

Original Research Article

Adversity breeds flowers: Research on improvisational behavior of entrepreneurs in response to major emergencies

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Abstract: Based on event system theory, and integrating the internal logic of "event-behavior-performance". Through an analysis of survey data from 268 entrepreneurs reveals that the more significant the characteristic attributes of major emergencies (novelty, disruption and criticality), the more likely entrepreneurs are to engage in ambidextrous improvisational behaviors.

Keywords: major emergencies; ambidextrous improvisation; entrepreneurial performance; event system theory

1. Introduction

In the VUCA era, major events such as natural disasters, the new crown epidemic, political and economic turmoil, and industry reshuffles caused by our country's policy adjustments have occurred frequently, making start-ups face an increasingly complex and changeable living environment. Therefore, improvisation has become an indispensable and important ability for start-ups to cope with and deal with emergencies ^[1]. Therefore, can entrepreneurs take the initiative to make different impromptu choices for different dimensions of event intensity, which in turn affects entrepreneurial performance? This is the focus of this study.

2. Research the hypothesis

2.1. Major emergencies and dual improvisational behaviors

The more significant the novelty, disruption and criticality of the event, the greater the impact of the emergency on the development of the enterprise, and the more strongly it can attract the attention of entrepreneurs, thereby stimulating their improvisation. When entrepreneurs respond to major emergencies, they can improve and optimize existing resources and adopt developmental improvisation to achieve value-added and upgraded resources to minimize the potential impact on business development ^[2]. Based on this, the following hypotheses are proposed in this study:

H1: The more novel, disruptive, and critical a major event is, the more likely it is that entrepreneurs will adopt developmental improvisational behavior.

The more novel, subversive, and critical major emergencies are, the more direct their impact on individual behavior. The lack of routine procedures and rules for such incidents often motivates entrepreneurs to transform and innovate ^[3]. Entrepreneurs are committed to finding more possibilities for innovation and development by exploring new services and knowledge, promoting innovative combinations of resources, constantly searching, trial and error, and innovating, broadening unknown areas. Accordingly, this study proposes the following hypotheses:

H2: The more novel, disruptive, and critical a major contingency is, the more likely entrepreneurs are to adopt exploratory improvisational behavior.

2.2. The mediating role of binary improvisational behavior

The stronger the novelty of major events, the more likely they are to bring unknown challenges and new opportunities to enterprises, which requires entrepreneurs to learn and integrate existing resources to process new information ^[4], thereby improving efficiency and effectiveness. The disruptive nature of major emergencies is destructive ^[5], which will disrupt the original resource planning and technology use, prompting entrepreneurs to rethink the resources at hand, eliminate ineffective resources, and refine the optimal

resource integration. By optimizing and refining existing products, core technologies, and market services to meet consumer needs, entrepreneurial performance can be effectively improved^[6]. The higher the criticality of major emergencies, the more vigilance can stimulate entrepreneurs^[7], prioritize key events with a positive attitude, and use instantly available resources to achieve innovative breakthroughs^[8]. Based on this, the following hypotheses are proposed:

H3a: Novelty of major emergencies positively impacts entrepreneurial performance through developmental improvisation;

H3b: The disruptive nature of major emergencies has a positive impact on entrepreneurial performance through developmental improvisation;

H3c: The Criticality of Major Contingencies positively impacts entrepreneurial performance through developmental improvisation.

Novelty events mean more market opportunities for entrepreneurs, and by exploring and utilizing valuable market and technology opportunities, they can carry out more innovative activities and improve the entrepreneurial performance of enterprises. The occurrence of major emergencies is disruptive, covering breakthroughs in market changes, policy adjustments and other aspects. The traditional business model is no longer applicable, and there is an urgent need to drive the development of products and technological innovation to gain competitive advantages, thereby improving enterprise performance. There is a positive correlation between the criticality of events and the likelihood of stimulating behavioral change or innovation^[3]. Such events can stimulate entrepreneurs' innovative thinking and promote them to move smoothly to a new stage of development. Based on this, this study can be launched:

H4a: Novelty of major contingencies positively impacts entrepreneurial performance through exploratory improvisation;

H4b: The disruptive nature of major emergencies positively impacts entrepreneurial performance through exploratory improvisation;

