INFLUENCE OF ENTREPRENEURIAL ORIENTATION AND ENTREPRENEURIAL ACTION LEARNING ON ENTREPRENEURIAL PERFORMANCE OF SMEs IN SICHUAN PROVINCE OF CHINA

FEN HE

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY PROGRAM IN BUSINESS ADMINISTRATION
FACULTY OF BUSINESS ADMINISTRATION
RAJAMANGALA UNIVERSITY OF TECHNOLOGY THANYABURI
ACADEMIC YEAR 2024

INFLUENCE OF ENTREPRENEURIAL ORIENTATION AND ENTREPRENEURIAL ACTION LEARNING ON ENTREPRENEURIAL PERFORMANCE OF SMEs IN SICHUAN PROVINCE OF CHINA

FEN HE

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY PROGRAM IN BUSINESS ADMINISTRATION

FACULTY OF BUSINESS ADMINISTRATION
RAJAMANGALA UNIVERSITY OF TECHNOLOGY THANYABURI

ACADEMIC YEAR 2024

Dissertation Title	Influence of Entrepreneurial Orientation and Entrepreneurial Action Learning on the Entrepreneurial Performance of SMEs in Sichuan Province of China
Name-Surname	Miss Fen He
Program	Business Administration
Dissertation Advisor	Assistant Professor Duangporn Puttawong, Ph.D.
Academic Year	2024

DISSERTATION COMMITTEE

..... Chairman
(Associate Professor Sungworn Ngudgratoke, Ph.D.)

..... Committee
(Assistant Professor Sirinya Wiroonrath, Ph.D.)

..... Committee
(Assistant Professor Putthiwat Singhdong, Ph.D.)

..... Committee
(Assistant Professor Thitima Pulpetch, Ph.D.)

..... Committee
(Assistant Professor Duangporn Puttawong, Ph.D.)

Approved by the Faculty of Business Administration, Rajamangala University of Technology Thanyaburi in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

..... Dean of Faculty of Business Administration
(Associate Professor Khahan Na-Nan, Ph.D.)

2 October 2024

Dissertation Title	Influence of Entrepreneurial Orientation and Entrepreneurial Action Learning on Entrepreneurial Performance of SMEs in Sichuan Province of China
Name-Surname	Miss Fen He
Program	Business Administration
Dissertation Advisor	Assistant Professor Duangporn Puttawong, Ph.D.
Academic Year	2024

ABSTRACT

The purpose of this study was to investigate the effects of entrepreneurial orientation and entrepreneurial action learning on the entrepreneurial performance of small and medium-sized enterprises (SMEs) in Sichuan province, China, with entrepreneurial action learning acting as a mediating variable and dynamic capability as a moderating variable. Data were collected from 629 respondents through a questionnaire survey. Stratified random sampling was used for selecting qualified respondents.

This study constructed three models. In Model 1, entrepreneurial orientation had a positive effect on entrepreneurial performance, entrepreneurial orientation had a positive effect on entrepreneurial action learning, and entrepreneurial action learning had a positive effect on entrepreneurial performance. Additionally, entrepreneurial action learning acted as a partial mediator between entrepreneurial orientation and entrepreneurial performance. Model 2 and Model 3, respectively validated the positive moderating effect of dynamic capability between entrepreneurial orientation and entrepreneurial performance, and the positive moderating effect of dynamic capability between entrepreneurial action learning and entrepreneurial performance.

The research indicated that small and medium-sized enterprises could not only improve entrepreneurial performance by strengthening entrepreneurial orientation, but also promote long-term sustainable development by cultivating and utilizing entrepreneurial action learning and dynamic capability.

Keywords: entrepreneurial orientation, entrepreneurial action learning, dynamic capability, entrepreneurial performance, small and medium-sized enterprises

Acknowledgements

This thesis was successfully completed with the support of many people. Researcher would like to express the sincerest gratitude to everyone who had supported this research.

First, the researcher would like to thank Thesis Advisor Board Dr. Duangporn Puttawong. From the construction of the theoretical framework to the selection of research methods, Dr. Duangporn Puttawong offered valuable opinions and suggestions. Dr. Sangvorn Ngamkhook offered significant help in research methodology and statistical analysis. Dr. Thitima Pultech gave excellent suggestions on the format and citation of literature. Dr. Sirinya Wiroonrajth refined the expression of sentences in the thesis. Dr. Puttiwat Singdong offered significant inspiration for writing Chapter 5.

Researchers would like to express gratitude to the Faculty of Business Administration, Rajamangala University of Technology, Thanyaburi, for providing the support and resources that enabled researchers to concentrate on this research. Researchers also would like to express gratitude to the small and medium enterprises in Sichuan Province. Despite their busy schedules, they took the time to participate in this research survey, providing invaluable data and insights for this research. The success of the researcher was received by all doctoral students who helped the researcher all the time and thanked the person not mentioned here.

