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Employee career adaptability and perceived cohesion on innovative behavior: Mediating and moderating effects

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Abstract: This study examines how employee career adaptability and perceived cohesion influence innovative behavior, with work engagement as a mediator and leadership power distance and individual learning ability as moderators. Drawing on career construction theory and the job demands-resources model, we investigate the psychological mechanisms and boundary conditions that shape innovation in R&D contexts. Using a cross-sectional design, we collected data from 533 R&D employees in large Chinese manufacturing firms and analyzed it through structural equation modeling and moderated regression analysis. The results reveal that both career adaptability and perceived cohesion significantly enhance innovative behavior, with work engagement partially mediating these relationships (indirect effects). Leadership power distance weakens the positive effects of career adaptability on innovation and work engagement, while individual learning ability strengthens these relationships. Notably, power distance did not moderate the cohesion-engagement link, suggesting team bonds may buffer against hierarchical constraints. These findings highlight the dual pathways—direct and through engagement—by which adaptability and cohesion foster innovation, while emphasizing the contextual roles of leadership structures and learning capability. For organizations, the study underscores the need to reduce hierarchical barriers, cultivate adaptive career mindsets, and promote continuous learning to maximize innovation potential. The research contributes to career construction and JD-R theories by integrating personal, social, and organizational factors in innovation processes.

Keywords: *Career adaptability, Individual learning ability, Innovative behavior, Leadership power distance, Perceived cohesion, Work engagement.*

1. Introduction

In today's rapidly evolving business environment, organizational success increasingly depends on the ability of employees to engage in innovative behaviours that drive growth, adaptability, and competitive advantage [1]. Innovative behaviour, defined as the generation, promotion, and implementation of new ideas to improve work processes, products, or services [2] is a critical factor in sustaining organizational performance. However, fostering such behaviour is complex, as it is influenced by a multitude of individual and contextual factors. Among these, career adaptability an individual's psychological resource for managing career-related challenges and changes [3] and perceived cohesion the sense of belonging and unity within a team or organization [4] have emerged as significant predictors of employee innovation. Despite their importance, the mechanisms through which these factors influence innovative behavior remain underexplored, particularly in terms of mediating and moderating processes.

Career adaptability according to career construction theory Rençber and Paşaoğlu Baş [5] has four fundamental elements that include future planning which is concern alongside control for career ownership and curiosity for exploring possibilities as well as confidence about achieving career targets.

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Individuals with high career adaptability can tackle workplace uncertainties and actively seek development opportunities and perform behaviours leading to organizational innovation [6]. Research papers demonstrate that adaptable employees demonstrate better creativity together with problem-solving abilities because these features act as building blocks for innovative behaviour [7]. Research has not established complete clarity regarding the mental and societal mechanisms which convert career adaptability into innovative performances. Self-efficacy emerges as a possible linkage between career adaptability and creative employee behaviour because career adaptability builds employee confidence in generating along with executing new ideas [8]. Employees with higher workplace support perceptions tend to redirect their adaptability abilities towards innovation because they feel accepted by their organization [9].

The perception of cohesion describes how workers experience alliance with their organizational team resulting in mutual trust and commitment and collaboration [10]. A cohesive work environment successfully enhances knowledge sharing and open communication which leads to collective problem-solving because of their association with innovative practices [11]. Workplaces with perceived high cohesion stimulate employees to collaborate efficiently and take significant risks and share unorthodox concepts which leads to innovation success [12]. A direct link between perceived cohesion and innovative behaviour measurements does not necessarily exist. The relationship exists through psychological safety when team members believe they can express their ideas without fear of adverse effects according to Adil, et al. [13]. Strong team cohesion leads to psychological safety creation and allows teams to implement innovative practices [14]. The effects of cohesion on innovation can be enhanced through transformational leadership which provides intellectual inspiration and motivation to employees.

