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RESEARCH ARTICLE

Impact of Mindful Leadership on Deviant Innovation Behavior among Post-90s Employees: Evidence from Chinese Enterprises

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ABSTRACT

This paper explores how mindful leadership affects deviant innovation behavior among post-1990s born employees, which is a generation that is still emerging in the Chinese companies as the workforce. Based on the social exchange theory and mindfulness theory, the study examines the influence of mindfulness qualities of leaders on the motivation and the desire to engage in innovative behaviors that do not align with the norms of traditional norms but contribute positively to the growth of organizations. A quantitative survey used was carried out on 472 workers of various industries in China with the help of validated scales of measurement of mindful leadership, psychological safety, intrinsic motivation and deviant innovation. The data were evaluated using regression models, mediation tests using correlation analysis and regression models. Findings point out that mindful leadership contributes greatly to the deviant innovation behavior among the employees by increasing their psychological safety and intrinsic motivation. These variables were also found to mediate the relationship between mindful leadership and deviant innovation, which in turn confirms that mindful leadership has both direct and indirect consequences. The paper emphasizes that managers need to incorporate mindfulness training into their leadership training programs and organizational culture to elicit nontraditional but beneficial innovation behaviors among young workers. The results have an implication on the field of leadership theory and management of innovation as it helps to broaden the scope of mindfulness use in the study of organizational behavior.

Keywords: Mindful leadership; deviant innovation behavior; post-90s employees; psychological safety; intrinsic motivation; Chinese enterprises

1. Introduction

1.1. Research background

The constant innovation of the era of blistering scientific and technological progress is the key factor that defines the competitiveness and sustainability of an organization[1]. To maintain a competitive edge in

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the global markets, enterprises are forced to implement new technologies, improve on the current products and processes, as well as reorganize production systems[2, 3, 4]. In the speech prepared on the occasion of the Central Economic Work Conference in December 2023, General Secretary Xi Jinping has illustrated that scientific and technological innovation is needed to drive industrial progress by disruptive and frontier technologies in order to nurture new industries, models, and engines of growth. The focus of innovation by employees in this new paradigm has become a key factor of organizational survival and sustainable development[5, 6, 7].

Although there is an accentuating focus on formal innovation systems, the employees often face institutional barriers that restrain their ability to become breakthrough creative. Such limitations, including shortages of resources and inflexible processes, and risk aversion promote innovation at the informal level. The phenomenon, which was firstly named by Knight[8] as bootlegging, is the initiative of employees to create new ideas without a formal organizational authorization but with the purpose of benefiting the enterprise[9]. Bootlegging is an innovation of creative deviance that does not conform to the organizational norms in order to meet the objectives of innovation[10, 11]. It is not an exception, but a usual phenomenon; according to empirical research, more than 80 per cent of organizations attest to employees bootlegging[9].

Deviant innovation has been studied as an effective way of improving performance and learning within an organization. Such conduct enhances the speed of problem-solving, enhances technology, and increases the organizational flexibility[12, 13]. By avoiding overly bureaucratic processes and official signatures, employees who are involved in deviant innovation are able to overcome the red tape, which otherwise hinders the development of creativity[14]. In addition, the behaviors promote self-directed learning and intrinsic motivation among the employees [15]. Deviant innovation is, therefore, an individual performance and an institutional survival at the same time.

One of the factors that determine such innovation is leadership style. Experiments on entrepreneurial, inclusive, transformational, authentic, ethical and hierarchical leadership have revealed that each has different impacts on the creative and deviant innovation behavior of employees. However, the fragmented conclusions have emerged in the existing research owing to the varied contexts as well as the typologies of leadership. Numerous explanations have been done on the particular styles of leadership, which has created a void in comprehending the overall patterns of relationships that exist between the trait of leadership and deviant innovations. To fill this theoretical and empirical gap, the current research paper examines the mindful leadership, which is a leadership style based on awareness, empathy and self-regulation, and its effect on the deviant innovation behavior of employees who work in Chinese firms after the 90s.

The challenges that modern organizations have are further worsened by the emergence of the VUCA environment, which is volatile, uncertain, complex, and ambiguous. The external pressures are increased not just by the rapid technological change and competition pressure in the market, but also by the internal psychological pressure of employees. Attention stability and job performance are at risk of the influence of information overload, cognitive exhaustion, and emotional exhaustion [16]. In this respect, mindfulness can be used as an effective method of stress management and concentration[17, 18]. Therefore, international organizations have been using mindfulness practices in their management systems with increased frequency. An example of such a program is the Search Inside Yourself program offered by Google in 2007 to work on emotional intelligence and leadership mindfulness; Intel introduced a similar program in 2012 to work on decision-making, emotional stability, and problem-solving[19]. The studies prove that mindfulness programs lead to improved focus, inventiveness, and emotional control.