The successful completion of this thesis was inseparable from the help and support provided by all the teachers, relatives, and friends. Researchers were deeply grateful to the friends who offered care, encouragement, and companionship during times of academic difficulty. Their support helped the researcher maintain patience and perseverance in the face of challenges, ultimately leading to the successful completion of this research work.

Fen He

Table of Contents

Table of Contents (Continued)

List of Tables

List of Tables (Continued)

Page

List of Tables (Continued)

Page

List of Figures

CHAPTER 1
INTRODUCTION

1.1 Background and Statement of the Problem

Chinese economy is one of the vital subjects drawing widespread attention scale globally. In recent years, the Chinese economy has demonstrated robust growth, propelling it to become one of the world's largest economies. Since the initiation of economic reforms and opening-up policies, Chinese economy has consistently maintained high-speed expansion. Through the introduction of market-oriented mechanisms and the attraction of foreign direct investment, China has undergone significant structural transformations. The rapid process of industrialization and urbanization, along with its substantial demographic dividend, has furnished a formidable impetus to economic growth (Wang, 2023). Chinese distinctive path of economic development is also a focal point of academic interest. The Chinese government has implemented unique policies in its economic development, including regional opening-up policies, industrial policies, and trade policies. Implementing these policies has driven the advancement of Chinese economy, assisting it in becoming a crucial link in the global industrial supply chain (Lee, 2012). China has emerged as one of the world's largest trading nations in international trade. The value of Chinese exports and imports has continued to grow over the past few decades, and it has consistently expanded its trade partnerships with other countries and regions. Chinese opening economic policies have provided favorable conditions for it to gain a competitive edge in international trade (Xie & Wang & Miao, 2021). The Chinese economy also faced certain challenges. With the increase in labor cost and the intensification of an aging population, Chinese labor force dividend was gradually diminishing. Furthermore, environmental pollution and resource scarcity threatened the sustainable development of the Chinese economy (Tian, 2019). To address the aforementioned challenges, the Chinese government had put forth a series of development strategies and policies, such as "innovation-driven," "supply-side structural reform," and "green development." These measures aimed to facilitate the transformation and upgrading of the Chinese economy, fostering high-quality development and sustainability (Zhao et al., 2023).

With the rapid development of the Chinese economy, SMEs are playing an increasingly crucial role in driving economic growth, generating employment opportunities, and promoting innovation. As vital sources of economic vitality, SMEs not only contributed to achieving balanced regional development but also drove technological progress and industrial upgrading. According to data from the National Bureau of Statistics of China, the contribution of SMEs to the domestic Gross Domestic Product (GDP) had been rising steadily, making them an integral component of the Chinese economy. SMEs also hold substantial potential in the realm of employment, capable of absorbing a significant portion of the workforce, alleviating employment pressures, and promoting social stability. As of 2019, according to data from the National Bureau of Statistics, the number of SMEs in China had surpassed 30 million, accounting for over 99% of the total number of enterprises. SMEs contributed to over 60% of Chinese GDP, making them a pivotal driving force behind economic growth. Moreover, they contributed nearly 2 trillion yuan in taxes, accounting for over 20% of the national total tax revenue, highlighting their substantial role in contributing to the country's fiscal resources (Daily, 2023).

SMEs play a crucial role in driving economic growth and enhancing competitiveness. However, due to their relatively limited resources, intense market competition, and higher risks associated with innovation, SMEs face unique challenges. Therefore, researching the entrepreneurial performance of SMEs, especially exploring how entrepreneurial orientation and entrepreneurial action learning can influence entrepreneurial performance, holds significant importance.

Entrepreneurial orientation referred to the proactive attitude and inclination toward innovation and risk-taking in the management and decision-making processes of a company (Wiklund & Shepherd, 2005). The entrepreneurial orientation of SMEs could drive them to invest resources into innovation and maintain a positive entrepreneurial spirit when faced with difficulties and challenges. Entrepreneurial action learning emphasized that enterprises enhanced their innovation capabilities through continuous practice and learning, continually adjusting and improving innovative strategies and actions to achieve better entrepreneurial Performance (Antonites, 2005). By studying the influence of entrepreneurial orientation and entrepreneurial action learning on the

entrepreneurial Performance of SMEs, it was possible to gain deeper insights into how SMEs could achieve better innovation outcomes with limited resources. This held significant implications for formulating policies and strategies that supported the innovative development of SMEs, and for enhancing the competitive position of SMEs in the global arena.

Data from the Sichuan Provincial Bureau of Statistics showed that, as an important economic hub in Southwest China, Sichuan Province possessed vast market potential and abundant resource advantages (Statistics, 2020). With a substantial population base and a rapidly developing economy, it offered entrepreneurs ample market demand and opportunities. Furthermore, its strategic geographical location facilitated close transportation links with mainland China, Southwest Asia, Southeast Asia, and other regions, providing favorable conditions for entrepreneurs to expand their markets. Moreover, entrepreneurial activities in Sichuan Province were experiencing rapid growth. Recent statistical data indicated a consistent increase in newly registered enterprises in Sichuan Province, reflecting a vibrant entrepreneurial atmosphere. This growth could be attributed to the continuous improvement of government support policies and the increasing innovative awareness among entrepreneurs. Additionally, SMEs played a significant role in entrepreneurial activities in Sichuan Province (Commission, 2020). SMEs were irreplaceable in the entrepreneurial landscape, exerting a pivotal role in driving employment, technological innovation, and economic growth. Covering various sectors including manufacturing, services, and agriculture, SMEs in Sichuan Province hold crucial importance for the province's economic development.