Research has shown growing interest in career adaptability and perceived cohesion as innovation drivers but researchers still need to define fundamental connections between the factors alone with precise conditions affecting their power [8, 11]. The influence of career adaptability on team innovation becomes stronger when members demonstrate high cohesion or when adaptability remains low. Self-efficacy together with psychological safety provide complete explanations for these relationships but the study remains incomplete for investigating additional potential underlying associations. The assessment of these questions serves both theoretical growth and practical implementation needs because organizations need proven methods to foster innovation. Research must examine the entire organizational framework because it plays a significant role. Organizations in industries characterized by constant change need organizations to excel at adapting and working together [15]. Such competitive situations require organizations to build career adaptability together with cohesion to optimize their performance. Research indicates that these factors interact differently in stable market settings so managers should implement contingency models as per [16] approach. Cultural elements affect the relationship between career adaptability and cohesion toward innovation because collectivist nations value team synergy yet individualist societies emphasize personal adaptability [12].

The present study aims to contribute to the literature by examining the mediating and moderating mechanisms that link career adaptability and perceived cohesion to innovative behaviour. Specifically, it investigates whether self-efficacy mediates the relationship between career adaptability and innovation, and whether psychological safety mediates the link between cohesion and innovation. Additionally, it explores the moderating roles of perceived organizational support and leadership style in these relationships. By integrating theories from career development, social psychology, and organizational behaviour, this research provides a comprehensive framework for understanding employee innovation. Practically, the findings will offer insights for organizations seeking to enhance innovation through human resource development and team-building initiatives. For example, if career adaptability is found to be a key driver of innovation, organizations may invest in training programs that enhance employees' adaptive skills. Similarly, if perceived cohesion is critical, interventions aimed at strengthening team dynamics and fostering inclusive cultures may be prioritized. Understanding the moderating factors will

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also help organizations tailor their strategies based on contextual variables such as leadership and organizational support.

2. Literature Review

Research explores employee career adaptability together with perceived cohesion as predictors of innovative workplace behavior but there exists limited evidence of both the fundamental processes leading to this outcome and its specific circumstances. Career adaptability as outlined by Amari [17] within career construction theory manifests across four core components including personal future outlooks (concern) and self-directed behavior regulation (control) and exploratory curiosity (curiosity) together with inner confidence (confidence). High career adaptability among employees leads to proactive work behaviors including innovation because they develop psychological skills to handle career uncertainties and seize possible prospects [18]. Research findings show career adaptability produces better job performance and creativity [19] although scientists need to study how self-efficacy and intrinsic motivation function as intermediate factors. Social cognitive theory by Mehmood, et al. [20] demonstrates self-efficacy functions as a linking mechanism which connects adaptability to innovative action because workers with confidence levels tend to test fresh ideas [21]. Adaptable individuals tend to search for meaningful challenges because of which intrinsic motivation functions as a possible mediator.

Within team dynamics perceived cohesion operates as the team members' mutual bond together with their sense of unity as independently [22] and stands as one of the fundamental predictors for both collaboration and innovation [23]. Teams that stick together give employees an atmosphere of trust in addition to open communication channels and mutual support so employees feel free to advance unconventional thoughts [24]. According to You, et al. [25] psychological safety model cohesive teams become innovative by creating an environment free from fear of criticism or failure. High psychological safety teams demonstrate stronger behaviors related to experimentation and knowledge sharing according to experimental findings [26]. The impact of cohesion on innovation might fluctuate based on the leadership approaches used in specific situations. The leadership approach of transformational leadership strengthening cohesion through inspiring employees toward group innovation according to Fang, et al. [27] strengthens collective innovation efforts [28]. Open leader support plays a critical role since absence of backing can create groupthink which prevents innovation yet requires further study about moderating factors [29].

The study of career adaptability together with perceived cohesion demonstrates an underexamined relationship within innovation research. The combination of adaptability with cohesion creates a social network which enables people to work together creatively [30]. Academic researchers suggest high cohesion intensifies adaptable employee innovation potential through creating an environment which backs risky endeavors [31]. When employee cohesion is strong it allows minimally adaptable workers to share their ideas despite limited adaptability [30]. The discovery of conflicting findings shows that adaptable employees become essential for innovation in teams that are both highly cohesive and rigid because these organizations need disruption to avoid complacency [32]. The two opposites emphasize why researchers should explore self-efficacy and psychological safety as mediating factors and leadership and organizational climate as moderating elements to understand how and under what conditions these constructs affect innovative behaviour.

