource management resource for enterprises, high-performance work systems enhance employee competence, stimulate innovative behavior, and build sustainable competitive advantages through training, incentives, and other practices.

(2) Self Determination Theory

This theory holds that individuals have innate growth and development potential, and autonomy, competence, and sense of belonging are the three basic psychological needs. The high-performance work system empowers employees with autonomy, provides growth support, meets their psychological needs, stimulates intrinsic motivation, and promotes innovative behavior.

5.2 Research Model

This article constructs a research model with work autonomy as the mediating variable to explore the direct impact of high-performance work systems on employees' breakthrough innovation behavior, as well as the indirect impact generated through work autonomy. The model is as follows:

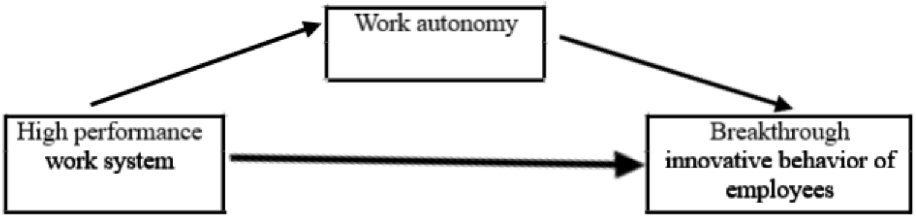

Figure 5-1 Research Model Diagram

5.3 Research Hypothesis

(1) Hypothesis of High Performance Work System and Employee Breakthrough Innovation Behavior

The high-performance work system emphasizes teamwork and employee growth. Through training, motivation, empowerment, and other practices, it provides employees with the resources and atmosphere needed for innovation, and stimulates their willingness and ability to innovate. The study on Public Training Rights (2023) indicates that high-performance work systems influence employee innovation behavior through the interaction of human resource management practices. Based on this, it is proposed that:

Assumption 1: High performance work systems have a significant positive impact on employees' breakthrough innovation behavior.

(2) Assumption of High Performance Work System and Work Autonomy

The high-performance work system enhances employees' professional skills and confidence through practices such as employee participation in decision-making and training empowerment, giving them more decision-making power in their work. Du Yingyu (2022) verified that high-performance work systems have a positive impact on employee proactive behavior. Based on this, it is proposed that:

Assumption 2: High performance work systems have a significant positive impact on employees' work autonomy.

(3) Hypothesis on Work Autonomy and Employee Breakthrough Innovation Behavior

Work autonomy empowers employees with autonomous decision-making space, enabling them to flexibly adjust work strategies, respond to unknown challenges, and enhance their confidence and sense of responsibility in innovation. Zhao Lei and ZhaiXinyu (2018) empirically demonstrate that work autonomy has a positive impact on employees' innovative behavior. Based on this, it is proposed that:

Assumption 3: Employee work autonomy has a significant positive impact on their breakthrough innovation behavior.

(4) The mediating role of work autonomy

The high-performance work system empowers employees to enhance their work autonomy, which provides space and motivation for innovation, thereby promoting breakthrough innovation behavior. Wang Yingmei (2023) pointed out that employees with high work autonomy are more likely to exhibit innovative behavior. Based on this, it is proposed that:

Assumption 4: Work autonomy plays a mediating role in the relationship between high-performance work systems and employees' breakthrough innovative behavior.

6. Research Design

6.1 Questionnaire Design

The questionnaire consists of two parts: the first part is the basic information of the survey subjects (gender, age, education level, etc.); The second part is the core variable scale, using the Likert 5-point scoring scale (1=completely disagree, 5=completely agree) to ensure the scientific and consistent measurement.

6.2 Scale selection

(1) High Performance Work System Scale

The 18 item scale developed by Zhang Junwei and Long Lirong (2017) was adopted, with examples including "emphasizing high-performance related personality and abilities during company selection" and "providing continuous training for employees". This scale has good reliability and validity in domestic research.

(2) Work Autonomy Scale

Using Kirmeyer et al.'s (1986) 7-item scale, including examples such as "I can freely decide on job content" and "I can choose my own work methods," to measure employees' perception of job autonomy in a single dimension.

(3) Employee Breakthrough Innovation Behavior Scale

Using Madjar et al.'s (2011) 3-item scale, examples include "I come up with highly creative ideas in my work" and "I adopt a completely new way of working", to meet the measurement needs of breakthrough innovative behavior.