In Sichuan Province, the background of innovation and entrepreneurship activities was characterized by a positive developmental trend (Chen & Liu, 2019). Firstly, government supporting policies had played a crucial role in driving entrepreneurial-oriented activities (Wu & Zhao, 2018). Sichuan Province actively promoted the implementation of innovation and entrepreneurship policies, offering measures such as fiscal support, tax incentives, and entrepreneurial training to foster entrepreneurial activities among small and medium-sized enterprises. These policy implementations had created a favorable entrepreneurial environment and resource support for entrepreneurs, thereby stimulating the development of entrepreneurial-

oriented activities. Secondly, Sichuan Province's human resources and technological innovation capabilities provided robust support for entrepreneurial-oriented activities (Wu & Zhao, 2018). With 137 regular institutions of higher education and 12 adult higher education institutions (News, 2023). Sichuan boasted first-class higher education and research institutions, offering talent and technological support to entrepreneurs. This solid foundation facilitated the development of entrepreneurial-oriented activities, enabling entrepreneurs to better respond to market challenges and innovative demands.

Studying the entrepreneurial landscape of SMEs in Sichuan Province aimed to gain a profound understanding of the influence of the local entrepreneurial environment and related factors on business innovation and development. According to research, Sichuan Province, as a significant economic hub in Southwest China, possesses extensive market potential and abundant resource advantages. Over the past few years, entrepreneurial activities in Sichuan Province have shown a rapid growth trend. According to data from the Sichuan Provincial Bureau of Statistics (2020), in 2019, the province saw the registration of 234,000 new enterprises, representing an 11.3% year-on-year increase. This underscored the increasingly dynamic entrepreneurial atmosphere in Sichuan Province.

SMEs in Sichuan Province hold a significant position within the entrepreneurial landscape. SMEs played an irreplaceable role in the province's economy, contributing significantly to employment, technological innovation, and economic growth. As of 2022, the number of SMEs in Sichuan Province exceeded 2.3 million, accounting for over 90% of the total enterprises in the province. These SMEs contributed about 70% of the province's total tax revenue and accounted for more than 80% of urban new employment, contributing over 55% to the overall economic growth of the province (Huang, 2023).

Although much research had been conducted in the field of entrepreneurship, there was still relatively little research on specific geographic areas and specific types of firms. Choosing to study SMEs in Sichuan Province helped to fill the research gap in this area. It provided a more specific and in-depth understanding of the entrepreneurial environment in the region. The choice of strategic entrepreneurship theory and dynamic capability theory as the theoretical basis of the study helped to integrate practical research with existing management theories. This helped to deepen the understanding of the

various factors involved in the entrepreneurial process and also provided new empirical support for theory development.

1.2 Purpose of the Study

The research “Influence of Entrepreneurial Orientation and entrepreneurial action learning on Entrepreneurial Performance of SMEs in Sichuan Province of China” was to comprehensively analyze the roles of entrepreneurial orientation and entrepreneurial action learning within SMEs in Sichuan Province, investigating their impact mechanisms on entrepreneurial performance. This research intended to provide theoretical and practical guidance for enhancing business performance by uncovering how to optimize the entrepreneurial process. As such, the objectives of this study were as follows:

1. To analyze the causal relationship model of entrepreneurial orientation, entrepreneurial action learning, and the entrepreneurial performance of SMEs in Sichuan Province.

2. To analyze the causal relationship model of the entrepreneurial orientation on the entrepreneurial performance of SMEs in Sichuan Province, mediated by entrepreneurial action learning.

3. To analyze the causal relationship model of the effects of entrepreneurial orientation and entrepreneurial action learning on the entrepreneurial performance of SMEs in Sichuan Province, moderated by favorable dynamic capability.

1.3 Research Questions

Research of the "Influence of Entrepreneurial Orientation and entrepreneurial action learning on Entrepreneurial Performance of SMEs in Sichuan Province of China" was the study of the factors including entrepreneurial orientation, entrepreneurial action learning, and dynamic capability were aimed at becoming guiding models for the development of entrepreneurs in SMEs in Sichuan Province, to enhance their performance in competitive markets. Based on this, the present study would introduce the following research questions:

1. What was the relationship between entrepreneurial orientation, entrepreneurial action learning, and entrepreneurial performance?

There existed a close relationship between entrepreneurial orientation and entrepreneurial performance. Research had found that enterprises with a strong entrepreneurial orientation were more likely to achieve higher levels of entrepreneurial performance. Studies indicated that entrepreneurial-oriented companies were more inclined to engage in innovation and exploration, enabling them to seize market opportunities and make swift decisions. This proactive entrepreneurial orientation helped companies adapt to evolving market environments, gained competitive advantages, and thus enhanced entrepreneurial performance (Lumpkin & Dess, 1996).