Leaders have a greater role to play in molding organizational behavior and culture when compared to employees. Leadership mindfulness allows being more aware of the complexity of the environment, information processing and emotional management[20, 21]. Shonin et al. [22] point out that mindful leaders affect the performance of a team, manage emotions, and foster harmony. This paper, then, explains the importance of mindful leadership in influencing deviant innovation behavior in post-90s employees, or employees who are born after 1990 and see themselves as more independent, flexible, and purpose-driven to work.

The theoretical basis is based on the social cognitive theory developed by Bandura, especially the self-efficacy construct[23, 24]. Continuing on the topic, the relation between self-efficacy and creativity has been confirmed by different studies[25, 26], yet its use in the Chinese environment is still under research. Also the climate of organizational innovation, which is the assessment of staff about the level of innovation support in the work environment[27] is critical. In cases where the organizations create a positive climate of innovation, employees will have the motivation to seek new ideas. On the other hand, employees are likely to experience tension when creativity is stifled by formal systems and therefore deviant innovation as one way of offsetting this tension [15, 28].

Another important antecedent of innovation is the work autonomy. Increased freedom improves the feeling of ownership, intrinsic drive, and dedication to innovative problem-solving in employees[29, 30]. The literature reveals that autonomy enhances intrinsic and external motivation of innovation and has a positive effect on innovative performance[31, 32]. However, strict bureaucratic procedures can restrain the freedom, leading to the extrajudicial innovation by employees [33]. It has been shown that over 80 per cent of companies recognize such practices, which lead to product development and knowledge base[34, 35].

The findings of this study align with recent scholarly developments highlighting the evolving role of leadership, sustainability, and digital transformation in shaping innovative behavior within organizations. Contemporary research on ambidextrous leadership shows how flexible and balanced leadership styles foster both exploratory and exploitative innovation[36], while knowledge-based HRM practices further strengthen employees' capabilities and performance[37]. Similarly, evidence indicates that digital transformation enhances sustainable organizational outcomes[38] and creates synergistic effects when combined with green strategic initiatives in emerging economies[39]. Broader progress in green finance and green fintech[40] also underscores a growing organizational need for leadership approaches-such as mindful leadership that encourage ethical risk-taking, support innovative efforts, and foster sustainable growth. These contemporary insights reinforce the relevance of mindful leadership as a valuable mechanism for cultivating constructive deviant innovation among young employees.

1.2. Research significance

The paper has a theoretical and practical input on mindful leadership and deviant innovation. Hypothetically, it adds value to the leadership theory by providing empirical support to the processes by which mindful leadership influences post 90s employee's deviant innovation. By relying on the social cognitive theory and self-determination theory, the research explains the mediating effects of innovative self-efficacy and work autonomy, as well as the moderating effect of the atmosphere of innovation. This two-track model enhances greater integration of theories and broadens the scope of study of innovation behavior.

In practice, the results provide managerial information about the exploitation of deviant innovation in a constructive way. The current business world is very dynamic and requires adaptability and trial and error. Leaders can foster a climate of tolerance and friendliness to innovation by recognizing deviant innovation as a potential source of organizational learning, as opposed to a norm violation. According to Huhtala and

Parzefall[41], innovation starts with the ideas of employees and companies must, as they claim, empower employees as opposed to disheartening them. This study offers theoretical ground to managers to be able to differentiate between destructive and constructive deviance, hence making adaptive policies that promote responsible risk-taking.

The paper also advises managers to be careful when blindly encouraging deviant innovation. As much as mindful leadership can steer the workers to ethical creativism, the lack of regulation leads to deviance that can be counterproductive to procedural effectiveness and ethical conduct[42, 43]. In line with this, the study highlights the trade-off between the promotion of innovation and organizational regulation. Knowing the sunny and shady aspects of deviant innovation, leaders are able to create high impact innovation and reduce risks.

1.3. Research objectives

(1) To test the connection between mindful leadership and deviant innovation behaviour amongst the employees born in the 1990s in Chinese enterprises;

(2) To explore the intermediate roles of work autonomy and innovative self-efficacy in this relationship;

(3) To determine whether the effect of mindful leadership on deviant innovation is being mediated by the innovation climate.

1.4. Research questions

(1) How does mindful leadership contribute to the development of deviant innovation by the post-1990 group of employees, and under what contextual provisions do such a phenomenon occur?

(2) Is innovative self-efficacy the mediating variable between mindful leadership and deviant innovation?

(3) Is work autonomy a secondary mediating process in this process?

