



## RESEARCH ARTICLE

## The Affect Mechanism of Environmental Munificence on Entrepreneurial Improvisation in Heilongjiang Province, China

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ARTICLE INFO	ABSTRACT
Received: Oct 14, 2024 Accepted: Nov 27, 2024	<p>Improvisational behavior is the key to entrepreneurial success, and a relaxed entrepreneurial environment is related to entrepreneurial improvisation. Therefore, based on the triadic reciprocal determinism, a sample of 816 entrepreneurs in Heilongjiang Province, China, was collected through a web-based questionnaire using a purposive sampling method to examine the relationship between environmental munificence and entrepreneurial improvisation, as well as the facilitating effects of future self-continuity and belief in community of shared future for mankind community. The results confirm for the first time that environmental munificence is positively related to entrepreneurial improvisation. That future self-continuity and belief in community of shared future for mankind have a facilitating effect between the two. This suggests that entrepreneurs in Heilongjiang Province, China, need a relaxed entrepreneurial environment, continuity between the present and future selves, and the link between common human beliefs, to fully stimulate entrepreneurial improvisation. Finally, the findings provide important insights for improving entrepreneurial improvisation.</p>
<b>Keywords</b>	
Environmental munificence Entrepreneurial improvisation Future self-continuity Belief in community of shared future for mankind	
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### INTRODUCTION

In today's business environment, where constant change is central to survival, the environment has a huge impact on the survival and growth of entrepreneurial ventures (Dahan & Shoham, 2023; Gorondutse, 2023; Kabue, Kilika, & Waithaka, 2023). Faced with high levels of uncertainty and unexpected business opportunities and challenges in the entrepreneurial process, entrepreneurial firms often lack available insights or pre-established models to follow (García, Ramos, & Soto, 2023; Skandera, McKenny, & Combs, 2023; Zhang et al., 2024). Traditional entrepreneurship, on the other hand, can limit a firm's flexibility and creativity and is not effective in helping it navigate difficult times or seize fleeting opportunities (Debrulle et al., 2023; Duque & Lado, 2023; Patel, Wolfe, & Guedes, 2023; Qadri, et al., 2024). In this context, entrepreneurial firms are in dire need of new ways of thinking to help them quickly capitalize on emerging opportunities and respond to unexpected situations in a timely and effective manner (Tapinos, Leask, & Brown, 2023; Xie, 2023; Yu et al., 2023). Previous research suggests that firms that can flexibly and quickly adjust their strategic approaches to environmental changes can more easily and adequately build competitive advantage (Júnior &

Pereira, 2023; Restuti et al., 2023; Huang & Xiao, 2023). Entrepreneurial firms are often faced with the dilemma of having to quickly respond to unexpected events and constantly adapt their strategies to be competitive, but are too short-sighted and lack the resources to make changes (Bendig et al., 2024; Ding & Liu, 2024; Fatima & Elbanna, 2023). Entrepreneurial improvisation - where firms merge the creation and execution of solutions to address problems immediately and creatively (Conz et al., 2023; Shah, Gul, & Obaid, 2023; Vera & Crossan, 2023; Jam et al., 2014), - will help startups bridge the gap between what they already have planned and the solutions that are needed for the situation (Conz et al., 2024; Ding & Liu, 2024; Fatima & Elbanna, 2023). will effectively help startups bridge the gap between existing plans and context-specific solutions, and more effectively manage the impact of environmental changes and unexpected opportunities (Liu, Zhou, & Wang, 2023; Luo, Mai, & Ye, 2023; Sun et al., 2023). The prevalence of improvisation in entrepreneurship and its significance for firm development has been widely established (Akhtar & Mohamad, 2024; Chetty et al., 2024; Hu, Ahmed, & Su, 2023). However, research on entrepreneurial improvisation is still in its infancy and there is a particular lack of exploration of improvisation in entrepreneurial contexts (Feng & Chen, 2024; Pisotska & Gurses, 2023; Ruiz & Shelton, 2023). In addition, Miner et al. (2024) highlight that entrepreneurial improvisation, which occurs more frequently and is relied upon more, exhibits which patterns are unique to entrepreneurial contexts and is a question that current improvisation research urgently needs to answer.