Complexity in organizational settings generates further challenges for the relationships between variables. The rapid changes in dynamic industries lead career adaptability to better predict innovation because employees need continuous learning and change orientation [33]. When operating in stable environments the perceptions about teamwork cohesion take precedence in maintaining enduring collaborative relationships [16]. Individualists versus collectivists show different predispositions because individualists emphasize personal adaptability while collectivists focus on group harmony [34]. Organizations that promote innovative policies together with proper resource allocation demonstrate higher innovation rates because employees are motivated to contribute when their work gets recognized

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by the organization [35]. Research still needs to fill important knowledge gaps regarding these findings. Career adaptability studies and perceived cohesion research exist independently from one another because researchers fail to investigate their joint effects or possible interaction on innovation. Empirical studies provide minimal evidence of the linkage between self-efficacy and psychological safety which serve as theoretical mediation factors. The research needs additional validation concerning leadership and organizational culture as moderators across different sectors as well as cultural backgrounds. Research on these gaps allows a more thorough development of theoretical models and provides evidence for implementing targeted HR practices (adaptability training along with team-building initiatives and leadership development) aimed at promoting innovation.

3. Methodology

3.1. Research Design

This study adopts a quantitative research design to examine the relationships between employee career adaptability, perceived organizational support, work engagement, leadership power distance, individual learning ability, and employee innovative behaviour. A cross-sectional survey approach is employed, allowing for the collection of data at a single point in time to analyse the hypothesized relationships. The research design is explanatory in nature, as it seeks to investigate not only the direct effects of career adaptability and perceived cohesion on innovative behaviour but also the mediating role of work engagement and the moderating effects of leadership power distance and individual learning ability. Structural equation modelling (SEM) is utilized to test the hypothesized relationships, providing a robust statistical framework for analysing complex mediation and moderation effects. The choice of a quantitative approach ensures objectivity, generalizability, and the ability to measure relationships between variables with precision.

3.2. Population and Sampling

The target population for this study consists of employees working in the research and development (R&D) departments of six large-scale manufacturing enterprises in Zhejiang Province, China. These enterprises were selected due to their prominence in high-tech industries, including smart manufacturing, new energy vehicles, and advanced materials, where innovation is a critical driver of competitive advantage. The sample was restricted to R&D personnel with at least one year of tenure to ensure familiarity with organizational dynamics and work processes. A total of 726 questionnaires were distributed, and after screening for incomplete or inconsistent responses, 683 valid responses were retained, yielding a response rate of 94.1%. The sample includes employees across different age groups (18–26, 27–45, and 46+ years), genders, and educational levels (bachelor's, master's, and doctoral degrees) to capture diverse perspectives and enhance the generalizability of findings.

3.3. Data Collection

Data collection was conducted using an online survey administered via the Wenjuanxing platform (a Chinese equivalent of Qualtrics) between June 2024 and January 2025. The survey was distributed with the support of HR departments and R&D managers in the participating organizations to ensure high response rates. Participants were provided with an informed consent form detailing the study's purpose, confidentiality measures, and voluntary nature of participation. The questionnaire consisted of six sections measuring career adaptability, perceived cohesion, leadership power distance, work engagement, individual learning ability, and innovative behavior, all based on validated multi-item scales. To minimize common method bias, the survey employed reverse-coded items and ensured anonymity. Additionally, offline follow-ups were conducted to encourage participation and clarify any ambiguities in the questionnaire.

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3.4. Measures of Study

The study employed well-established scales to measure the key constructs, all adapted to the Chinese context. Career adaptability was assessed using the 24-item Career Adapt-Abilities Scale (CAAS) Savickas and Porfeli [36] covering four dimensions: career concern, control, curiosity, and confidence. Perceived cohesion was measured using an 8-item scale by Carless and De Paola [37] focusing on task commitment and team attraction. Leadership power distance was evaluated using a 17-item scale Malik [11] assessing hierarchical relationships, decision-making authority, and interaction frequency. Work engagement was measured using a 17-item Utrecht Work Engagement Scale [38] comprising vigor, dedication, and absorption dimensions. Individual learning ability was assessed via a 12-item scale Nikolova, et al. [39] capturing reflective learning, experimental learning, and learning from peers and leaders. Finally, innovative behavior was measured using a 12-item scale [40] distinguishing between idea generation and implementation. All items used a 5-point Likert scale (1 = "Strongly Disagree" to 5 = "Strongly Agree").