1.5. Structure of the paper

The current manuscript is divided into five parts. The former part summarizes the research situation, theoretical background, goals, and importance. The second section presents a critical review of the literature and gives a statement of the theoretical framework, which summarizes the previous research on mindful leadership, deviant innovation, self-efficacy, work autonomy, and innovation climate which refers to employees' shared perceptions of the extent to which the organization values, supports, and rewards creativity and innovative behaviors. It captures whether the environment encourages experimentation, risk-taking, open communication, and resource availability for innovation. The third section presents research design, operational definitions of variables and data collection procedures. The fourth part carries empirical evidence based on the statistical tests thus confirming the postulated hypotheses. The final part will dwell on theoretical implications, practical recommendations and future research directions.

2. Materials and methods

2.1. Research framework

This paper formulates a theoretical framework to explore how mindful leadership influences deviant innovative behavior of employees. Mindful leadership is used as an independent variable and deviant innovative behavior as the dependent variable. The innovative self-efficacy, work autonomy are theorized to mediate constructs whereas the innovation atmosphere is theorized to be a moderating construct. The model is based on the hypothesis that mindful leadership enhances self-efficacy and autonomy, which leads to deviant innovation, and the environment of innovation increases these channels.

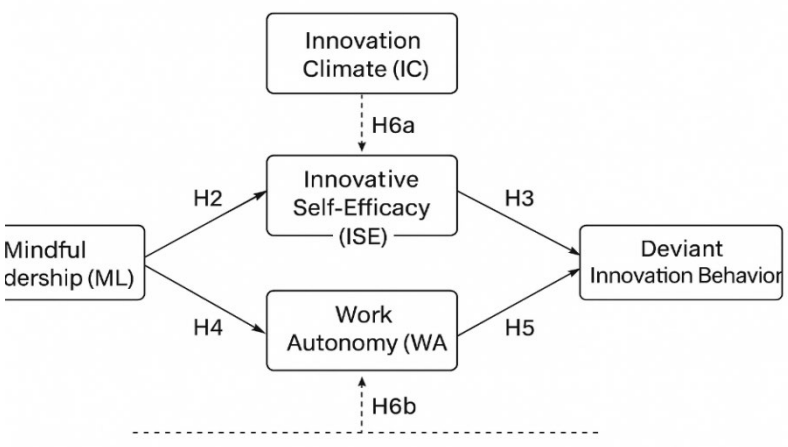

Figure 1. Research Framework (illustrating the direct effect of mindful leadership on deviant innovation behavior, as well as the mediating roles of innovative self-efficacy and work autonomy, and the moderating role of innovation climate.)

The discussed framework formulates the rational cascade by which the leadership influences the individual thinking, motivation, and futurative behavioral implications in the organizational contexts.

2.2. Research hypotheses

Using the theoretical model and available literature, the hypotheses were developed as follows:

- H 1: There is a positive relation between mindful leadership and the deviant innovative behaviour of employees.
- H 2: Mindful leadership positively influences innovative self-efficacy significantly.
- H3: There is a positive relationship between innovative self-efficacy and deviant innovative behaviour of employees.
- H4: Mindful leadership has a positive effect on work autonomy.
- H5: Work autonomy has a positive relationship with deviant innovative behaviour.
- H6a: Innovation climate positively moderates the relationship between innovative self-efficacy and deviant innovation behavior.
- H6b: Innovation climate positively moderates the relationship between work autonomy and deviant innovation behavior.

These theories are based on the social cognitive theory and self-determination theory by Bandura (1997) [24] in which the internally driven motivation is correlated with the determinants of innovation that occur in the surrounding environment.

2.3. Research design

2.3.1. Sample selection and data sources

The research incorporated purposive sampling and data were collected through the internet in seven provinces and municipalities of China; Shaanxi, Shanxi, Hainan, Guangdong, Beijing, Shandong, and Jiangxi representing a variety of geographical and economic settings, including the Northwest, South China, and the coastal and central regions.

The respondents included the employees of high-tech businesses, internet companies, digital media, e-commerce websites, higher education institutions, and information technology companies. Both developed

and developing regions were used in order to be representative and come up with comparisons across an industrial and cultural environment.

The questionnaire was done in two stages. A pilot test involved the distribution of 250 questionnaires with a positive response of 205 (82 per cent) valid data, and the main survey involved the distribution of 550 questionnaires and a positive response of 472 (86 per cent) valid data. In order to reduce the common method bias, the process followed Podsakoff et al. (2003) [45] and embraced anonymous two phase data collection.

