

A Study of the Impact of Entrepreneurship on Organizational Resilience of Science and Technology-Based Small and Medium-Sized Enterprises

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Abstract

China's booming background has brought unprecedented development opportunities for Science and Technology-based small and medium-sized enterprises (SMEs), yet they still need to face the challenges of the complex and changing VUCA (volatility, uncertainty, complexity, ambiguity) environment. This paper uses research data from Science and Technology-based SMEs to study the impact of entrepreneurship on organizational resilience of Science and Technology-based SMEs and the moderating role of knowledge inertia based on dynamic capability theory. The results show that: entrepreneurship has a significant positive effect on organizational resilience; knowledge management has a significant mediating role between entrepreneurship and organizational resilience; and knowledge inertia has a significant negative moderating effect on the positive relationship between entrepreneurship and knowledge management and organizational resilience. The study contributes to the understanding of the complex effects of entrepreneurship on organizational resilience in dynamic environments in Science and Technology-based SMEs.

Keywords

Science and Technology-Based SMEs, Dynamic Capability Theory, Entrepreneurship, Knowledge Management, Knowledge Inertia, Organizational Resilience

1. Introduction

Currently, China's economy, science and technology, and all aspects of society

are showing strong and sustained development, which provides unprecedented development space and diversified opportunities for Science and Technology-based SMEs. During his visit to Wuhan on June 28, 2022, General Secretary Jinping Xi emphasized “keeping the lifeblood of science and technology firmly in our own hands, making greater progress in scientific and technological self-reliance and self-improvement, and constantly enhancing the independence, autonomy, and security of China’s development”, and Science and Technology-based SMEs have pushed China’s science and technology forward, and, as a carrier of scientific and technological innovation, it is not only an important driving force for China’s economic growth (Zhou, 2024), but also an important force for promoting high-quality development and technological innovation (Li et al., 2023).

Although Science and Technology-based SMEs have gained unprecedented development opportunities in the context of China’s booming development, they have certain limitations in terms of their resource reserves, enterprise scale and market influence, which have led to multiple pressures and challenges in their quest for survival and development, and in turn, they have shown obvious deficiencies in their resilience to pressure (Zhang, 2022). Along with the rapidly changing market environment, Science and Technology-based SMEs are faced with severe VUCA scenarios, the frequent occurrence of “black swan” events and increasingly serious destructive force of the growing influence, and prompting the organization is in urgent need to improve the survival and crisis management capabilities of the organization’s survivability and crisis management has become critical, and therefore the “resilience” has become a key factor in interpreting the survival of the enterprise (Ishak & Williams, 2018). How to enhance the organizational resilience of Science and Technology-based SMEs to better cope with various uncertainties that may arise in the future and to achieve their sustainable development has become an issue that requires urgent attention and in-depth research. Existing studies have mostly focused on exploring the impact of external elements such as labor relations climate (Chi et al., 2023) and organizational context (Zhang, 2022) on organizational resilience of Science and Technology-based SMEs; however, the role of individual mental traits on organizational resilience has also been gradually paid attention to (Kuntz et al., 2017), and this perspective from the perspective of internal individual traits has provided a more comprehensive understanding of organizational resilience new thinking.

Resource-based theory advocates that an enterprise’s competitive advantage comes from the unique resources and capabilities it possesses. Dynamic capability theory, as an important extension of resource-based theory in a dynamic environment, emphasizes that an enterprise’s resources and capabilities are closely related to the changes in the environment in which it operates, and that they are the key elements affecting whether the enterprise can develop in the long term. Schultz (1980), an American economist, pointed out that entrepreneurship is the

ability of entrepreneurs to take risks as well as to cope with market imbalances, and this ability is an important driving force to promote the sustainable development of enterprises (Tan, 2018), and the cultivation and play of entrepreneurial spirit is particularly important in enhancing the resilience of Science and Technology-based SMEs when they face the challenges of a dynamic and intricate market environment. Existing studies mainly focus on the mechanism of entrepreneurship's role in technological innovation (Su & Song, 2014; Du et al., 2018) and internationalization development path (Liu et al., 2018) of Science and Technology-based SMEs, and there is still an urgent need for an in-depth discussion on how entrepreneurship affects the organizational resilience of Science and Technology-based SMEs.