The relationship between entrepreneurial orientation and entrepreneurial action learning was closely intertwined. They interacted and mutually facilitated each other throughout the entrepreneurial process. Entrepreneurial orientation influenced the attitudes, intentions, and values of entrepreneurs, while entrepreneurial action learning involved accumulating experience, adjusting strategies, and continually learning through actual entrepreneurial actions. Mitchell .et al (2002) stated that entrepreneurial orientation was crucial for entrepreneurial action learning. An individual's entrepreneurial orientation affected their behaviors and decisions during entrepreneurship, thereby influencing their path of entrepreneurial learning. A positive entrepreneurial orientation often drives entrepreneurs to engage in trials, experiments, and continuous adjustments, accelerating their process of entrepreneurial learning. The dynamic interaction between entrepreneurial orientation and entrepreneurial action learning underscored the significance of continuous learning, adaptation, and adjustment in the entrepreneurial journey. The entrepreneurial orientation of entrepreneurs affected their behaviors and decisions in entrepreneurship, and entrepreneurial action learning, drove by the accumulation of practical experience and reflection, assisted in altering the attitudes, intentions, and values of entrepreneurs. This formed a virtuous cycle, propelling entrepreneurs to grow continuously through ongoing learning.

There existed a close relationship between entrepreneurial action learning and entrepreneurial performance. Entrepreneurs could enhance entrepreneurial performance through proactive learning behaviors. Research indicated that entrepreneurial action

learning has a positive impact on entrepreneurial performance. Entrepreneurs, by continuously experimenting, reflecting, and adjusting in their practices, acquire practical experience and knowledge, draw lessons from them, and enhance their innovation capabilities and ability to address market challenges. Entrepreneurial action learning also assisted entrepreneurs in adapting to evolving environments, making timely adjustments to strategies and business models, thereby achieving better entrepreneurial performance (Burgers, 2017).

2. How did entrepreneurial orientation affect entrepreneurial performance through entrepreneurial action learning?

Entrepreneurial orientation motivated business owners and employees to proactively explore new opportunities and try out new markets and products, which provided opportunities for practical entrepreneurial action learning. Through practical action and experience, firms could acquire new knowledge, insights, and skills that were critical to improving entrepreneurial performance. For example, firms might learn through trial and error what market strategies were more effective, how to better satisfy customer needs, how to manage risk, etc., and this knowledge could directly affect entrepreneurial performance.

Entrepreneurial orientation emphasized innovation, and firms might achieve this by trying new products, services, or market strategies. Entrepreneurial action learning helped companies better understand the effects of innovation, learn which innovation methods were more effective and which were not, and then adjusted and iterated accordingly. This helped companies adapt faster to market needs and differentiated themselves from the competition, leading to improved entrepreneurial performance.

Entrepreneurial orientation was often accompanied by risk-taking. Entrepreneurial action learning helped firms to better understand risks and learned how to manage them. Firms could gradually improve their risk management strategies and reduce the impact of potential risks through feedback and experience in practice. This reduced the uncertainty of entrepreneurial activities and thus increased the stability of entrepreneurial performance.

Entrepreneurially oriented firms interacted more closely with the market and continuously obtained market feedback. Entrepreneurial action learning enabled firms to

better interpret market feedback and understand market needs and customer reactions. This feedback loop promoted improvements in products and serviced to satisfy customer needs, thereby increasing entrepreneurial performance.

Entrepreneurial action learning helped to develop adaptability and flexibility in enterprises. Enterprises could better respond to changing market conditions, quickly adjust their strategies, and better capitalize on new opportunities. This adaptability helped to maintain competitiveness and thus improved entrepreneurial performance.

3. How did entrepreneurial orientation and entrepreneurial action learning have a causal relationship to the entrepreneurial performance of SMEs in Sichuan Province through dynamic capability?

Under the influence of dynamic capability, how did entrepreneurial orientation relate to entrepreneurial performance? Enterprises with a strong entrepreneurial orientation were more inclined to possess and develop dynamic capability, which referred to the ability of enterprises to adapt to and address the ever-changing market environment. This included flexibility, learning ability, and innovation capability. Entrepreneurially enterprises were more willing to explore and innovate, driving entrepreneurial performance through dynamic capability. Dynamic capability enabled enterprises to swiftly identify market opportunities, made rapid adjustments to strategies and business models, and engaged in timely organizational learning and knowledge accumulation. The fusion of entrepreneurial orientation and dynamic capability allowed enterprises to quickly adapt to and seize market changes, thereby enhancing entrepreneurial performance (Zahra & Sapienza & Davidsson, 2009).