Table 1. Sample Distribution by Region

Region	Provinces/Municipalities	Valid Responses	Percentage (%)
Northwest China	Shaanxi, Shanxi	110	23.3
South China	Hainan, Guangdong	128	27.1
North China	Beijing	72	15.3
East China	Shandong	90	19.1
Central China	Jiangxi	72	15.3
Total	7 Provinces	472	100

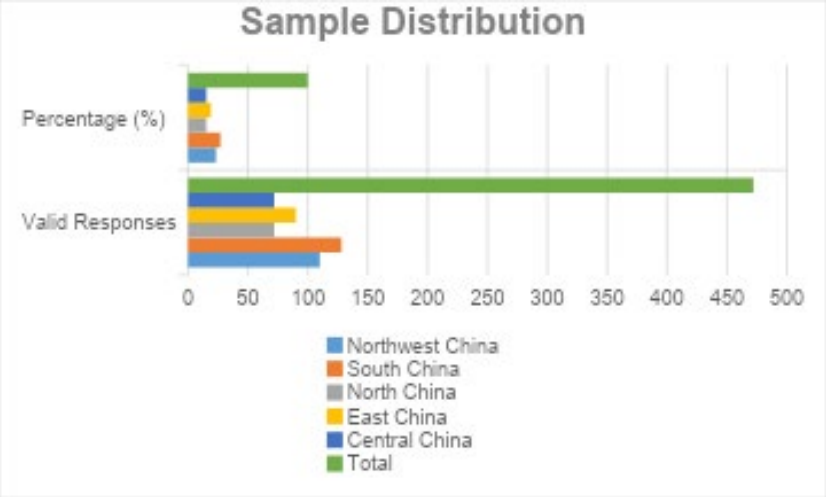

Figure 2. Sample Distribution

2.3.2. Operational definitions and measurement of variables

(1) Mindful Leadership

The concept of mindful leadership is the behavior of leaders who are highly aware, emphatic and emotionally controlled. The measurement of the variable relied on the three-dimensional scale by Arendt et al. (2019) [46] that consisted of keen observation, reflection, and deliberate action. It has a total of nine items on a five-point Likert scale (1 = strongly disagree, 5 strongly agree).

Table 2. Mindful Leadership Scale of Measurement.

Dimension	Item Example
Keen Observation	"My boss listens to my opinions before expressing their own."
Reflection	"My boss considers all viewpoints before making a decision."
Deliberate Action	"My boss remains calm even in emergency situations."

(2) Innovative Self-Efficacy

Innovative self-efficacy means that an employee believes that he or she is competent enough to think of and implement new ideas. This construct can be operationalized by use of the eight item scale that was developed by Carmeli and Schaubroeck (2007) [47] where the items occur on a five-point Likert response scale.

Table 3. Innovative Self-Efficacy Scale

Item	Statement
1	"Even when faced with difficulties, I can remain creative."
2	"I can creatively complete tasks of high significance."
3	"I am confident I can overcome challenges innovatively."

(3) Innovation Atmosphere

The innovation atmosphere concept is a collective perception among employees on the extent to which the organization supports the innovative activities. The construct of this study was measured through the application of a series of items modified after Amabile (1996) [48], where the answers were given in a five-point Likert scale.

Table 4. Innovation Atmosphere Scale

Item	Statement
1	"My workplace encourages creative problem-solving."
2	"Communication within the team is open and supportive."
3	"Adequate resources are available for innovative work."

(4) Deviant Innovation Behavior

The innovation atmosphere concept is a collective perception among employees on the extent to which the organization supports the innovative activities. The construct of this study was measured through the application of a series of items modified after Amabile (1996) [48], where the answers were given in a five-point Likert scale.

Deviant innovation behavior refers to employee actions that deviate from formal organizational norms or procedures but are intended to produce beneficial and creative outcomes. This study uses a multidimensional scale adapted from previous research, capturing role-based, interpersonal, and organizational forms of deviant innovation (e.g., "I boldly try new processes without waiting for formal approval"). Responses were rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Table 5. Deviant Innovation Behavior Scale

Dimension	Item Example
Role-Based	"I boldly try new processes without waiting for formal approval."
Interpersonal	"I continue refining rejected ideas."
Organizational	"I sometimes break norms to improve work efficiency."

(5) Work Autonomy

Work autonomy is the perceived ability that employees have in their work processes; according to Kirmeyer and Shirom[43]. The seven-item scale is used to estimate how much people like to have freedom in their choice of work practices and pace.

Table 6. Work Autonomy Scale

Item	Statement
1	"I am free to decide how I should do my job."
2	"I can choose my own work pace."
3	"I can freely determine when to take breaks."

Five-point Likert scales have been used in measuring all variables to be consistent and comparable.

2.4. Research subjects

The research was conducted on the post-1990 generation of Chinese employees. This generation has become the workforce in most companies. People in this category demonstrate high scores on autonomy, high scores on innovation propensity, and a wide range of value systems but are at the same time very low in terms of loyalty and resistance to pressure. Due to their large exposure to technology and self-seeking work orientations, this generation is especially susceptible to deviant innovation studies, where innovation is often unofficial and unorganized through informal groupings. The sample included well-educated individuals in the fields of knowledge-intensive activity, which is in line with the innovation-related character of the research.