3.5. Data Analysis Techniques

A multi-step analysis method guided the data assessment procedures. The distribution of data was calculated through the generation of descriptive statistics which included means and standard deviations in addition to skewness and kurtosis values. Cronbach's alpha reliability assessment showed strong internal consistency in the scales through values above 0.70 which verified their reliability. Construct validity assessment involved Exploratory and Confirmatory Factor Analysis which confirmed suitable factor distribution of items to their respective constructs. The research employed SEM to evaluate proposed relationships by examining direct effects and mediation together with moderation effects. The research used [14]mediation technique as its foundation before conducting moderation analysis through hierarchical regression of interaction terms. The application of bootstrapping served to validate the statistical significance of both direct effects as well as indirect effects. The research team executed all statistical computations utilizing SPSS 27.0 as well as AMOS 24.0.

3.6. Ethical Considerations

All ethical protocol required the study to respect both participant confidentiality and voluntary participation rights. Every study participant granted informed consent to participate before taking the survey as the research team collected data without collecting any individual identifying details. All data received treatment that removed personal identifiers before being safeguarded from unauthorized users. A review from the institutional ethics committee approved the research protocol to maintain academic standards at every stage. All participants received guarantees that their research responses would stay confidential for scientific purposes and that they maintained the privilege of ending their participation at any point. The research findings were presented in an open fashion to prevent data misinterpretation. The research team installed these procedures to preserve ethical scientific conduct and sustain honest relations among researchers and their research subjects.

4. Empirical Findings

4.1. Descriptive Statistics and Sample Characteristics

Empirical research depends heavily on descriptive statistics and sample characteristics which build its foundation by demonstrating how the data set distributes itself across the dataset. The analysis of population variables including education level gender and age enables representation evaluation of the studied group and detects potential result-altering biases. The primary leadership indicators including career adaptability and perceived cohesion along with innovative behavior show their mean data points and standard deviation levels in order to understand initial participant responses. A representative and balanced sample base strengthens the research generalization and response variations show that employees have unique experiences thus requiring individual-specific analysis in future work.

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Table 1.
Descriptive Statistics of Key Variables.

Variable	Mean	Std. Deviation	Min	Max
Employee Innovative Behavior	3.396	1.243	1	5
Career Adaptability	3.125	1.001	1	5
Perceived Cohesion	3.139	1.161	1	5
Work Engagement	3.07	1.17	1	5
Leadership Power Distance	3.015	1.048	1	5
Individual Learning Ability	3.052	1.085	1	5

Table 1 shows data indicates that participants demonstrated average to above-average ratings on every measured construct from 3.015 to 3.396. New ideas are the most commonly practiced behavior in R&D departments as indicated by a mean score of 3.396. The results show leadership power distance alongside work engagement as mildly lower at 3.015 and 3.070 indicating hierarchical organization could limit staff engagement and work engagement remains sub-optimal. The range of standard deviations from 1.001 to 1.243 indicates employees view their workplace environment and capabilities differently which affects their responses. The diverse levels of engagement demonstrate why researchers need to identify influencing variables which help explain complex relationships between work engagement and subject matter expertise in Saudi universities.

Table 2.
Pearson Correlation Matrix of Key Variables

Variable	1	2	3	4	5	6
1. Innovative Behavior	1					
2. Career Adaptability	0.402**	1				
3. Perceived Cohesion	0.328**	0.552**	1			
4. Work Engagement	0.321**	0.594**	0.517**	1		
5. Leadership Power Dist.	-0.622**	0.366**	0.120**	0.144**	1	
6. Individual Learning	0.565**	-00.008	-0.465**	-0.048	-0.561**	1

Table 2 outlines key characteristics of correlations between study variables which become apparent in the matrix data. Research results demonstrated that innovative behavior creates a positive connection with career adaptability (r = .402) and perceived cohesion (r = .328) and work engagement (r = .321) as well as individual learning ability (r = .565) thus supporting the initial hypotheses. Individual learning ability functions as the most influential factor that literally drives employees to show innovative behaviours because workers require powerful capabilities in skill acquisition and knowledge application to be innovative. The hierarchical structure in leadership power distance negatively impacts innovative behaviour to a high degree (r = -.622). Individual learning ability shares a negative relationship with this variable (r = -.561) and at the same time exhibits a positive association with career adaptability (r = .366). The data implies that although some staff members manage hierarchical structures, they encounter minimal opportunities to learn or advance their development. An analysis of distinct variables can be supported because the predictor scales show moderate connections (e.g. a .594 equivalent relationship exists between career adaptability and work engagement). Researchers should study the relationship between team unity perception and individual learning capability because the discovered negative correlation (r = -.465) merits more examination.