On the other hand, environmental turbulence is strongly linked to entrepreneurial improvisation (Hu et al., 2018). Entrepreneurial improvisation is related to cognition and perception (Jalam & Adamu, 2021; Jia et al., 2023). However, it is not clear how environmental munificence relates to entrepreneurial improvisation and whether the relationship is affected by future self-continuity and belief in community of shared future for mankind.

In addition, Heilongjiang Province is located in the north of China, and the regional economy has been on a long-term downward trend, especially in recent years (Song et al., 2023; Zhang, Cong, & Luan, 2023; Zhao, Deng, & Liu, 2024). Therefore, it is crucial to stimulate and help entrepreneurs start their businesses, which will greatly help to revive the local economy (Du et al., 2023; Huo & Huang, 2023; Tang, Song, & Zou, 2024a).

Therefore, the purpose of this study is to investigate the level of environmental munificence in Heilongjiang Province, China, as well as to observe their perceptions of entrepreneurial improvisation and the facilitating effects of future self-continuity and belief in community of shared future for mankind. Clarifying these relationships will be beneficial to further enhance the development of the theory of entrepreneurial improvisation, as well as the future economic development of Heilongjiang Province, China.

## **2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

### **2.1 Triadic Reciprocal Determinism**

Bandura's (1989) *triadic reciprocal determinism* suggests that individuals, environments, and behaviors can be independent of each other, yet influence each other. On the other hand, entrepreneurial improvisation is defined as the behavior of an individual who reacts spontaneously and instantly to unexpected events (Cunha et al., 1999), categorized as behavior. In addition, environmental munificence is described as the scarcity or abundance of resources available in the environment and needed by the firm (Zhao, Mei, & Wan, 2010), categorized as the environment. On the other hand, future self-continuity is defined as an individual's perception of the degree of continuity and congruence between his or her present and future selves (Zhang et al., 2022), categorized as perception. As well, the belief in community of shared future for mankind is defined as an individual's perception of the state of global human coexistence and destiny (Wang et al., 2021), which is categorized as a cognitive belief. Thus, the interaction of perceived future self-continuity

with cognitive belief in community of shared future for mankind and environmental munificence as environmental factor will influence entrepreneurial improvisation.

## **2.2 Entrepreneurial Improvisation**

Entrepreneurial improvisation is a spontaneous and immediate response by individuals to unexpected events (Cunha et al., 1999). Compared to general entrepreneurial behavior, entrepreneurial improvisation has two distinctive features: on the one hand, it is unplanned, i.e., entrepreneurial improvisation is an unplanned behavior (Chen et al., 2023); and on the other hand, it is rapid and immediate, i.e., the design and implementation of solutions are at short intervals or even integrated (Miner & O'Toole, 2024).

## **2.3 Environmental Munificence and Entrepreneurial Improvisation**

The definition of entrepreneurial improvisation has been described as the behavior of an individual to react spontaneously and instantly to unexpected events (Cunha et al., 1999). On the other hand, environmental munificence is considered as the degree of scarcity or abundance of resources available in the environment and needed by the firm (Zhao et al., 2010). Research has shown that environmental turbulence is strongly linked to entrepreneurial improvisation (Hu et al., 2018). As stated by Charoensukmongkol (2022), Moradi, Rezaeian and Hamidifar (2022), and Xiong (2022), entrepreneurial improvisation is highly dependent on the resources provided by the environment. Whereas a relaxed and friendly entrepreneurial environment provides entrepreneurs with objective resources to support the development and growth of new ventures, they are better able to identify and discover new information through interaction with the environment, which provides more support for creativity in the process of entrepreneurial improvisation. Hence the hypothesis:

H1: Environmental munificence is positively related to entrepreneurial improvisation.

## **2.4 The Moderator Role Played by Future Self-continuity**

One possible facilitator of the relationship between environmental munificence and entrepreneurial improvisation is future self-continuity, which is considered to be an individual's perception of the degree of continuity and congruence between his or her present and future selves (Zhang et al., 2022). Family support is positively related to future self-continuity (Guo, Jiang, & Yu, 2024). Furthermore, it was found to mediate the relationship between a sense of fairness and burnout (Yang et al., 2023). This is because future self-continuity can provide entrepreneurs with a sense of self-perseverance from the present to the future (Sokol & Serper, 2019), which will be important to help entrepreneurs in the process of starting their own businesses. When future self-continuity interacts with environmental munificence, it strengthens the resilience of online entrepreneurs to persist in implementing subsequent entrepreneurial activities even when they face obstacles. Hence the hypothesis:

H2: There is a positive moderating effect of future self-continuity between environmental munificence and entrepreneurial improvisation.