6.3 Data Collection

240 questionnaires were distributed through online channels, and after excluding invalid questionnaires with incomplete filling and logical contradictions, 225 valid questionnaires were finally collected, with a recovery rate of 93.75%. The basic information of the sample is as follows:

In the basic information of the questionnaire survey, there were 68 males, accounting for 30.22%, and 157 females, accounting for 69.78%; In terms of age: 202 people aged 25 and below, accounting for 89.78%; 11 people aged 26 to 30, accounting for 4.89%; 5 people aged 31 to 35, accounting for 2.22%; 7 people aged 36 and above, accounting for 3.11%; In terms of education level, there are 47 people with associate's degree or below, accounting for 20.89%, 165 people with bachelor's degree, accounting for 73.33%, and 13 people with master's degree or above, accounting for 5.78%; In terms of work experience: 194 people have worked for 3 years or less, accounting for 86.22%, the highest proportion, 10.67% for 4-6 years, 1.33% for 7-9 years, and 1.78% for 10 years or more; In terms of positions: senior managers account for 10.22%, middle-level managers account for 16.44%, grassroots managers account for 10.22%, and ordinary employees account for 63.11%, the highest proportion; In terms of the number of employees in the enterprise: less than 50 people account for 32%, 50-100 people account for 30.67%, 101-500 people account for 21.33%, 501-1000 people account for 9.33%, and over 1000 people account for 6.67%; In terms of company type, there are 74 employees in state-owned enterprises, accounting for 32.89%. There are 117 private enterprises, accounting for 52%, and 34 foreign-funded/joint venture enterprises, accounting for 15.11%. The basic information of the sample is shown in Table 6-1.

Variable	Category	Number of people	Proportion（%）
Gender	Male	68	30.22%
	Female	157	69.78%
Age	25 years old and under	202	89.78%
	26~30	11	4.89%
	31~35	5	2.22%
	36 years old and above	7	3.11%

	Specialized and below	47	20.89%
Educational attainment	Undergraduate	165	73.33%
	Master's degree and	13	5.78%
	3 years or less	194	86.22%
Years of Work Experience	4~6	24	10.67%
	7~9	3	1.33%
	10 years or more	4	1.78%
	Senior managers	23	10.22%
Position	Middle managers	37	16.44%
	Front-line manager	23	10.22%
	Regular employee	142	63.11%
	Less than 50 people	72	32%
	50~100	69	30.67%
Number of employees	101~500	48	21.33%
	501~1000	21	9.33%
	More than 1000 people	15	6.67%
	State-owned enterprise	74	32.89%
Company Type	Private enterprise	117	52%
	Foreign/joint venture	34	15.11%

Table 6-1 Basic Information Distribution Table

7. Empirical Analysis

7.1Reliability and Validity Analysis

（1）Reliability analysis

The reliability of the scale was tested using Cronbach's alpha (α), with α > 0.7 indicating good reliability. The results showed that the α coefficients for all three core variables and the overall scale were greater than 0.7, specifically: high-performance work system (α=0.964), work autonomy (α=0.934), employee breakthrough innovation behavior (α=0.888), and the overall scale (α=0.974), demonstrating high reliability and stable, valid data.

Variable Scale	Cronbach's	Variable Scale	Cronbach's	Variable Scale
High performance work system		0.964		18
Work autonomy		0.934		7
Breakthrough innovative behavior of employees		0.888		3

Overall scale	0.974	28

Table 7-1 Scale Reliability Test

(2) Validity analysis

Evaluate the validity of the scale through KMO test and Bartlett sphericity test. KMO>0.7 indicates suitability for factor analysis, while Bartlett's sphericity test p<0.001 indicates a correlation between variables. The inspection results show that the KMO of the high-performance work system is 0.939, the KMO of work autonomy is 0.897, and the KMO of employee breakthrough innovation behavior is 0.732, all of which meet the requirements; The Bartlett sphericity test had p-values of 0.000, indicating good validity of the scale and suitability for further analysis.

variable	KMO	Bartlett sphericity		
		Approximate chi square	degree of freedom	Sig.
High performance work system	0.939	2943.746	105	0.000
Work autonomy	0.897	1271.481	21	0.000
Breakthrough innovative behavior of employees	0.732	392.842	3	0.000

Table 7-2 Validity Test of the Scale

7.2 Correlation analysis

The Pearson correlation coefficient was used to analyze the relationship between three variables. The results showed that the correlation coefficient between high-performance work system and job autonomy was r=0.737 (p<0.01), the correlation coefficient between high-performance work system and employee breakthrough innovative behavior was r=0.731 (p<0.01), and the correlation coefficient between job autonomy and employee breakthrough innovative behavior was r=0.793 (p<0.01). All three variables showed significant positive correlations, laying the foundation for subsequent regression analysis and mediation effect testing.