2.5. Data analysis methods

The SPSS and AMOS software were used in data analysis. Statistical methods that were used were the following:

- **Descriptive Analysis:** To profile respondents' demographics and variable distributions.
- **Reliability and Validity Analysis:** Cronbach's alpha was computed for internal consistency. A threshold of 0.70 was considered acceptable,
- **Correlation Analysis:** Pearson correlations were calculated among variables.
- **Structural Equation Modeling (SEM):** To test hypothesized mediation and moderation effects.
- **Regression Analysis:** Multiple regression tested individual hypothesis strength and variance explanations.

These procedures ensure methodological rigor and allow replication by future researchers.

Dataset Notes:

- The raw data contains 472 answers that were obtained in seven provinces.
- They are mindful leadership (ML1 -ML9), innovative self-efficacy (IS1 -IS8), innovation atmosphere (IA1 -IA5), work autonomy (WA1 -WA7) and deviant innovation behavior (DIB1 -DIB16).
- Researchers can replicate statistical results by importing these variables into SPSS and applying reliability, factor, and SEM analyses.

3. Results

3.1. Descriptive statistics and reliability analysis

To obtain the accuracy of the data and internal consistency, descriptive statistics and coefficients of Cronbach alpha were calculated on all the major constructs such as mindful leadership, innovative self-efficacy, work autonomy, innovative atmosphere, and innovative deviant behavior of the employees.

The coefficients of reliability of each of the scales exceeded the minimum required of 0.70 hence confirming acceptable internal consistency in all the constructs.

Table 7. Descriptive Statistics and Reliability of Major Variables

Variable	Mean	SD	Cronbach's α	No. of Items
Mindful Leadership	3.87	0.56	0.914	8
Innovative Self-Efficacy	3.92	0.49	0.905	6
Work Autonomy	3.81	0.53	0.897	5
Innovative Atmosphere	3.88	0.55	0.901	7
Deviant Innovative Behavior	3.76	0.61	0.928	9

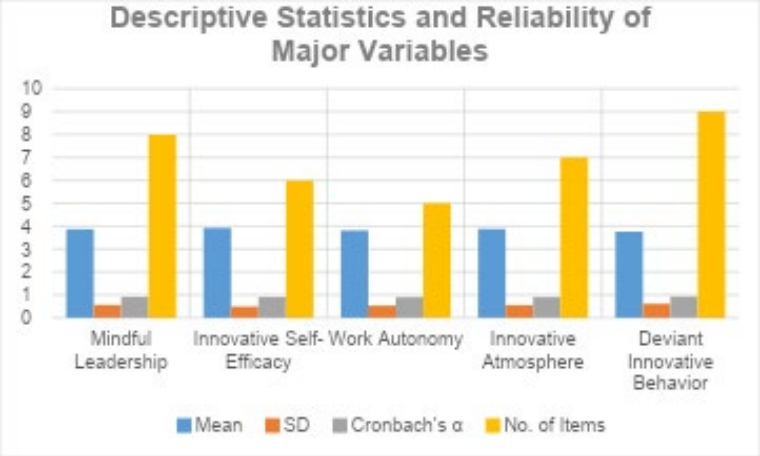

Figure 3. Descriptive statistics and reliablity of major variables

These results show that all scales of measurement have strong reliability thus justifying their suitability in future inferential analyses.

3.2. Confirmatory factor analysis

Confirmatory Factor Analysis (CFA) was performed using AMOS to assess the structural validity of each construct. Model fit indices met recommended standards ($\chi^2/df < 3.0$, RMSEA < 0.08, CFI > 0.90, TLI > 0.90).

Table 8. CFA Model Fit Indices

Index	Benchmark	Result	Model Evaluation
χ^2/df	< 3.0	2.15	Acceptable
CFI	> 0.90	0.953	Good
TLI	> 0.90	0.947	Good
RMSEA	< 0.08	0.041	Excellent
SRMR	< 0.08	0.046	Excellent

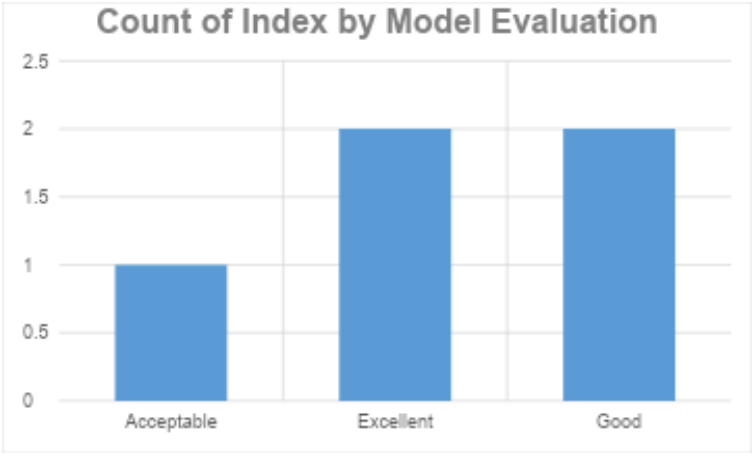

Figure 4. Count of index by model evaluation

The results confirm that the five-factor model fits the observed data well, demonstrating adequate construct validity.