4.2. Reliability and Validity

Researchers must perform validity and reliability tests in order to establish accurate and credible research findings. Cronbach's alpha provides reliability measurement which checks that individual items within each construct maintain consistent measurement of their underlying concept. The validity assessment through confirmatory factor analysis (CFA) ensures correct representation of theoretical constructs in the measurement model while convergent validity strengthens through high factor

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loadings and AVE measures item-strong relationships to intended constructs and discriminant validity proves constructs are independent from each other. The study underwent rigorous psychometric testing to prove that measurement tools accurately captured career adaptability levels and perceived cohesion dimensions and work engagement indicators along with other variables thus building trust in hypothesis testing and final results.

Table 3.
Reliability and Convergent Validity Analysis.

Construct	Cronbach's α	Composite Reliability (CR)	Average Variance Extracted (AVE)
Career Adaptability	0.959	0.972	0.897
Perceived Cohesion	0.949	0.947	0.900
Work Engagement	0.974	0.973	0.922
Leadership Power Distance	0.992	0.985	0.941
Individual Learning Ability	0.988	0.974	0.903
Innovative Behavior	0.987	0.984	0.968

Table 3 presents all constructs in this research show strong measurement reliability together with convergent validity. The values for Cronbach's α exceed 0.90 with a range from 0.949 to 0.992 which indicates strong internal consistency. Additionally, the construct reliability scores (range: 0.947 to 0.985) verify the reliability of the investigated constructs. All calculated average variance extracted values exceed 0.50 (range: 0.897-0.968) thus indicating true convergent validity since each construct focuses on more than 50% of its indicator variance. The measurement precision of innovative behavior and leadership power distance reaches nearly perfect values (AVE=0.968 and AVE=0.941 respectively) based on the study results. The study demonstrates psychometric soundness among all measurement scales which effectively measure their theorized constructs thus creating a stable base for structural model validation.

Table 4.
Discriminant Validity Assessment (Fornell-Larcker Criterion).

Construct	1	2	3	4	5	6
1. Innovative Behavior	0.984					
2. Career Adaptability	0.402	0.947				
3. Perceived Cohesion	0.328	0.552	0.949			
4. Work Engagement	0.321	0.594	0.517	0.96		
5. Leadership Power Distance	-0.622	0.366	0.12	0.144	0.97	
6. Individual Learning Ability	0.565	-0.008	-0.465	-0.048	-0.561	0.95

Table 4 shows the Fornell-Larcker criterion assessment for discriminant validity which confirms that every construct maintains distinct empirical separation in the study. Discriminant validity is established when the diagonal elements (square roots of AVEs) reaching from 0.947 to 0.984 surpass all relevant off-diagonal correlations in their respective rows and columns. The correlation between career adaptability and work engagement measures (r=0.594) stands lower than their square root average variance extractions (0.947 and 0.96). Research shows these two moderators have an inverse relationship as individual learning ability displays negative correlation with leadership power distance at r=-0.561. These findings demonstrate that each construct exhibits greater variance among its measurement variables than with those of other constructs which validates both the discriminant validity and theoretical distinctiveness of the research elements.

4.3. Hypothesis Testing Results

The hypothesis testing results provide empirical validation for the proposed theoretical model, confirming significant relationships between key constructs. All direct effect hypotheses (H1-H5) were supported, demonstrating that career adaptability and perceived cohesion positively influence both work

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engagement and innovative behavior, while work engagement itself serves as a significant predictor of innovative behavior. These findings align with existing literature on employee adaptability and organizational behavior, reinforcing the importance of fostering career development and team cohesion to drive innovation in R&D settings.

Table 5.
Direct Effects of Key Variables on Innovative Behavior and Work Engagement.