## **2.5 The Moderator Role Played by Belief in Community of Shared Future for Mankind**

belief in community of shared future for mankind is defined as an individual's perception of the state of global human coexistence and destiny (Wang et al., 2021). Research has confirmed that self-efficacy is positively related to improvisational behavior (Hultman et al., 2022). In addition, research has confirmed that beliefs can further contribute to the relationship between innovation climate and improvisation behavior (Su et al., 2021). Whereas environmental munificence is a key external resource to support entrepreneurship, its interaction with shared human beliefs may be able to strengthen entrepreneurs' creativity in the entrepreneurial process, stimulate their ability to think

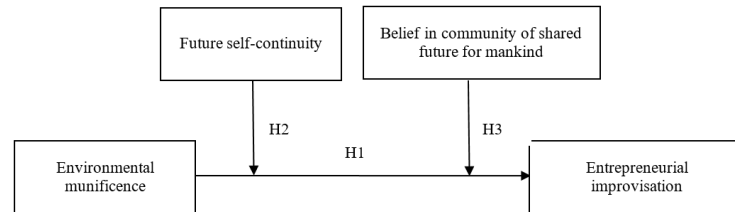
in a variety of ways and help them to better deal with obstacles and negative problems, which would further enhance the enhancement of entrepreneurial improvisation. Hence the hypothesis:

H3: There is a positive moderating effect of belief in community of shared future for mankind between environmental munificence and entrepreneurial improvisation.

### 3. METHODOLOGY

#### 3.1 Research Framework

The research framework was constructed according to the research objectives and hypotheses (Figure 1).



**Figure 1. Research framework**

#### 3.2 Samples and Procedures

The survey was conducted in May 2024, using a purposive sampling method and a web-based questionnaire to investigate the experiences and perceptions of entrepreneurs in Heilongjiang Province, China, on environmental munificence, entrepreneurial improvisation, future self-continuity, and belief in community of shared future for mankind, which resulted in a final sample of 816 respondents (validity rate of 94.883%).

#### 3.3 Measures

**Environmental munificence scale:** Designed by Zhao et al. (2010), 1 factor with 5 items ( $\alpha=0.894$ ). Environmental munificence reflects the scarcity or abundance of resources available in the environment and needed by the firm (Zhao et al., 2010).

**Entrepreneurial improvisation scale:** Designed by Vera and Crossan (2005), 1 factor with 7 items ( $\alpha=0.943$ ). Entrepreneurial improvisation reflects an individual's behaviour of reacting spontaneously and immediately to unexpected events (Cunha et al., 1999).

**Future self-continuity scale:** Designed by Sokol and Serper (2019), divided into 3 factors of similarity, vividness and positivity with 10 items ( $\alpha=0.85$ ). Future self-continuity reflects individuals' perceptions of the degree of continuity and congruence between their present and future selves (Zhang et al., 2022).

**Belief in community of shared future for mankind scale:** Adapted from Wang et al. (2021), the instrument consists of 2 factors: peaceful coexistence ( $\alpha=0.750$ ), and solidarity ( $\alpha=0.733$ ), with a total of 10 questions. Belief in community of shared future for mankind an individual's perception of the state of global human coexistence, and destiny (Wang et al., 2021).

Variables were measured on a 5-point scale with self-assessment; gender, marital status, and relatives' entrepreneurial experience served as demographic background.

## 4. RESULTS

### 4.1 Distribution of Population Characteristics

The sample was predominantly female (503, 61.64%); married entrepreneurs were predominant (634, 77.70%); and the highest number of relatives had entrepreneurial experience (620, 24.02%). This indicates that the sample is suitable for entrepreneurship research.

**Table 1 Distribution of population characteristics**

Background variables	Category	N	%
Gender	Male	313	38.36
	Female	503	61.64
Marital status	Married	634	77.70
	Unmarried	182	22.30
Relatives' entrepreneurial experience served	have	620	75.98
	not have	196	24.02

Note. n=816.

### 4.2 Model Fit

SRMR=0.04, a good match.

**Table 1 Root mean square error**

	Primary sample	Mean	95%	99%
Saturated model	0.04	0.032	0.037	0.038
Estimated model	0.04	0.032	0.037	0.038

Note. \*\*\* $p < 0.001$ .