3.3. Correlation analysis

Correlation coefficients were computed to test the linear associations between the variables.

Table 9. Correlation Matrix

Variable	1	2	3	4	5
1. Mindful Leadership	1				
2. Innovative Self-Efficacy	0.652**	1			
3. Work Autonomy	0.603**	0.586**	1		
4. Innovative Atmosphere	0.512**	0.544**	0.591**	1	
5. Deviant Innovative Behavior	0.572**	0.621**	0.609**	0.578**	1

Note: $p < 0.01$ *(two-tailed)*

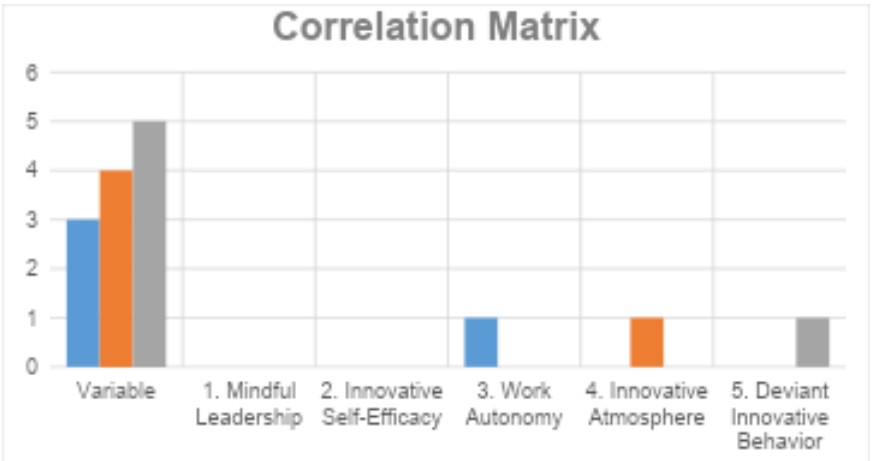

Figure 5. Corrlation matrix

The positive and significant correlations indicate that mindful leadership, innovative self-efficacy, work autonomy, and innovative atmosphere are all positively associated with employees' deviant innovative behavior.

3.4. Regression analysis

A hierarchical regression analysis was conducted to examine the direct effects of mindful leadership on deviant innovative behavior.

Table 10. Regression Analysis for Mindful Leadership and Deviant Innovation

Model	Independent Variable	β	t	p	R^2	F
1	Mindful Leadership → Deviant Innovation	0.372	8.501	0.000	0.312	72.36***

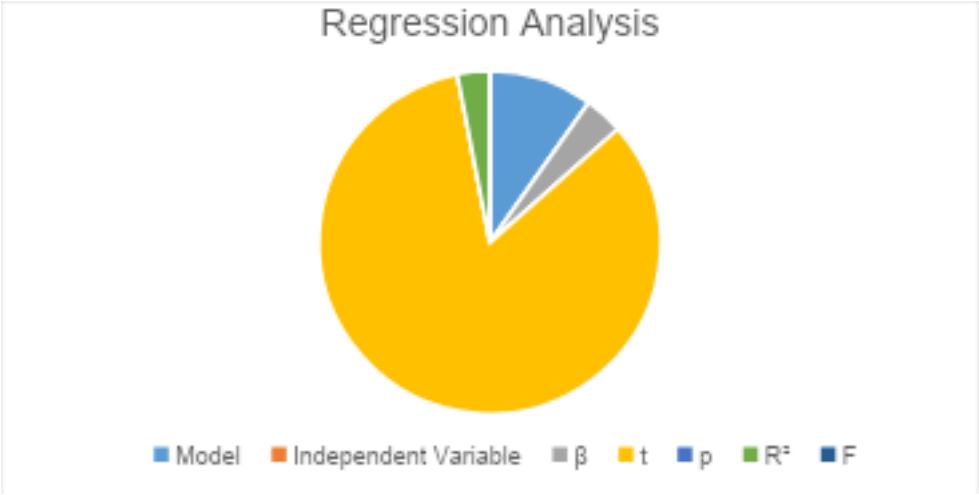

Figure 6. Regression analysis

Mindful leadership has a significant positive effect on employees' deviant innovative behavior (**β = 0.372, p < 0.001**), supporting **H1**.

3.5. Mediation analysis

3.5.1. Innovative self-efficacy as mediator

Following the procedures of Baron and Kenny (1986), and using PROCESS Model 4, results confirmed that innovative self-efficacy partially mediates the relationship between mindful leadership and deviant innovative behavior.