In the context of the rapid development of knowledge economy, knowledge management has become the leading force in the development of Science and Technology-based SMEs (Gao & Ren, 2024). Studies have shown that entrepreneurship can enhance the knowledge management ability of enterprises (Zhu & Xu, 2023), and entrepreneurs can effectively integrate external knowledge resources into the enterprise system and realize the internal dissemination and extensive sharing of knowledge (Mao & Wang, 2015). In this process, knowledge inertia may become a barrier that hinders the introduction, dissemination and application of new knowledge in Science and Technology-based SMEs, which in turn restricts the display and play of entrepreneurship, and its potential negative impacts cannot be ignored.

This paper constructs a theoretical model of the relationship between entrepreneurship and organizational toughness of Science and Technology-based SMEs based on the dynamic capability theory, selects knowledge management as the intermediary, and introduces knowledge inertia to regulate, to further explore the mechanism of entrepreneurship's role in the organizational toughness of Science and Technology-based SMEs, and to provide practical references to Science and Technology-based SMEs facing difficulties in their survival and to help them overcome the challenges and achieve sustainable development.

2. Research Hypothesis and Theoretical Basis

2.1. Entrepreneurship and Organizational Resilience

According to the dynamic capability theory, an organization should have a resilient capability to respond quickly to market reactions and gain competitive advantage by continuously constructing, adjusting and reconfiguring internal and external resources. Entrepreneurship is regarded as a dynamic process that involves exploring opportunities in the real world, mobilizing needed resources, and engaging in value-creating innovative activities (Chen, 2007). Entrepreneurship is able to continuously screen, combine, and reorganize the resources and capabilities of an enterprise according to changes in the internal and external environments (Zhao, 2011), and is closely related to the generation of the dynamic capabilities of an enterprise (Ma et al., 2010). Organizational resilience is

regarded as a dynamic capability that can be cultivated (Zhang et al., 2020), which embodies the resilience of an organization to survive, adapt, and even evolve continuously in the face of adversity, and entrepreneurship, as the primary condition to activate the dynamic capability of an enterprise (Zhu & Xu, 2023), enables an organization to demonstrate more superior adaptability and resilience in the face of multiple challenges, and thus builds an organizational structure of higher resilience.

Current research reveals that entrepreneurship has a significant effect on enhancing a firm's ability to integrate flexibly, absorb new knowledge quickly, and gain insight into environmental changes, which in turn can enhance organizational resilience (Hou et al., 2022); moreover, entrepreneurship can positively contribute to organizational resilience in three different dimensions, namely cognitive, action, and situational (Chen, 2022). Based on this, we propose the hypothesis:

H1: Entrepreneurship has a significant positive effect on organizational resilience of Science and Technology-based SMEs.

2.2. The Brokering Role of Knowledge Management

American management scientist Drucker & Maciariello (2014) points out that entrepreneurs are not only organizers of business activities, but also pioneers and bold explorers of new markets, new needs and new customers by virtue of their unique market sensitivity and pioneering spirit, which enables them to accurately capture multiple information about customers, suppliers and competitors, and then carry out in-depth integration, sharing and application. Knowledge management, as an all-encompassing process of handling knowledge within an organization, which includes knowledge acquisition, integration, storage, sharing, transfer, creation, and application (Zhao et al., 2012), has a deep fit with entrepreneurship. Entrepreneurship plays a crucial role in promoting the effective management and application of knowledge, which can significantly enhance the value creativity of enterprises (Yang, 2020). Therefore, in order to achieve sustained innovation and competitive advantage, enterprises need to pay attention to the cultivation of entrepreneurship and the implementation of knowledge management, and the combination of the two can not only improve the level of knowledge management, but also promote the overall development of enterprises (Paoloni et al., 2020).