H4c: The Criticality of Major Contingencies positively impacts entrepreneurial

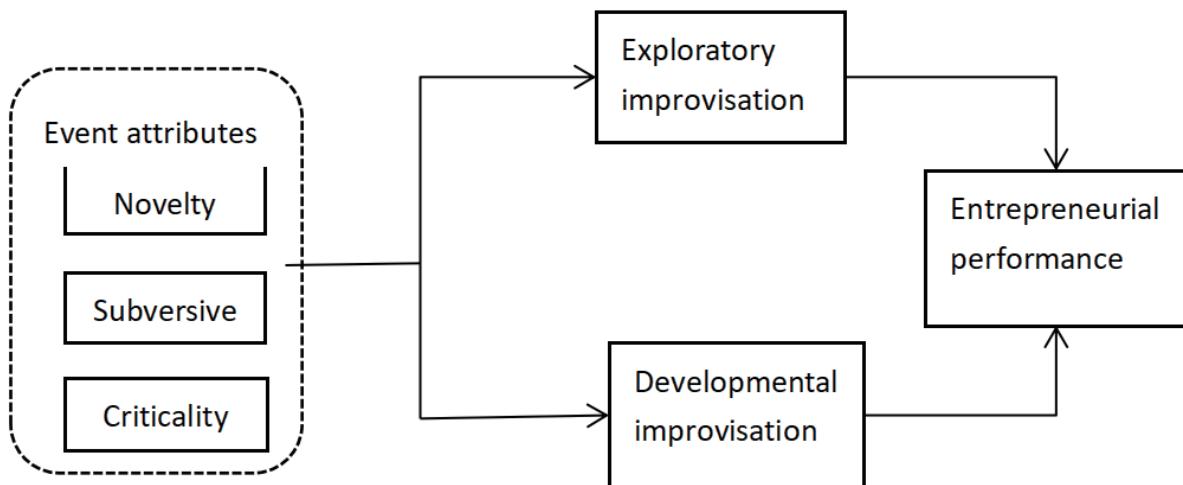


Figure 1. Research models.

3. Hypothesis testing

3.1. Direct effect test

The results are shown in **Table 1**. The more novel, subversive, and critical major emergencies are, the more they can stimulate entrepreneurs' developmental improvisational behavior ($M2, \beta=0.253, P<0.001$), H1 is established. The more novel, subversive and critical the major emergencies, the more they can stimulate entrepreneurs' exploratory improvisational behavior ($M4, \beta=0.202, P<0.001$), H2 is supported.

Table 1. Results of main effect regression analysis.

Variable	Developmental improvisation		Exploratory improvisation	
	M1	M2	M3	M4
Gender	0.008	-0.048	0.074	0.009
Age	0.052	0.007	-0.002	-0.063
Education level	0.035	-0.078	0.069	-0.061
Entrepreneurial experience	-0.042	-0.067	0.036	0.007
Work experience	-0.210	-0.143	-0.040	0.049
Enterprise age	0.131	0.102	0.058	0.026
Enterprise size	0.111	0.017	0.072	-0.043
Type of enterprise	0.005	0.059	0.047	0.101
Novelty *Disruption * Criticality		0.253***		0.202***
R2	0.066	0.364	0.029	0.425
ΔR2	0.027	0.327	-0.011	0.391
F value	1.686	9.831***	0.725	12.684***

Note: The data in the table are standardized regression coefficients; n=268, *, **, and *** represent significant at the levels of 10%, 5%, and 1%, respectively; The same below.

3.2. Hypothesis testing of mediating effects

Table 2 shows that when the mediating variable is developmental improvisational behavior, the indirect effect of novelty affecting entrepreneurial performance through developmental improvisation is 0.104, with a 95% CI of [0.052, 0.172], excluding 0. The indirect effect of disruptive impact on entrepreneurial performance through developmental improvisation was 0.062, with a 95% CI of [-0.001, 0.136], including 0. The indirect effect of criticality on entrepreneurial performance through developmental improvisation was 0.112, with a 95% CI of [0.037, 0.218], excluding 0. In summary, H3a and H3c are established, but H3b is not.

Similarly, when the mediating variable is exploratory improvisation, the indirect effect of novelty on entrepreneurial performance is 0.059, and the 95% CI is [-0.013, 0.136], including 0. The indirect effect coefficient of disruptive improvisation on entrepreneurial performance was 0.050, with a 95% CI of [0.004, 0.108], excluding 0. The indirect effect of criticality on entrepreneurial performance by stimulating exploratory improvisation behavior was 0.114, with a 95% CI of [0.048, 0.207], without 0. In summary, H4b and H4c are established, but H4a is not.

Table 2. Bootstrap mediation effect test results.

Intermediary path	Effect	Boost SE	Bias Corrected (95%)	
			LLCI	ULCI
Novelty→developmental improvisation→entrepreneurial performance	0.104	0.031	0.052	0.172
Disruptive→developmental improvisation→entrepreneurial performance	0.062	0.035	-0.001	0.136
Critical →developmental improvisation →entrepreneurial performance	0.112	0.047	0.037	0.218
Novelty→exploratory improvisation→entrepreneurial performance	0.059	0.037	-0.013	0.136
Disruptive→exploratory improvisation→entrepreneurial performance	0.050	0.027	0.004	0.108
Criticality→exploratory improvisation→entrepreneurial performance	0.114	0.041	0.048	0.207

4. Research conclusions

First, the more novel, disruptive, and critical major emergencies are, the more likely entrepreneurs are to adopt dual improvisational behaviors. Second, there are differences in the mechanism of the impact of different attributes of major emergencies on entrepreneurial performance.

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