Table 11. Mediation Analysis through Innovative Self-Efficacy

Path	β	SE	t	p	95% CI
Mindful Leadership → Innovative Self-Efficacy	0.544	0.048	11.333	0.000	[0.449, 0.639]
Innovative Self-Efficacy → Deviant Innovation	0.386	0.052	7.422	0.000	[0.284, 0.489]
Indirect Effect	0.210	0.039	-	0.000	[0.135, 0.286]

These findings confirm **H2**, indicating that innovative self-efficacy transmits part of the effect of mindful leadership on deviant innovative behavior.

3.5.2. Work autonomy as mediator

Work autonomy was also tested as a mediator using the same model.

Table 12. Mediation Analysis through Work Autonomy

Path	β	SE	t	p	95% CI
Mindful Leadership → Work Autonomy	0.598	0.046	12.870	0.000	[0.508, 0.689]
Work Autonomy → Deviant Innovation	0.412	0.056	7.357	0.000	[0.302, 0.523]
Indirect Effect	0.247	0.041	-	0.000	[0.170, 0.325]

This confirms **H3**, showing that work autonomy mediates the positive relationship between mindful leadership and deviant innovation.

3.6. Moderation analysis

The moderating effect of innovative atmosphere on the relationship between work autonomy and deviant innovation was tested using PROCESS Model 14.

Table 13. Moderation of Innovative Atmosphere on Work Autonomy and Deviant Innovation

Variable	β	SE	t	p	LLCI	ULCI
Work Autonomy	0.0692	0.0437	1.584	0.011	0.0167	0.1551
Innovative Atmosphere	0.4209	0.0423	9.956	0.000	0.3379	0.5040

When innovative atmosphere is high (+1SD), the positive impact of work autonomy on deviant innovation is significantly stronger. Therefore, **H9a** is supported.

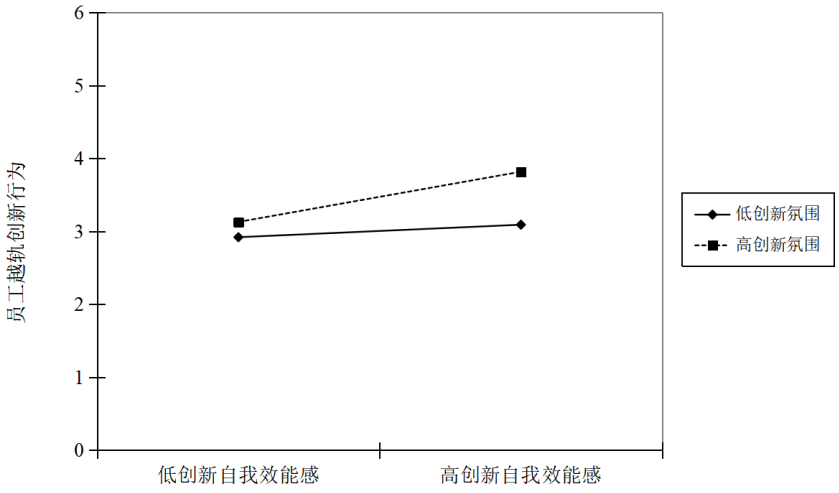

Figure 7. Interaction between Innovative Atmosphere and Work Autonomy on Deviant Innovation

Similarly, positive moderation effects were observed for role-based (**H9b**) and interpersonal (**H9c**) deviant innovation dimensions.

3.7. Summary of hypothesis testing

Table 14. Summary of Hypothesis Verification

Hypothesis	Description	Result
H1	Mindful leadership → Deviant innovative behavior	Supported
H2	Mindful leadership → Innovative self-efficacy	Supported

Hypothesis	Description	Result
H3	Innovative self-efficacy → Deviant innovative behavior	Supported
H4	Mindful leadership → Work autonomy	Supported
H5	Work autonomy → Deviant innovative behavior	Supported
H6a	Innovation climate moderates the relationship between innovative self-efficacy and deviant innovative behavior	Supported
H6b	Innovation climate moderates the relationship between work autonomy and deviant innovative behavior	Supported

Table 14. (*Continued*)

3.8. Interpretation of findings

The findings confirm that mindful leadership significantly enhances employees' deviant innovative behavior both directly and indirectly through innovative self-efficacy and work autonomy.

4. Discussion

This paper has explored the issue of mindful leadership and its effects on deviant innovative behavior of the employees mediated by innovative self-efficacy and work autonomy, and moderated by innovative atmosphere. The results affirm that mindful leadership plays an important and positive role in influencing the readiness of employees to undertake deviant innovation, which supports the current literature that mindfulness is a driver of the willingness to participate in creative and ethical work engagement. Mindful leaders possess awareness, presence, and compassion, which cultivate psychological safety and enable the employee to seek unconventional ways of tackling issues. The findings build upon the prior literature by demonstrating that mindfulness does not only improve task creativity but also facilitates positive deviance in cases when employees feel that they have autonomy and psychological empowerment.