Hypothesis	Relationship Tested	β Coefficient	p-value	Result
H1	Career Adaptability → Innovative Behavior	0.5	<0.001	Supported
H2	Perceived Cohesion → Innovative Behavior	0.352	<0.001	Supported
H3	Career Adaptability → Work Engagement	0.694	<0.001	Supported
H4	Perceived Cohesion → Work Engagement	0.522	<0.001	Supported
H5	Work Engagement → Innovative Behavior	0.134	<0.05	Supported

According to Table 5 career adaptability directly influences innovative behavior ($\beta = 0.500$, $p < 0.001$) to a greater extent than perceived cohesion ($\beta = 0.352$, $p < 0.001$) because employees who can better handle workplace challenges drive innovation successfully. The direct impact of career adaptability on work engagement reaches 0.694 ($p < 0.001$) and perceived cohesion contributes 0.522 ($p < 0.001$) which demonstrates their crucial role in maintaining employee engagement. The model demonstrates that work engagement ($\beta = 0.134$, $p < 0.05$) has a smaller but significant impact on innovative behavior though it serves as an intermediary mechanism between employee engagement and innovative solutions. Organizations must dedicate funding toward career development programs together with team-building initiatives because they build innovative environments at work.

4.3.1. Mediation Effects (Work Engagement)

The mediation analysis demonstrates that work engagement acts as an essential internal process by which career adaptability and perceived cohesion drive innovative behavior in employees. The research results show that work engagement functions as a partial mediator because it strengthens both direct relationships and indirect pathways between independent variables and innovation outcomes. This discovery highlights how work engagement creates a psychological pathway for innovation because engaged personnel transform their adaptability and team cohesion into innovative outputs at work.

Table 6.
Mediation Effects of Work Engagement.

Hypothesis	Mediation Path	Indirect Effect	95% CI	Result
H6	Career Adaptability → Work Engagement → Innovative Behavior	0.093	[0.013, 0.172]	Supported
H7	Perceived Cohesion → Work Engagement → Innovative Behavior	0.114	[0.058, 0.178]	Supported

Table 6 shows work engagement serves as a medium that channels parts of career adaptability and perceived cohesion's positive influence on innovative behavior according to Table 6. The 0.093-point indirect relationship between career adaptability demonstrates that employees who handle workplace transitions well develop higher engagement levels that strengthen their innovative performance. Employee perception of cohesion as a team environment generates a strong indirect impact (0.114) on engagement that drives innovation performance. The calculated 95% confidence intervals demonstrate that contagious effects exist between the two paths since they both fail to include zero. Organizations aiming for improved innovation must create psychological engagement with work since this proves as a key intervening variable beyond developing adaptation skills and team cohesion.

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4.3.2. Moderation Effects

The study reveals critical boundary conditions that either strengthen or weaken the relationships between key variables. Leadership power distance emerged as a significant negative moderator, suppressing the positive effects of career adaptability and perceived cohesion on both work engagement and innovative behavior. Conversely, individual learning ability served as a positive moderator, amplifying these beneficial relationships. These findings highlight how organizational context and personal capabilities jointly shape employees' capacity to translate their resources into innovative outcomes.

Table 7.
Moderation Effects Analysis.

Hypothesis	Moderator	Moderated Relationship	β Coefficient	p-value	Result
Leadership Power Distance (Negative Effects)					
H8	Leadership Power Distance	Career Adaptability → Innovative Behavior	-0.286	<0.01	Supported
H9	Leadership Power Distance	Career Adaptability → Work Engagement	-0.511	<0.05	Supported
H10	Leadership Power Distance	Perceived Cohesion → Work Engagement	0.003	>0.05	Not Supported
H11	Leadership Power Distance	Perceived Cohesion → Innovative Behavior	-0.343	<0.01	Supported
Individual Learning Ability (Positive Effects)					
H12	Individual Learning Ability	Career Adaptability → Innovative Behavior	0.32	<0.05	Supported
H13	Individual Learning Ability	Work Engagement → Innovative Behavior	0.396	<0.01	Supported
H14	Individual Learning Ability	Perceived Cohesion → Innovative Behavior	0.26	<0.001	Supported

Table 7 shows how employees in power-distance organizational structures struggle more with innovation. They get less benefits from their career adaptability (H8, H9) and team member connections (H11) to produce desired results at work. The relationship between team cohesion and work engagement remains stable despite high power distance in organizations. Individual learning ability has shown exceptional power in boosting innovation by helping employees use their adaptability as well as their high engagement levels and strong team loyalty to produce new concepts. Students with better learning skills will enhance their productive ideas through work engagement by 0.396. Organizations need to lower organizational hierarchy and support learning habits to extract full creative capability.