With the rapid development of the knowledge economy, knowledge has become an important component of an organization's strategic resources (Mahdi et al., 2019), and the rapid emergence of new markets and their dynamic and ever-changing nature have injected a strong competitive impetus into firms, which has led to efforts to consolidate and integrate their knowledge assets as a means of sustained economic value creation. The knowledge base view holds that the firm is a knowledge processing system whose core competencies derive from knowledge within the firm. And according to the dynamic capability theory,

knowledge management is not only a key driver for constructing and enhancing the dynamic capabilities of an enterprise (Iansiti & Clark, 1994), but also a cornerstone for organizations to maintain their advantages in the fierce market competition, flexibly adapt to the future market trends, and shape a forward-looking vision. Through effective knowledge management, enterprises can continuously adjust and optimize their resource allocation, thus cultivating unique dynamic capabilities and providing solid support for the long-term development of the organization. Based on this, we propose the hypothesis:

H2: Knowledge management mediates between entrepreneurship and organizational resilience in Science and Technology-based SMEs.

2.3. The Moderating Role of Knowledge Inertia

Knowledge inertia describes the tendency of an organization, team, or employee to acquire knowledge influenced by inertia and tends to obtain information from familiar knowledge source channels and apply previous knowledge, experience, methods, or procedures to solve problems (Liao, 2002). In order to save time, effort and avoid risk, entrepreneurs often use routine problem-solving procedures; however, stagnant knowledge sources and outdated experience can lead to the same solutions being used over and over again (Liao et al., 2008), and the predictability of an organization's managerial behaviors may expose the firm to greater risk in a highly vulnerable competitive environment. From the perspective of dynamic capability theory, this knowledge inertia actually weakens the organization's dynamic capabilities, i.e., it is difficult for the organization to adjust its resource allocation in time to respond to changes in the external environment. When managers become aware of external threats or opportunities and intend to take action for change, they may find that the organization lacks the resilience to cope with external uncertainties due to knowledge inertia (Gilbert et al., 2005). Although entrepreneurship pushes employees to explore new knowledge, practices, and innovative approaches to enhance organizational adaptability and resilience, knowledge inertia can be a significant impediment, limiting the inflow and application of new knowledge and resulting in organizations relying too much on past experience and knowledge when dealing with problems. Based on this, we propose the hypothesis:

H3a: Knowledge inertia negatively moderates the relationship between entrepreneurship and organizational resilience in Science and Technology-based SMEs.

When organizations are accustomed to solving problems in the same way over and over again, they may use similar matching and analogical reasoning to infer and solve problems, thus saving thinking time and avoiding the risk of change. However, when organizational members rely too much on empirical inertia, they may limit the learning and application of new knowledge and skills, thus hindering the innovation and development of the organization (Zhou & Zhou, 2021).

In highly competitive environments, if an organization's predicted strategies or actions can be predicted by its competitors, then the firm's managerial behavior can be easily tracked and exploited by its rivals, leading to failure and loss (Liao, 2002). Further, the greater the knowledge inertia, the more limited its ability to innovate, and management structures that are conservative, rigid, formal, and repressive tend to stifle innovative learning and reduce the likelihood that an organization will incorporate innovation into its management practices (Sillic, 2019). When firms attempt to introduce new knowledge and integrate it with external knowledge, the firm's knowledge inertia may have a disruptive effect on this process and negatively affect knowledge integration (Yuan et al., 2005). Based on this, we propose the hypothesis:

H3b: Knowledge inertia acts as a negative moderator between entrepreneurship and knowledge management.

The specific research model is shown in **Figure 1**.

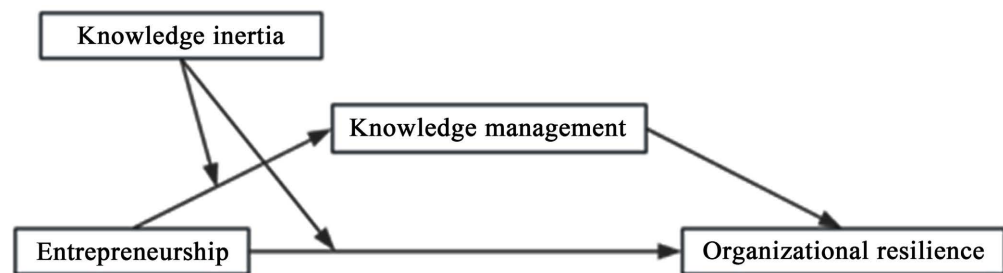


Figure 1. Research model.