### 4.3 Correlation Analysis

Environmental munificence is positively correlated with entrepreneurial improvisation ( $\beta=0.180^{***}$ ;  $p<0.001$ ) and H1 is valid.

**Table 3 Correlation analysis**

Variable	M	SD	1	2	3	4
1. Environmental munificence	3.563	0.871	0.734			
2. Future self-continuity	3.615	0.957	0.442***	0.739		
3. Belief in community of shared future for mankind	3.598	0.865	0.320***	0.326***	0.746	
4. Entrepreneurial improvisation	3.768	0.992	0.180***	0.224***	0.132**	0.732
$\alpha$			0.929	0.936	0.905	0.824
CR			0.561	0.637	0.836	0.619
AVE			0.540	0.547	0.558	0.536

Note. \*\*\* $P < 0.001$ .

### 4.4 Regulation Analysis

M3 is the regression model of future self-continuity moderating the relationship between environmental munificence and entrepreneurial improvisation, with  $R^2=0.431$  and  $F=27.603^{***}$ ; meanwhile, the regression coefficient of environmental munificence  $\times$  future self-continuity is  $\beta=0.315^{***}$ ,  $p<0.001$ . It indicates that future self-continuity has a positive moderating effect between environmental munificence and entrepreneurial improvisation, and H2 is valid.

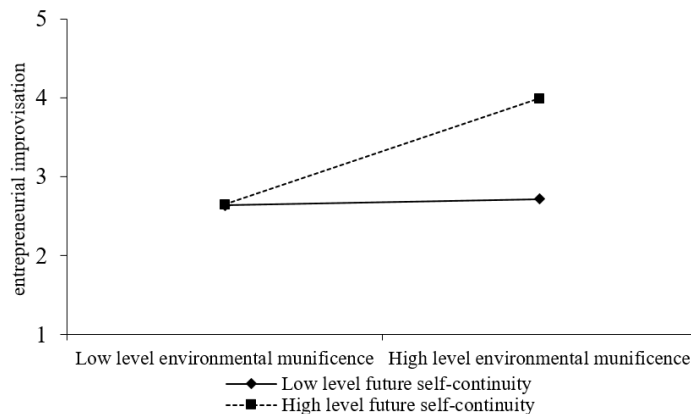
M5 is the regression model of belief in community of shared future for mankind moderating the relationship between environmental munificence and entrepreneurial improvisation, with an  $R^2 = 0.346$  and  $F = 19.213^{***}$ ; meanwhile, the regression coefficient of environmental munificence  $\times$  belief in community of shared future for mankind is  $\beta=0.265^{***}$ ,  $p<0.001$ , which shows that there is a positive moderating effect of belief in community of shared future for mankind on the relationship between environmental munificence and entrepreneurial improvisation, and H3 is valid.

**Table 4 Regulation Analysis**

	Entrepreneurial improvisation				
	M1	M2	M3	M4	M5
Gender	0.043	0.045	0.012	0.013	0.032
Marital status	0.018	0.017	0.028	0.008	0.026
Relatives' entrepreneurial experience served	0.043	-0.051	0.013	0.017	0.035
Environmental munificence	0.447***	0.360***	0.356***	0.331***	0.335***
Future self-continuity		0.312***	0.320***		
Environmental munificence $\times$ future self-continuity			0.315***		
Belief in community of shared future for mankind				0.301***	0.305***
Environmental munificence $\times$ belief in community of shared future for mankind					0.265***
$R^2$	0.213	0.302	0.431	0.275	0.346
Adj $R^2$	0.196	0.285	0.415	0.257	0.327
$F$	12.890** *	17.815** *	27.603** *	15.670** *	19.213** *
DW			1.972		1.953

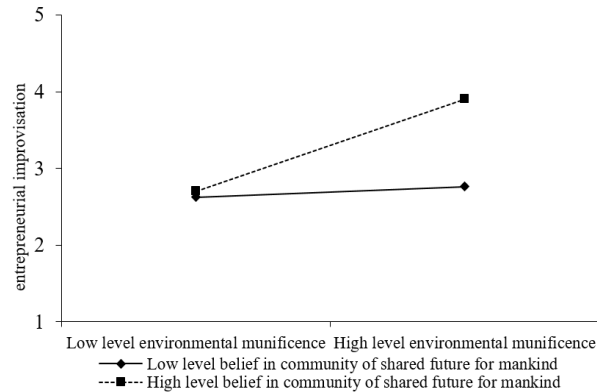
Note. \*\*\* $p < 0.001$ .