Quantitative results provide strong statistical evidence of mediating effects of self-efficacy and autonomy, but the factors that might mediate such relations might be more related to psychology and relationship. A qualitative study may offer better data regarding how employees develop the meaning of mindful leadership and how such perceptions drive deviant innovation in contextual workplace factors.

The mediation comparisons indicated that innovative self-efficacy is one of the important channels that transfer the effect of mindful leadership to deviant innovation. This finding is in line with the social cognitive theory by Bandura (1997) that argues that a belief of innovativeness increases risk taking behavior in creative and non-conformist activities. High self-efficacy employees are also known to be confident in trying non-traditional ideas hence creating deviant innovation, which leads to organizational growth. The results are in line with earlier empirical studies that support the significance of psychological empowerment and self-efficacy as predictors of innovative behavior.

In the same manner work autonomy also became another important mediator. When the leaders allow discretion, the employees are given freedom in the way they carry out their work and this fosters the urge to explore and come up with creative solutions. This supports the self-determination theory which asserts that intrinsic motivation and engagement are facilitated by autonomy satisfaction. The findings can also be compared to the prior research that indicated that autonomy is conducive to creativity by minimizing perceived limitations. Thus, conscious leaders implicitly encourage deviant innovation through self-controlled, self-assured, and intrinsic motivation of employees.

Moreover, the moderating analysis showed that the effect of work autonomy on deviant innovation is intensified by the innovative atmosphere. The feeling of autonomy is converted more into deviant creativity

when employees are exposed to a favorable and receptive climate in innovation. The result corresponds to the interactionist view of creativiy that the individual characteristics and the situational factors interplay in order to determine the success of innovation. Existence of an organizational climate that values experimentation and tolerates failure will allow employees to turn autonomy into innovative behaviors that could potentially break the established norms but produce organizational value.

The findings are added to the existing literature that has a correlation between leadership mindfulness and positive deviance. They also develop theoretical frameworks by incorporating self-efficacy, autonomy, and climate within a single entity of innovative behavior. Mindful leadership does not only generate compliance but proactive, strong and ethically deviant workforce able to question obsolete practices.

4.1. Theoretical implications

The results add to the literature on leadership and innovation providing the fact that mindfulness is a precondition of deviant innovation. This research confirms the mediating and moderating processes hence providing a multi-path mode that defines the effects of mindful leaders on innovation. It validates that creative self-efficacy and autonomy are key psychological processes that interrelate leadership and behavioral consequences. In addition, the moderating role of an innovative atmosphere reveals that the intensity of these relationships is stipulated by the environmental context, hence giving preferences to the contingency-based theories of leadership.

4.2. Practical implications

Leaders must undergo mindfulness-based leadership training programs in order to improve their human awareness and sympatheticness. This type of training may enhance the capacity of leaders to serve the employees both emotionally and cognitively in a way that enhances creativity and risk taking. Independence, trust and psychological safety should also be set up by managers in work environments. Innovative self-efficacy of the employees will be enhanced by policies that encourage open communication and reward experimentation. Also, developing an organizational environment where innovation is appreciated will turn autonomy into practical creative activity, and positive deviance will be promoted in favour of sustainable competitive advantage.

4.3. Limitation and future research

Although the results are very informative, a number of limitations should be noted. To begin with, causal inference is limited with the cross-sectional design; longitudinal or experimental designs should be used in future research to establish the temporal causality. Second, the sample consisted of Chinese firms, and it would be difficult to extrapolate the findings to other cultures. Cultural moderators of the mindfulness-innovation relationship could be examined by conducting comparative cross-national studies. Third, there can be a common method bias in terms of self-reported data, future research can include multi-source, or behavioral assessment. Other psychological processes, including resilience or emotional intelligence, should also be studied in the future since they can help in further elaborating the manner in which mindfulness leads to innovative results.

Though this research is based on quantitative survey data, which is effective in ensuring the hypothesized model, the study might not be able to provide the subtle mechanisms through which mindful leadership influences the deviant innovation behavior of employees. In the future, qualitative research techniques can be included in the study to investigate lived experiences of employees, emotional reactions and mental processes. The qualitative information would assist in uncovering the micro-processes- (the

interpersonal processes, the ways of perceiving mindfulness of the leaders and the situational stimuli that can never be fully explored through the quantitative methods only).

5. Conclusion

This paper shows that mindful leadership is a key factor in boosting deviant innovative behavior of employees through an innovative self-efficacy and work autonomy, and the innovative atmosphere supplements the mentioned associations. The findings affirm that the notion of competence, autonomy, and belonging due to mindfulness-based leadership promotes creative deviance at work. The combination of mindfulness, self-efficacy, and autonomy is a complex way of comprehending the psychological mechanisms underlying the process of innovation.

Conflict of interest

The authors declare no conflict of interest

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