3. Research Design

3.1. Research Sample

This paper takes Science and Technology-based SMEs whose registered location is Beijing as the research object. According to the *Measures for Evaluation of Science and Technology-based SMEs* and the *Guiding Opinions on Accelerating Scientific and Technological Innovation and Developing Ten Highly Precision Industries such as New-Generation Information Technology* issued by Beijing, enterprises with no more than 500 employees, annual sales revenue and total assets of no more than 200 million yuan, and within the top ten highly precision industries that Beijing is focusing on, were selected as the surveyed enterprises. The survey data used in this paper is mainly collected through questionnaires. Since the questionnaire involves the total number of employees, business conditions, and innovation of the enterprise, in order to ensure the authenticity and reliability of the data, the main founders of Science and Technology-based SMEs (chairmen, general managers, or partners) are selected as the data collection object. In this paper, 267 questionnaires were finally recovered, of which 255 were valid questionnaires, and the recovery rate of valid questionnaires was 95.5%. The sample distribution is shown in **Table 1**.

Table 1. Distribution of samples.

Statistical category	Index	Number	Frequency
Nature of enterprise	Limited liability company	148	58%
	Company limited by shares	107	42%
Size of enterprise	Less than 50 persons	199	78%
	51 - 100 persons	32	12.5%
	101 - 200 persons	19	7.5%
	201 - 500 persons	5	2%
Age of enterprise	4 years	39	15.3%
	5 years	34	13.3%
	6 years	26	10.2%
	7 years	63	24.7%
	8 years	42	16.5%
	9 years	51	20%
Industry classification	Machinery manufacturing	40	15.7%
	Information technology	99	38.8%
	Biomedical treatment	24	9.4%
	New energy and new materials	58	22.7%
	Software development	23	9%
	Rests	11	4.3%

3.2. Variable Measurement

All variable measurements in this paper were made using established scales available both at home and abroad, with appropriate adaptations to the research context of this paper. Except for the control variables, all variables were measured using Likert 5-level scales.

1) Dependent variable: organizational resilience. In this paper, we refer to the measurement scale of [Kantur & Say \(2015\)](#) to develop the measurement of organizational resilience, which consists of 7 items, such as “the company is able to gain a foothold and maintain a certain position in the market” and “the company is able to successfully provide different solutions”. The Cronbach’s α value for this scale in this paper is 0.796.

2) Independent variable: entrepreneurship. This paper combines [Covin and Slevin’s \(1989\)](#) and [Zahra’s \(1993\)](#) scales, with appropriate modifications to meet the needs of the study, and includes 7 items such as “Firms place great emphasis on R&D capabilities, leading-edge technology, and product or service innovation”, “Firms have developed many new products or services in the past three years”. The Cronbach’s α of this scale in this paper is 0.791.

3) Intermediary variable: knowledge management. This paper combines [Dong et al.’s \(2006\)](#) knowledge acquisition scale, [Shi et al.’s \(2012\)](#) knowledge sharing scale, [Han et al.’s \(2006\)](#) knowledge application scale, and [Xi’s \(2020\)](#) knowledge

creation scale, with appropriate revisions based on the needs of the study, and includes 15 items, such as “always looking for new information outside of the enterprise”, “the enterprise often exchanges and shares its experience with its peers, suppliers, and customers”, “the enterprise often experiments in order to be a trailblazer within the industry” and “the enterprise updates its technological knowledge in accordance with the technological changes in the industry”, among other items. The Cronbach’s α of this scale in this paper is 0.888.

4) Moderator variable: knowledge inertia. This paper refers to the scale compiled by Liao et al. (2008), and also draws on the scales of Xie et al. (2016), Fan and Gao (2016) to compile the measurement of knowledge inertia, which mainly contains 9 items, such as “Enterprises mainly seek new knowledge from the same or similar knowledge sources” and “Enterprises are accustomed to seeking new knowledge from previous knowledge sources and experiences”. The Cronbach’s α of this scale in this paper is 0.769.