Figure 1 effectively demonstrates how both organizational context (Leadership Power Distance) and personal capabilities (Individual Learning Ability) influence workplace relationships, with clear contrasts between their positive and negative moderating effects.

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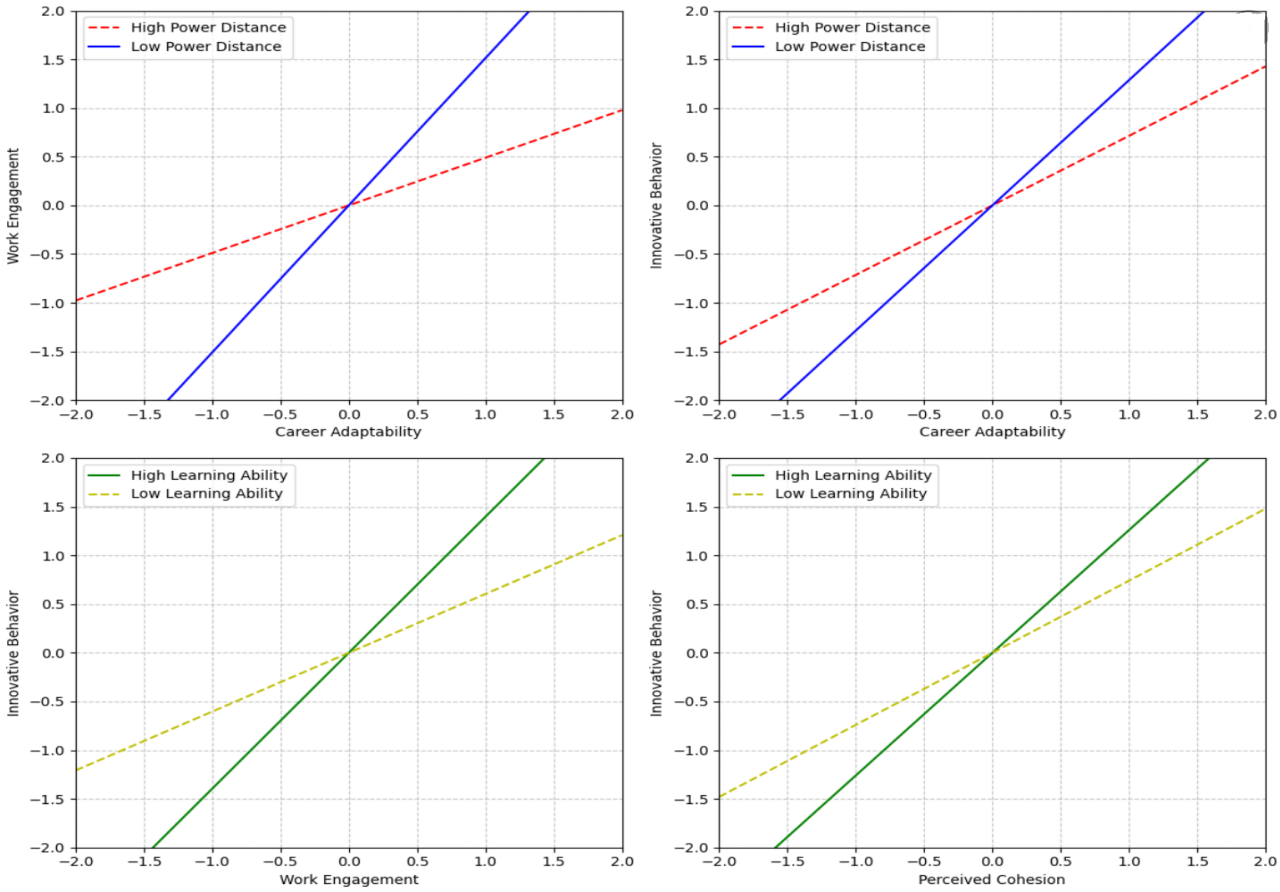

Figure 1.
Moderation Effects Analysis Leadership Power Distance and Individual Learning.