As shown in Figure 2, future self-continuity strengthens the relationship between environmental munificence and entrepreneurial improvisation.



**Figure 2: The moderating role of future self-continuity**

As shown in Figure 3, belief in community of shared future for mankind strengthens the relationship between environmental munificence and entrepreneurial improvisation.



**Figure 3: The moderating role of belief in community of shared future for mankind**

## 5. DISCUSSION

### 5.1 Discussion

This study examines the relationship between environmental munificence and entrepreneurial improvisation in Heilongjiang Province, China, as well as the facilitating role of future self-perpetuation and belief in community of shared future for mankind. First, the results confirm for the first time that environmental munificence is positively related to entrepreneurial improvisation. Thus, environmental munificence has an important role as an external resource in promoting creativity in improvisation during entrepreneurship. Second, the results show for the first time that future self-continuity can enhance the link between external resources and entrepreneurial improvisation. This is because permissive environments can provide entrepreneurs with more resources, thus enhancing their objective resources for development and growth, and ultimately their improvisational behavior during the entrepreneurial process. Third, the results confirm for the first time that belief in community of shared future for mankind can strengthen the relationship between environmental munificence and entrepreneurial improvisation. This is because belief in community of shared future for mankind strengthen alignment with external resources and also enhance entrepreneurs' resilience, thus activating their creativity in the entrepreneurial process.

This study contributes to a deeper understanding of entrepreneurial improvisation formation in the literature and also describes how cognitive and perceptual factors indirectly influence entrepreneurial improvisation formation. Specifically, the degree of future self-consistency and the belief in community of shared future for mankind the relationship between environmental munificence and entrepreneurial improvisation.

### 5.2 Research Significance

The findings of this study also have some practical implications. Based on the urgent need to improve the vitality of Chinese entrepreneurial firms, research on how entrepreneurial firms can respond to environmental changes and gain instantaneous competitive advantages in a timely manner through continuous improvisation and making full use of instantly available resources in the face of continuous changes in the environment will not only help entrepreneurial firms to maximize the value of entrepreneurial improvisation's timeliness and flexibility in coping with uncertainty, and to give full play to the positive impact it has on the development of the entrepreneurial firms, but also It can also help entrepreneurs grasp the fleeting opportunities in the context of transient competition, develop effective decision-making mechanisms, response capabilities and coping modes to cope with uncertainty through continuous improvement and adjustment, and then build and maintain the competitive capabilities of entrepreneurial firms, providing guidance for entrepreneurial firms to develop corporate strategies to ensure the long-term survival and

development of entrepreneurial firms (Goyal & Popli, 2024; Gui, Dai, & Zong, 2024; Nachum & Ogbechie, 2023; Stefenon & Gimenez, 2023; Tang et al., 2024b).

### **5.3 Research Contribution**

Based on the triadic reciprocal determinism, this study explores the relationship between environmental munificence and entrepreneurial improvisation in Heilongjiang Province, China, as well as the facilitating role of future self-continuity, and the belief in community of shared future for mankind of shared future for mankind. This study contributes significantly to entrepreneurial improvisation in three main ways:

First, while previous studies have explored entrepreneurial improvisation in China very little, this study effectively develops the field. As stated by Akhtar and Mohamad (2024), entrepreneurial improvisation is the key to business success in terms of its ability to turn around crises and breakthroughs for organizations. Therefore, this study is an important contribution to the future economic development of Heilongjiang Province, China.

Secondly, this study endeavors to understand the impact of external resources on it, as well as highlights the facilitating role of future self-continuity and the belief in a belief in community of shared future for mankind. This not only deepens existing explanations of the antecedents of entrepreneurial improvisation, but also expands its intermediate paths. As Chetty et al. (2024) argue, an overview of entrepreneurial improvisation research lacks arguments for antecedents and process mechanisms, which need to be explored more in the future to better contribute to future economic development.

Third, the findings also extend the development of ternary interactionism in the field of entrepreneurial improvisation, which is extended in this study by constructing a model of influencing entrepreneurial improvisation in terms of the environment and perceived future self-continuity, and belief in community of shared future for mankind. As stated by Hu et al. (2023), entrepreneurial improvisation can only be better advanced if it is explored and argued for more from different theories.