Dynamic capability moderated the relationship between entrepreneurial action learning and entrepreneurial performance by influencing the strength or direction of their relationship. One possible scenario was that enhancing dynamic capability might strengthen the positive relationship between entrepreneurial action learning and entrepreneurial performance. In enterprises with higher dynamic capability, the impact of entrepreneurial action learning on entrepreneurial performance might be more significant, meaning the positive influence of entrepreneurial action learning on entrepreneurial performance would be stronger. Another scenario was that weakening dynamic capability might diminish the relationship between entrepreneurial action learning and

entrepreneurial performance. In enterprises with lower dynamic capability, the impact of entrepreneurial action learning on entrepreneurial performance might be less pronounced, or entrepreneurial action learning might not have a significant effect on entrepreneurial performance.

1.4 Hypotheses

Entrepreneurial orientation contributed to igniting innovation awareness and drove within the company, enabling it to more keenly identify and capitalized on market opportunities (Covin & Wales, 2012). Entrepreneurial action learning empowered enterprises to continuously accumulate experience and knowledge, applying them to the innovation process, thereby enhancing the quality and efficiency of innovation (Wiklund & Shepherd, 2005). Dynamic capability adjustment enabled businesses to promptly respond to changes in the external environment, realigning resource allocation and capability combinations to adapt to shifting market demands (Teece, 2014).

1. In today's increasingly competitive business environment, innovation had become a key factor for the vigorous development of enterprises. However, on the path of entrepreneurship, SMEs often face challenges such as limited resources and intense competitive pressures. Therefore, exploring the relationship between entrepreneurial orientation and entrepreneurial performance became particularly important. To delve into the mechanisms through which entrepreneurial orientation impacts the entrepreneurial performance of SMEs, and to provide beneficial theoretical support and practical guidance for fostering corporate innovation and development, based on this context, this study put forth the following hypotheses.

H1: Entrepreneurial orientation had a positive effect on entrepreneurial performance.

2. In the modern business environment, the success of entrepreneurs hinged on their learning ability and innovative thinking. Entrepreneurial orientation, as a core element of business strategy, was considered the driving force behind innovation and entrepreneurship. However, the exact influence of entrepreneurial orientation on the learning process of entrepreneurs required further investigation. Based on this, the following hypothesis was proposed:

H2: Entrepreneurial orientation had a positive effect on entrepreneurial action learning.

3. In today's rapidly evolving economic landscape, SMEs played an increasingly vital role in innovation and entrepreneurship. However, faced with the ever-changing market dynamics and intensifying competition, these enterprises must possess the ability for continuous learning. Entrepreneurial action learning, as a proactive learning approach, might have an impact on the entrepreneurial performance of SMEs. To delve deeper into the catalytic role of entrepreneurial action learning on entrepreneurial performance, the following hypothesis was proposed:

H3: Entrepreneurial action learning had a positive effect on entrepreneurial performance.

4. Entrepreneurial orientation might motivate firms to be more inclined to adopt active action learning in pursuing new opportunities to gain experience and knowledge to better cope with challenges and enhance performance. In this context, the researcher argued that entrepreneurial action learning, as a mediating variable, might play an important connecting role between entrepreneurial orientation and entrepreneurial performance. By facilitating the practice of knowledge accumulation, risk management, innovation and market adaptation, entrepreneurial action learning helped SMEs to more effectively utilize the innovation and risk-taking associated with entrepreneurial orientation, which ultimately affects their entrepreneurial performance. Based on this, the following hypothesis was proposed:

H4: Entrepreneurial action learning played a mediating role in the entrepreneurial orientation on entrepreneurial performance.

5. In the modern landscape of business competition, the entrepreneurial performance of companies had become a crucial factor in ensuring sustainable development. However, the relationship between entrepreneurial orientation as a business strategy and entrepreneurial performance and how it was moderated by dynamic capability warranted in-depth investigation. Dynamic capability, representing a company's ability to adapt to changes and foster innovation, might indeed play a significant role in mediating the link between entrepreneurial orientation and entrepreneurial performance. Based on this, the following hypothesis was put forth:

H5: The effect of the entrepreneurial orientation on entrepreneurial performance increased with favorable dynamic capability.

6. In today's business environment, characterized by uncertainty and intense competition, the entrepreneurial performance of companies had become a key factor in maintaining competitive advantage. Entrepreneurial action learning, as an important way for entrepreneurs to adapt to changes and development, might indeed influence the shaping of entrepreneurial performance. However, how entrepreneurial action learning affected entrepreneurial performance under the moderation of dynamic capability required further in-depth research. Dynamic capability, such as a company's ability to adapt to environmental changes and foster innovation, could potentially play a critical role in mediating the relationship between entrepreneurial action learning and entrepreneurial performance. Based on this, the following hypothesis was proposed:

H6: The effect of entrepreneurial action learning on entrepreneurial performance increased with favorable dynamic capability.

1.5 Theoretical Perspective

This paragraph would be explained from the perspectives of Resource-Based Theory (RBT) and Dynamic Capability Theory (DCT). According to RBT, entrepreneurial orientation and entrepreneurial action learning could be seen as crucial resources for SMEs. Entrepreneurial orientation enabled companies to actively pursue opportunities, explored and utilized internal and external resources, and drove innovative activities. Entrepreneurial action learning, through trial and error and feedback mechanisms, allowed companies to accumulate knowledge and experience, transforming them into innovative capabilities. The accumulation and integration of these resources were vital for the entrepreneurial performance of SMEs. Dynamic capability, on the other hand, represented the ability of enterprises to dynamically adjust how they build, configure, and utilize internal resources, in response to and in adaptation to complex environmental changes (Fan, 2021).