5. Discussion

Employee career adaptability together with perceived cohesion help increase innovative behavior according to this study while also establishing work engagement as the intermediary mechanism. The relationships between employee career adaptability and perceived cohesion and innovative behavior exist only under specific boundary conditions that include leadership power distance and individual learning ability. The research findings present detailed explanations about innovation motivation factors in R&D settings while studying China's unique workplace atmosphere. Research based on career construction theory [17] supports previous studies by proving that adaptable workers show superior problem-solving flexibility [16] through their positive relationship to innovative behavior ($\beta = 0.500$). The magnitude of our study's effect size surpassed values documented in Western research by Lee, et al. [18] which points to variations in the adaptability-innovation connection between Western and Chinese working cultures. Dynamic work environments prioritized by China probably account for these findings [22].

The work engagement mediation process (0.093) enhances the JD-R model by explaining how adaptability resources develop innovation capability through improved psychological commitment [13]. Researchers in Western contexts [12] observed stronger indirect relationships between variables yet Asian cultures value team commitment more than individual initiative based on their collective traditions. The negative relationship between power distance ($\beta = -0.286$) confirms [11] theoretical position regarding hierarchical obstacles to innovation within Asian organizational contexts. The study

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reveals that effective organizations with high power distance standards unintentionally diminish the innovative capabilities of adaptable staff members thus impacting Chinese digital transformation efforts [9].

The positive moderating effect of learning ability ($\beta = 0.320$) offers new insights into the innovation literature. The identification of learning as an antecedent to innovation by Zheng, et al. [8] has been expanded through our study to demonstrate its important function as a booster of adaptability advantages. Learning ability extends the concept of learning agility described by Adil, et al. [13] to demonstrate how adaptive capabilities get transformed into tangible innovative actions through employee learning abilities. Both the findings and research [4] reveal opposite effects yet the results from this study confirm that powerful social connections deflect the constraints of power distance in collectivist societies [10]. Cohesion works as an alternative mechanism when compared to individual adaptability within hierarchical organizations. The research provides three major theoretical contributions to the academic field. The study integrates adaptability resource research from career construction theory with innovation theory to show how adaptability resources generate innovative results. JD-R theory receives an advancement via this study which determines when engagement acts as a mediator. Power distance research receives extension through this study because it demonstrates how different innovation antecedents respond differently to power distance configurations.

5.1. Practical Implications

The research results present organizations with practical methods for improving staff innovation specifically when operating within R&D departments under Chinese hierarchical structures. Companies must create career advancement plans which teach adaptability abilities including resistance training and future-thinking career paths together with decreased hierarchical levels to minimize power differences between personnel.

The formation of trustworthy cohesive teams by managers will lead to better sustained engagement and innovative performance even within bureaucratic structures according to our study results. Continuing education programs like mentoring sessions and skills-based training sessions should receive top priority within HR policies because this advances staff ability to generate innovative solutions from their existing adaptability and engagement levels. Leadership training programs must teach employees to seek participation and maintain transparent communication as a way to reduce the negative impact of hierarchical distribution on innovation. Specification of initiatives must match R&D experts' essential requirements as they need both self-managing freedom and teamwork support to initiate organizational innovations. Organizations should implement holistic approaches to personal social and structural factors in order to create environments where career adaptability together with team cohesion optimally support innovation through improved work engagement.

6. Conclusion and Recommendations

The study demonstrates how employee career adaptability together with perceived cohesion both directly influence innovative behavior while work engagement mediates their relationship to innovative behavior. The research demonstrates how leadership power distance presents barriers but individual learning abilities enhance innovation between these variables. This study combines career construction theory and the JD-R model to generate valuable theoretical insights which provide practical revelations for organizations working in hierarchical cultural settings.

The research findings warrant three organizational strategies which include: first establish complete career development programs that build adaptive abilities of staff members with integrated flat organizational structures and leadership styles which promote participation. The establishment of authentic team cohesion through trust programs and cross-functional collaboration creates resilient teams because results show structural constraints have no impact. Third it is vital to establish constant learning environments which incorporate trained platforms alongside knowledge-sharing platforms to assist employees in transforming their adaptive capabilities into innovative results. Future researchers

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should investigate these relationships across various cultures and markets by using multi-period research designs to identify the causal sequences between them. Studying other potential mediation elements such as psychological safety and creative self-efficacy will enhance overall innovation process comprehensiveness. Organizations that focus on theoretical aspects and practical needs regarding human capital use will succeed in developing innovative solutions for competitive markets.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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