5) Control variable. In order to avoid the influence of irrelevant variables on the relationship between entrepreneurship and organizational resilience, this paper draws on the research methodology of Zhang and Wang (2021), and selects the nature of the enterprise, the size of the enterprise, the age of the enterprise, and the classification of the industry as the control variables in this study.

4. Empirical Analysis

4.1. Testing of Validity and Reliability

By using SPSS27.0 to test the reliability of all variables, the results of data analysis are shown in Table 2. The Cronbach’s α values for each variable of entrepreneurship, knowledge management, knowledge inertia and organizational resilience of Science and Technology-based SMEs are all higher than 0.7, which indicates that the internal consistency of the research scales is high. The KMO values are all greater than 0.7, and the p-values of the Bartlett’s test of sphericity are all significant, so that the structural validity passes the test.

Table 2. Reliability and validity test results.

Variable	Cronbach’s α	KMO	Bartlett’s Test of Sphericity
Entrepreneurship	0.791	0.771	497.951***
Knowledge management	0.888	0.902	1407.780***
Knowledge inertia	0.769	0.756	546.208***
Organizational resilience	0.796	0.802	476.908***

Note: *** indicates $p < 0.001$

4.2. Descriptive Statistics and Correlation Analysis

In this paper, we use Stata 17 to calculate the mean and standard deviation of the model variables and the Pearson correlation coefficient between the variables to

verify the correlation between each variable, and the results are shown in **Table 3**. According to the results in **Table 3**, the correlation coefficient between entrepreneurship and knowledge management is 0.520 ($p < 0.001$), the correlation coefficient between entrepreneurship and organizational resilience is 0.563 ($p < 0.001$), and the correlation coefficient between organizational resilience and knowledge management is 0.691 ($p < 0.001$), all of them have a significant positive correlation, and the correlation coefficients are lower than 0.7, which provides a good basis for the preliminary support for model construction and research hypothesis testing.

Table 3. Descriptive statistics and correlation analysis results.

Variable	Average	Sd.	1	2	3	4	5	6	7	8
1. nature	1.427	0.511	1							
2. size	1.333	0.701	0.293***	1						
3. age	3.737	1.708	-0.457***	-0.255***	1					
4. industry	2.835	1.405	0.142**	0.00800	-0.167***	1				
5. ES	3.615	0.629	-0.0140	0.108*	0.0440	-0.0750	1			
6. KM	3.805	0.546	0.0180	0.160**	-0.0500	-0.0740	0.520***	1		
7. KI	3.368	0.547	-0.104*	-0.0270	0.0860	-0.0770	0.374***	0.402***	1	
8. OR	3.855	0.578	0.0340	0.109*	-0.0670	0.00500	0.563***	0.691***	0.223***	1

Note: *indicates $p < 0.05$, ** indicates $p < 0.01$, ***indicates $p < 0.001$; nature indicates Nature of enterprise, size indicates Size of enterprise, age indicates Age of enterprise, industry indicates Industry classification; ES indicates Entrepreneurship; KM indicates Knowledge management; KI indicates Knowledge inertia; OR indicates Organizational resilience

4.3. Hypothesis Testing

1) Main effects test. In this paper, we use hierarchical regression analysis to add the independent variable entrepreneurship while introducing control variables, and determine whether the hypotheses are valid by checking the significance of the regression coefficients, and the regression results are shown in **Table 4**. According to Model 2, the regression coefficient of entrepreneurship on organizational toughness is significant ($\beta = 0.521$, $p < 0.001$), which indicates that entrepreneurship has a significant positive impact on organizational toughness of Science and Technology-based SMEs, and therefore the hypothesis H1 of this paper is verified.

Table 4. Main effects and mediation effects test results.