variable	KMO	Bartlett sphericity		
		Approximate chi square	degree of freedom	Sig.
High performance work system	0.939	2943.746	105	0.000
Work autonomy	0.897	1271.481	21	0.000

Breakthrough innovative behavior of employees	0.732	392.842	3	0.000

Table 7-3 Correlation Analysis of Three Variables

7.3 Regression analysis

(1) Regression Analysis of High Performance Work System and Employee Breakthrough Innovation Behavior

Perform regression analysis with employee breakthrough innovation behavior as the dependent variable and high-performance work system as the independent variable. The results showed that the model R^2 was 0.535 ($F=256.346$, $p<0.001$), and the regression coefficient β of the high-performance work system was 0.841 ($t=16.011$, $p<0.001$), indicating that the high-performance work system can explain 53.5% of the variation in employees' breakthrough innovation behavior and has a significant positive impact on it. Hypothesis 1 is supported.

	Non standardized coefficient		Standardized coefficient					
	B	Standard error	Beta	t	sig.	R^2	AdjustR^2	F
constant	0.353	0.203		1.744	0.083			
High performance work system	0.841	0.053	0.731	16.011	0.000	0.535	0.533	F=256.346 P=0.000

Table 7-4 Regression Analysis

(2) Regression analysis of high-performance work system and job autonomy

Perform regression analysis with work autonomy as the dependent variable and high-performance work system as the independent variable. The results showed that the model R^2 was 0.543 ($F=265.282$, $p<0.001$), and the regression coefficient of the high-performance work system was $\beta=0.871$ ($t=16.287$, $p<0.001$), indicating that the high-performance work system can explain 54.3% of the variation in work autonomy and has a significant positive impact on it. Hypothesis 2 holds true.

	Non standardized coefficient		Standardized coefficient					
	B	Standard error	Beta	t	sig.	R^2	Adjust R^2	F

constant	0.150	0.206		0.728	0.467			
High performance work system	0.871	0.053	0.737	16.287	0.000	0.543	0.541	F=265.282 P=0.000

Table 7-5 Regression Analysis of High Performance Work System and Work Autonomy

(3) Regression Analysis of Work Autonomy and Employee Breakthrough Innovation Behavior

Perform regression analysis with employee breakthrough innovation behavior as the dependent variable and work autonomy as the independent variable. The results showed that the R^2 of the model was 0.630 (F=379.063, p<0.001), and the regression coefficient of job autonomy was β=0.772 (t=19.470, p<0.001), indicating that job autonomy explained 63.0% of the variation in employees' breakthrough innovation behavior and had a significant positive impact on it. Hypothesis 3 holds true.

	Non standardized coefficient		Standardized coefficient					
	B	Standard error	Beta	t	sig.	R^2	Adjust R^2	F
constant	0.871	0.142		6.137	0.000			
Work autonomy	0.772	0.040	0.793	19.470	0.000	0.630	0.628	F=379.063 P=0.000

Table 7-6 Regression Analysis of Work Autonomy and Employee Breakthrough Innovation Behavior

7.4 Analysis of the Mediating Effect of Work Autonomy

Using stepwise regression to test the mediating effect, three models were constructed: ① independent variable → dependent variable; ② Independent variable → mediator variable; ③ Independent variable+mediator variable → dependent variable. The results showed that in Model 3, the regression coefficient of the high-performance work system was β=0.321 (t=5.676, p<0.001), the regression coefficient of work autonomy was β=0.557 (t=9.864, p<0.001), and the R^2 of Model 3 was 0.677, which was significantly improved compared to Model 1. The regression coefficient of the high-performance work system decreased from 0.731 to 0.321, but remained significant, indicating that job autonomy partially mediates the relationship between the two. Hypothesis

4 holds true.

	predictor variable	dependent variable	R^2	B	SE	β	t	sig.
Model1	High performance work system	Breakthrough innovative behavior of employees	0.535	0.841	0.053	0.731	16.011	0.000
Model2	High performance work system	Work autonomy	0.543	0.871	0.053	0.737	16.287	0.000
Model3	High performance work system	Breakthrough innovative behavior of employees	0.677	0.369	0.065	0.321	5.676	0.000
	Work autonomy			0.542	0.055	0.557	9.864	0.000

Table 7-7 Analysis of Mediating Effects

8. Conclusion and Prospect

8.1 Research Conclusion

Through empirical analysis, this article draws the following core conclusions:

The high-performance work system has a significant positive impact on employees' breakthrough innovative behavior. Implementing a high-performance work system in enterprises can stimulate employees' innovation willingness and ability through training, incentives, collaboration, and other practices, and promote the emergence of breakthrough innovative behaviors.