On the other hand, some scholars draw on the ideas of evolutionary economics to point out that the evolution of dynamic capability was accompanied by the management and learning of knowledge. This enabled enterprises to actively pursue new knowledge

and adjusted their strategies to adapt to the constantly changing external environment (Zollo & Winter, 2002). The enhancement of this learning and adaptation capability provided the foundation for the improvement of entrepreneurial performance in enterprises. Entrepreneurial orientation and entrepreneurial action learning served as vital resources for SMEs, enabling them to actively pursue opportunities, explored and utilized internal and external resources, and drove innovative activities (Fang, 2018). Barney(1991) argued that dynamic capability are an extension of the RBV.

This study drew upon the RBV and DCT to establish a theoretical framework for identifying the resources and capabilities that served as the starting point for entrepreneurial activities in a business. Entrepreneurial orientation was thus considered as the independent variable, entrepreneurial action learning as the mediating variable, and dynamic capability as the moderating variable, examining their combined impact on entrepreneurial performance.

Based on these theoretical perspectives, this paper would present a conceptual framework from the following aspects:

1.Entrepreneurial Orientation (EO);

2. Entrepreneurial Action Learning (EAL);

3. Dynamic Capability (DC);

4. Entrepreneurial Performance (EP).

1.6 Scope of Study

Research of the "Influence of Entrepreneurial Orientation and Entrepreneurial Action Learning on Entrepreneurial Performance of SMEs in Sichuan Province of China", the scope of this study was as follows:

1.6.1 The Research Area

The objective of this study was to focus on SMEs in Sichuan Province. The definition of SMEs varied among different countries. According to the "Notice on Issuing the Classification Standards for SMEs" the classification of enterprises as small or medium-sized in China is based on indicators such as the number of employees, business revenue, and total assets (detailed classification will be explained in Chapter

Two). These classifications are further differentiated based on industry characteristics into three types: medium-sized, small-sized, and micro-sized enterprises (China, 2011).

1.6.2 Research Data

This study selected enterprises with a registration period of more than six months for the survey, and the survey was anticipated to be conducted in October 2023.

1.6.3 Research Sample Size

As of December 2022, there were 2.3 million SMEs in Sichuan Province (Huang, 2023). To ensure the authenticity and validity of the data, questionnaires were filled out by founders, entrepreneurs, or mid-to-senior-level managers of the enterprises. Multi-stage sampling method for sampling was employed, with samples drawn from a series of member extractions. According to statistical requirements, a sample size that aligned with the research objectives was selected from the 2.3 million SMEs in Sichuan Province to serve as the subjects of this study.

1.6.4 Research Variables

This article investigated the relationship between entrepreneurial orientation as the independent variable, entrepreneurial action learning as the mediating variable, dynamic capability as the moderating variable, and the entrepreneurial performance as the dependent variable. The dimensions of entrepreneurial orientation included collaborative innovativeness, proactive aggressiveness, risk-sharing propensity, and dynamic competitiveness. Entrepreneurial action learning comprised explorative learning, transformative learning, and developmental learning. The moderating role of dynamic capability was studied across the dimensions of organizational restructuring capability, resource integration capability, and opportunity perception capability. Entrepreneurial performance as the dependent variable was measured through three dimensions: growth performance, profitability performance, and overall performance.

Through this study, it was possible to effectively explore the impact of entrepreneurial orientation and entrepreneurial action learning on the entrepreneurial performance of SMEs in Sichuan Province. This study aimed to provide theoretical and practical guidance for the positive development of SMEs.

1.7 Definitions of Specific Terms

1.7.1 Definition of Entrepreneurial Orientation

Entrepreneurial orientation refers to the attitude and inclination of business managers or entrepreneurs towards innovation, risk-taking, and the pursuit of opportunities. This concept was initially introduced by Lumpkin and Dess in 1996. They defined entrepreneurial orientation as "the processes, practices, and decision-making activities that lead established firms to engage in new entry (creation) or innovation (procreation) activities" (Lumpkin & Dess, 1996). Entrepreneurial orientation was a direction that enhances survival and continuity (Feng & Patel & Xiang, 2020; Marei et al ,2023). It was a source of competitive advantage for entrepreneurial organizations (Mishra, 2017) and supported entrepreneurial organizations in competing and achieving higher returns (Purnomo, 2019). Rehman et al. (2019) argued that entrepreneurial orientation was one of the strategic orientations aimed at developing and innovating services and creating new behaviors to guide customers toward competitive advantage. Organizations with entrepreneurial orientation were characterized by creativity, a spirit of adventure, and proactiveness (Salih & Alsalhi & Abou-Moghli, 2024).