Variable	Organizational resilience			Knowledge management	
	Model 1	Model 2	Model 3	Model 4	Model 5
Nature of enterprise	-0.0208 (0.084)	-0.0111 (0.063)	0.00606 (0.048)	-0.0379 (0.086)	-0.0296 (0.066)

Continued

Size of enterprise	0.0838 (0.049)	0.0241 (0.036)	-0.0194 (0.031)	0.126* (0.050)	0.0752 (0.043)
Age of enterprise	-0.0167 (0.026)	-0.0280 (0.019)	-0.0154 (0.015)	-0.0122 (0.025)	-0.0218 (0.020)
Industry classification	-0.000563 (0.024)	0.0143 (0.020)	0.0243 (0.018)	-0.0300 (0.023)	-0.0174 (0.019)
Entrepreneurship		0.521*** (0.058)	0.265*** (0.057)		0.442*** (0.051)
Knowledge management			0.579*** (0.059)		
N	255	255	255	255	255
R ²	0.0137	0.328	0.542	0.0329	0.286
F	1.245	17.58***	43.42***	2.428*	17.71***

Note: *indicates $p < 0.05$, **indicates $p < 0.01$, ***indicates $p < 0.001$, the value of t is in parentheses.

2) Mediation effects test. In order to investigate whether knowledge management has a mediating role in entrepreneurship and organizational toughness of Science and Technology-based SMEs, the mediation effect test proposed by Baron and Kenny (1986) was used to verify the test results as shown in Table 4. According to Model 3, after adding the mediating variable knowledge management, the effect of entrepreneurship on organizational toughness decreases from the original 0.521 to 0.265 and remains significant ($p < 0.001$), indicating that knowledge management plays a partially mediating role between entrepreneurship and organizational toughness of Science and Technology-based SMEs, and therefore hypothesis H2 is verified.

In order to further validate the existence of the mediating effect, this paper uses the PROCESS plug-in in SPSS, repeats the sampling 5000 times and revalidates the mediating effect of knowledge management with a 95% confidence interval. The results show that the indirect effect of knowledge management between entrepreneurship and organizational resilience of Science and Technology-based SMEs is 0.256 and the 95% confidence interval is [0.179, 0.341], and the confidence interval does not contain 0. Therefore, the hypothesis H2 is validated again.

3) Moderating effects test. In order to test the moderating effect of knowledge inertia, the relevant variables are first standardized and the interaction term between entrepreneurship and knowledge inertia is constructed to avoid the problem of multicollinearity, and the test results are shown in Table 5. According to Model 6, knowledge inertia negatively moderates the relationship between entrepreneurship and organizational resilience ($\beta = -0.196$, $p < 0.001$), and Hypo-

thesis H3a is verified; according to Model 7, knowledge inertia negatively moderates the relationship between entrepreneurship and knowledge management ($\beta = -0.340$, $p < 0.001$), and Hypothesis H3b is verified.

Table 5. Moderating effect test results.

Variable	Organizational resilience	Knowledge management
	Model 6	Model 7
Nature of enterprise	-0.0244 (0.061)	-0.0527 (0.061)
Size of enterprise	0.0191 (0.037)	0.0664 (0.043)
Age of enterprise	-0.0374* (0.019)	-0.0380* (0.019)
Industry classification	0.0125 (0.020)	-0.0204 (0.018)
Entrepreneurship	0.512*** (0.053)	0.428*** (0.044)
Entrepreneurship * Knowledge inertia	-0.196*** (0.057)	-0.340*** (0.063)
N	255	255
R ²	0.352	0.368
F	17.33***	27.27***

Note: *indicates $p < 0.05$, **indicates $p < 0.01$, ***indicates $p < 0.001$.

5. Research Conclusions

Taking Science and Technology-based SMEs as the object of research, this study delves into the impact of entrepreneurship on organizational resilience through a systematic literature review. This paper constructs a mediation model with moderating effect and puts forward the corresponding hypotheses, which are verified through empirical methods, and the research results reveal the following three conclusions:

First, this study found spiritual qualities that blend leaders' managerial concepts and behaviors, i.e., entrepreneurship significantly enhances organizational resilience in Science and Technology-based SMEs, and the important role of entrepreneurship in shaping and enhancing firms' ability to withstand risk and adapt to change.

Second, the paper further suggests that entrepreneurship enhances the organizational resilience of a firm by improving the organization's knowledge management. Specifically, leaders with entrepreneurial spirit can promote the enhancement of the organization's ability to acquire, share, and create knowledge,

thus providing strong support for the sustainable development of the enterprise.