The high-performance work system has a significant positive impact on employee work autonomy. The high-performance work system empowers employees with more decision-making participation and growth opportunities, enhances their professional competence and confidence, and thereby strengthens their work autonomy.

Employee work autonomy has a significant positive impact on breakthrough innovation behavior. Work autonomy

provides employees with autonomous decision-making space, enhances their sense of innovation responsibility and confidence, and encourages them to actively explore new methods and paths.

Work autonomy plays a partial mediating role in the relationship between high-performance work systems and employees' breakthrough innovative behaviors. The high-performance work system not only directly affects employees' breakthrough innovation behavior, but also indirectly promotes this behavior by enhancing work autonomy.

8.2 Suggestions for Enhancing Employees' Breakthrough Innovation Behavior

(1) Optimize organizational structure and performance indicators

Build a flat and flexible organizational structure, reduce decision-making levels, and improve information transmission efficiency; Set concise, quantifiable, and fair key performance indicators, focus on innovation orientation, and stimulate employees' innovation motivation.

(2) Strengthen training and resource support

Provide targeted professional skills and innovation training based on employee job requirements and development plans; Provide necessary funding, technology, and time resources for employee innovation, and reduce innovation costs and risks.

(3) Improve incentive and feedback mechanisms

Establish an innovation incentive system that combines material and spiritual incentives, and give heavy rewards to breakthrough innovation achievements; Establish a timely and fair feedback mechanism, pay attention to the needs and difficulties of employees in the innovation process, and provide targeted support.

(4) Clear innovation goals and strategic integration

Incorporate innovation goals into corporate strategic planning and set specific and measurable innovation indicators; Promote the linkage between innovation goals and departmental and individual employee goals, and create a good atmosphere of innovation for all employees.

(5) Reasonably granting work autonomy

Under the premise of clear work objectives, employees are allowed to independently arrange their work time, choose work methods, and set work standards, fully tapping into their subjective initiative and innovative potential.

(6) Create an inclusive and innovative organizational atmosphere

Encourage employees to boldly try and make mistakes, and maintain a tolerant attitude towards innovation failures; Establish an employee communication platform to promote creative sharing and collaborative innovation,

and break down departmental barriers.

(7) Developing employees' self-management abilities

By providing training, guidance, and other methods, we aim to enhance employees' time management, goal setting, emotional regulation, and continuous learning abilities, helping them better utilize their work autonomy to achieve innovative goals.

(8) Expand channels for decision-making participation

Establish an open communication mechanism to encourage employees to participate in major decision-making and innovation project discussions within the company; Value employees' creativity and suggestions, enhance their sense of belonging and responsibility.

8.3 Research Shortcomings and Prospects

8.3.1 Insufficient research

(1) Sample limitations: The sample sources are concentrated in some regions and populations, and the distribution of age and work experience is uneven (89.78% are under 25 years old, and 86.22% are under 3 years old). The sample size (225) is relatively small, which may affect the universality of the research results.

(2) The research method is single: only questionnaire survey method is used to collect data, which may have subjective bias; Without using methods such as case analysis and in-depth interviews, the richness and depth of research conclusions need to be improved.

(3) Insufficient variable design: There is no multidimensional division of work autonomy, no introduction of moderating variables (such as organizational innovation atmosphere and leadership style), and insufficient exploration of the boundary conditions and internal mechanisms of the relationship between the three.

8.3.2 Future Outlook

(1) Optimize sample structure: Expand sample size to cover employees from more regions, industries, ages, and years of work experience, and enhance sample representativeness; Conduct cross industry and cross regional comparative research to enhance the universality of research results.

(2) Enriching research methods: combining various methods such as questionnaire surveys, case analysis, in-depth interviews, and longitudinal tracking to validate research models from multiple perspectives; Using advanced statistical methods such as structural equation modeling to enhance the scientific nature of analysis.

(3) Deepen research content: Divide work autonomy into multiple dimensions and explore the differences in mediating effects between different dimensions; Introduce moderating variables such as organizational innovation atmosphere and leadership style to construct a more complex theoretical model; Expand the research boundary

and explore the differences in the relationship between the three in different types of enterprises and cultural backgrounds.

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