### **5.4 Implications**

Based on the results of the study, three points of revelation are proposed:

First, by focusing on the characteristics and patterns of entrepreneurial improvisation in the entrepreneurial context in Heilongjiang Province, China, this study expands the research perspective in the field of entrepreneurial management. Entrepreneurial activities have become an important force driving current socio-economic development, but the high level of uncertainty in the environment exacerbates the failure of their entrepreneurial activities, thus there is an urgent need to develop a proven decision theory to help entrepreneurial firms cope with the challenges (Benz & Frese, 2023; Jarboui & Alrikabi, 2023; Kuratko et al. 2023). Entrepreneurial improvisation opens up new perspectives on entrepreneurial 'survival against the odds' by enabling firms to improvise with the resources at hand, make quick decisions, and rapidly build competitive advantage in a complex and changing competitive environment (Ávila, Davel, & Elias, 2023; Masaitytė & Jurė nienė, 2023; Vito, 2023). However, current research on improvisational behavior in the field of entrepreneurship is limited and lacks in-depth exploration of the patterns of improvisation in the entrepreneurial process (Du, 2023; Essuman et al., 2023; Kadhum, Muttar, & Khait, 2023). Therefore, this study explores the antecedents and process mechanisms affecting entrepreneurial improvisation, focusing on the effects of environmental munificence on entrepreneurial improvisation and the facilitating role of future self-continuity and belief in community of shared future for mankind, to provide theoretical guidance on how entrepreneurial firms can effectively cope with crises and breakthroughs.



Second, this study analyses entrepreneurial improvisation in the context of entrepreneurship in Heilongjiang Province, China, in conjunction with the triadic reciprocal determinism, which provides a perspective that can be drawn upon for the development of the theory. Lai and Lee (2023) point out that competition for firms in current turbulent environments is markedly different from that of the past, and that the previous literature lacks an in-depth consideration of the distinctive behaviors of entrepreneurial firms (Charoensukmongkol & Pandey, 2023; Stephan et al., 2023). This study, which draws on the triadic reciprocal determinism of entrepreneurial improvisation, confirms that the permissive environment in entrepreneurial activities determines the formation of entrepreneurial improvisation. This not only breaks new ground in the development of the theory, but also provides entrepreneurial practitioners with suggestions for developing strategies that can help trigger entrepreneurial thinking to construct approaches that combine flexibility and creativity.

Third, the current economic environment of rapid technological change and shifting competitive paradigms, in which entrepreneurial firms are facing unprecedented pressures (Ibrahim & Hasan, 2024; Kang, Chaivirutnukul, & Zeng, 2023; Kaye, 2023), requires entrepreneurial firms to be more intelligent in balancing exploratory and exploitative capabilities. Therefore, there is a need to explore options for rational resource allocation in the construction of improvisation capabilities (Hanson, Valentine, & Shultz, 2024; Marins, Davel, & Parsley, 2023; Nwoke, 2023). This study is based on the context of Heilongjiang Province in China, which provides a new perspective on improvisation research in entrepreneurial contexts, can deepen its research paradigm, achieves the exploration of its boundaries, and can provide reasonable suggestions for entrepreneurial firms in constructing competitive advantage.

### **5.5 Limitations and Future Research Directions**

First, although the questionnaire approach is well suited to studying managerial behavior (Bagga, Gera, & Haque, 2023; Soelton, 2023; Zheng, Zhou, & Iqbal, 2022), this method still suffers from subjective perceptual bias on the part of the observer, and the scope of observation is limited to the entrepreneur him/herself and his/her influences and does not cover the rest of the organizational context. This means that the behavioral patterns distilled in this study are not representative of the entrepreneurial improvisation of everyone in the organization. Second, although the sample size of this study meets the requirements, the findings are not yet widely generalizable. Thirdly, empirical studies have limited explanatory validity for causality and may ignore the influence of other factors present in the occurrence or change of behavior, such as individual performance in private time that cannot be covered. In the future, the method of scenario analysis can also be used to extract more logically rigorous and precise research results. Finally, it is recommended that future studies explore more research on the antecedents and process mechanisms of entrepreneurial improvisation, e.g., AI literacy, digital resilience, workplace fun, etc., to further advance the field.

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