Third, this paper also reveals that knowledge inertia plays a negative moderating role in the relationship between entrepreneurship and knowledge management. This suggests that the knowledge inertia formed by leaders' over-reliance on past learning and experience can weaken the positive impact of entrepreneurship on the level of knowledge management. Therefore, in order to enhance organizational resilience, companies need to take effective measures to reduce the negative impact of knowledge inertia, encourage leaders to continuously update their knowledge concepts, and actively seek new learning and development opportunities.

6. Discussion and Prospect

6.1. Theoretical Contribution

This paper examines how entrepreneurship affects the organizational resilience of Science and Technology-based SMEs through knowledge management and focuses on the role of knowledge inertia in this path. This study has the following three theoretical contributions and practical implications:

First, based on the perspective of dynamic capability theory, this paper systematically explores the path of entrepreneurship's influence on organizational resilience, and through empirical research, it verifies the mediating role of knowledge management in this path. In addition, most of the existing studies have chosen small and medium-sized manufacturing enterprises (SMEs) as the research object (Zhang et al., 2023; Liang & Li, 2024), while this paper provides theoretical support on how SMEs in science and technology can enhance organizational resilience through optimizing knowledge management. This finding enriches the research on antecedent variables of organizational resilience and provides useful insights into how Science and Technology-based SMEs can leverage entrepreneurship under the influence of knowledge inertia.

Second, this study further validates the value of knowledge management in improving organizational resilience to changing environments. Considering that SMEs are often faced with rapid environmental changes and the resulting "vulnerability" (Lu & Luo, 2022), this paper explores the relationship between entrepreneurship as a key antecedent variable of organizational resilience, and its relationship with knowledge management and organizational resilience. Entrepreneurship can enhance organizational resilience by strengthening knowledge management, which highlights the importance of leader influence and knowledge resource integration in SMEs.

Third, this paper analyzes the impact of knowledge inertia on the mechanism of entrepreneurship. When leaders face new situations or problems, over-reliance on past knowledge and experience and neglecting to learn and explore new knowledge and methods (Zhao et al., 2012) may hinder organizational adaptation and innovation. To overcome this challenge, organizations can reward employees or departments that excel in the learning of new knowledge and the application of

new technologies, thereby encouraging broader knowledge sharing and application and breaking the shackles of knowledge inertia.

6.2. Management Insight

Existing research has demonstrated that entrepreneurship is a key driver of organizational resilience (Hou et al., 2022). Entrepreneurship encompasses characteristics that can help organizations adapt and recover quickly in the face of challenges and uncertainty (Zeng, 2023), so organizations should focus on fostering and developing entrepreneurship in all aspects of recruitment, training and promotion. In addition, enterprises should establish a sound knowledge management system that encourages employees to share and learn new knowledge and to apply that knowledge in their work.

At the same time, for Science and Technology-based SMEs, their high degree of innovativeness and fast-changing market environment make them have a higher and more sensitive need for new knowledge. However, knowledge inertia, as a potential organizational obstacle, may significantly hinder the acquisition and application of new knowledge by these enterprises, thus reducing their adaptability in the market and overall innovation capability. In this context, it is particularly important for companies to build an open, flexible culture that encourages innovation. By fostering an organizational culture that encourages employees to challenge the status quo and to continue to learn and explore new knowledge, companies can not only effectively overcome the negative impact of knowledge inertia, but also better adapt to and make use of the new knowledge and ideas that emerge in the external environment. Such a cultural atmosphere will help to promote knowledge updating and innovative practices within the enterprise, thus providing a constant impetus for its long-term development.

6.3. Research Shortcoming and Prospect

There are still some shortcomings in this study: firstly, although this paper selects industry classification as the control variable, the data collection of the sample enterprises is still limited and restricted to SMEs in Beijing, which is subject to geographical constraints and the existence of uninvolved types of industries, so we can continue to expand the scope of the samples in the future to further improve the accuracy of the study; secondly, this paper focuses on the role of the intermediary variable, knowledge management, in the relationship between entrepreneurship and organizational resilience, but the complex mechanism of entrepreneurship and organizational resilience has not been explained comprehensively and systematically, so the future can be more perspectives to explore the relationship of the influence between them.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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