1.7.2 Definition of Entrepreneurial Action Learning

Entrepreneurial action learning could be defined as the process in which entrepreneurs take actions, acquire experience and knowledge, and reflect, adjust, and improve their actions through feedback mechanisms in practice. This concept emphasized the active participation of entrepreneurs and the significance of experiential learning in the entrepreneurial process. Rae (2003) highlighted that entrepreneurial action learning involved a process of rethinking undertaken by individuals while seeking entrepreneurial opportunities and creating new ventures. He emphasized that the challenges faced during the entrepreneurial process prompt entrepreneurs to engage in learning, constituting a socialized experiential learning behaviors. Cope (2005) asserted that entrepreneurial learning was a dynamic process through which entrepreneurs acquired knowledge, absorbed information through experience, observation, and practice, and developed their skills and abilities. This form of learning was identified as an effective means of transforming information and resources obtained by entrepreneurial teams from the

internet into entrepreneurial performance (Rae, 2005), serving as a key source of organizational core innovation advantage (Liu et al., 2023).

1.7.3 Definition of Dynamic Capability

Dynamic capability was defined as an organization's ability to adapt and respond to a constantly changing environment, encompassing aspects such as flexibility, learning capacity, and innovation (Eisenhardt & Martin, 2000). This concept emphasized an organization's sensitivity to change and uncertainty, as well as its ability to adjust and transform. According to research by Zahra et al. (2006), dynamic capability was defined as the "plasticity and agility displayed by an organization in pursuing opportunities, adapting to environmental changes, and integrating resources." Nielsen et al. (2000) regarded dynamic capability as an integrated set of knowledge management activities, while Verona and Ravasi (2003) described dynamic capability as a combination of knowledge creation, acquisition, integration, and redeployment. Wang et al. (2007) suggested linking knowledge with dynamic capability and explicitly propose knowledge-based dynamic capability, defining them as the absorption, creation, and application of knowledge. Dynamic capability enabled organizations to swiftly identify and seize market opportunities, flexibly adjusted strategies and business models, and continuously learn and accumulate knowledge. It underscored an organization's adaptability and capacity for change, thereby maintaining competitive advantage in an ever-evolving market environment. Barney (1991) posited that dynamic capability was an extension of the Resource-Based View (RBV), which asserted that firms possess valuable, rare, and inimitable resources, and this heterogeneity could be sustained over time.

1.7.4 Definition of Entrepreneurial Performance

Entrepreneurial performance was one of the criteria for measuring the outcomes and effectiveness of entrepreneurship (Fang, 2018). It served as an assessment standard for evaluating the results of a company's entrepreneurial activities, typically involving outcomes achieved in market competition, such as market share, sales growth, and profit levels. Moreover, entrepreneurial performance reflected the organization's capabilities in innovation, resource utilization, strategic execution, and adaptability to external environmental changes. According to the research by Wiklund and Shepherd (2005), entrepreneurial performance encompassed not only financial performance but also non-

financial aspects like market position, brand value, and employee satisfaction. Additionally, the definition of entrepreneurial performance was contingent upon various factors, including industry, company size, and cultural background.

1.8 Conceptual Framework

Based on the analysis of the conceptual dimensions involved in this study and the relationship between entrepreneurial orientation, entrepreneurial action learning and entrepreneurial performance, the conceptual framework of this study was constructed as shown in the figure below:

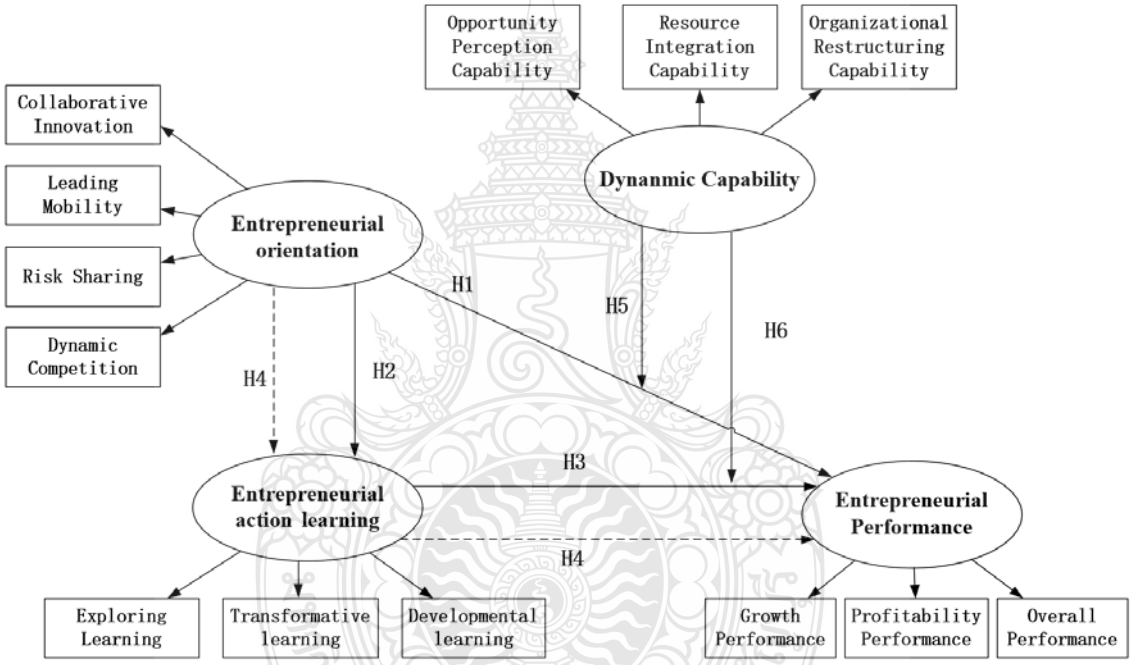


Figure 1.1 Theoretical Framework

1.9 Research Significance and Expected Results

1.9.1 Research Significance

In terms of theoretical significance, this study aimed to investigate the mechanism through which entrepreneurial orientation affected entrepreneurial performance, with entrepreneurial action learning as the mediating variable and dynamic capability as the moderating variable. This expanded the theoretical framework encompassing entrepreneurial orientation, entrepreneurial action learning, dynamic

capability, and entrepreneurial performance. Simultaneously, by exploring the relationships among entrepreneurial orientation, entrepreneurial action learning, dynamic capability, and entrepreneurial performance, this study delved into the essence and dimensions of entrepreneurial orientation. This deeper understanding enhanced the comprehension of the nature and role of entrepreneurial orientation, thereby offering insights into how businesses could use entrepreneurial orientation to enhance entrepreneurial performance.

In terms of practical significance, effective entrepreneurship played an increasingly crucial role in driving Chinese economic growth, technological progress, and international competitiveness. Entrepreneurship not only generated new employment opportunities but also became a vital strategy for businesses to navigate rapidly changing environments. Entrepreneurial orientation represented a strategic mindset that was bound to become a new mental model and operational philosophy. Action learning advocated learning through dynamic action rather than static approaches, emphasizing experiential and interactive learning that yields more novel and applicable knowledge. Dynamic capability referred to an organization's ability to adapt and respond to changes in an ever-evolving environment (Barney, 1991). This study provided practical insights into the implementation of entrepreneurial orientation strategies for businesses, aiding them in making sound strategic decisions amid fierce market competition. The integration of entrepreneurial orientation and entrepreneurial action learning implies that businesses could exhibit sharper responsiveness and learning capabilities in the face of external environmental challenges, enabling better handling of strategies related to change and innovation. This integration served as an inevitable strategic choice for Chinese enterprises to establish sustainable competitive advantages, deepen marketization, and internationalize. It had become a viable path to support the transformation from "Made in China" to "Created in China," aligning with the ongoing "mass entrepreneurship and innovation" development strategy and offering policy recommendations for its implementation.

1.9.2 Expected Results

By studying issues related to entrepreneurship among SMEs in Sichuan Province, it was expected to achieve several effects.

①. First, it could provide a deeper understanding of the entrepreneurial background and characteristics of SMEs in Sichuan Province, including the motives for entrepreneurship, the entrepreneurial environment, and entrepreneurial strategies. This contributed to a more comprehensive understanding of the current entrepreneurial situation and development trends in the region.

②. The research could uncover key factors influencing entrepreneurship among SMEs in Sichuan Province, including policy support, market environment, financial assistance, and human resources, among others. Furthermore, by exploring the impact of entrepreneurial orientation, entrepreneurial action learning, and dynamic capability on entrepreneurial performance, the study could offer theoretical and practical guidance, providing valuable insights and support for the innovation and development of businesses.

③. This research might contribute positively to enhancing innovation and competitiveness among SMEs in Sichuan Province, as well as promoting sustainable regional economic development (Liu, 2018; Wang, 2017). This contributed to the formulation of more effective entrepreneurship support policies by the government and relevant institutions, providing more targeted resources and services to promote innovation and development among SMEs.

④. The research could explore the selection and implementation of entrepreneurial strategies, offering guidance and recommendations to SMEs on aspects such as resource acquisition, market positioning, and organizational management (Wang, 2017). This held practical significance for entrepreneurs in making decisions and taking actions during the entrepreneurial process, enhancing the likelihood of entrepreneurial success.

Furthermore, through the study of entrepreneurship-related issues among SMEs in Sichuan Province, insights gained could serve as a reference and inspiration for entrepreneurship research in other regions and countries. While variations existed in entrepreneurial environments and factors across different areas, commonalities also prevail. Thus, investigating entrepreneurship among SMEs in Sichuan Province could provide experiences and lessons for entrepreneurs and policymakers in other regions, fostering the advancement of entrepreneurship theory and practice. In summary, the

anticipated outcomes of studying entrepreneurship-related issues among SMEs in Sichuan Province included conducting in-depth analyses of the local entrepreneurial environment, entrepreneurial strategies, and factors contributing to entrepreneurial success. This analysis, in turn, offered valuable insights and references for governmental decision-making and practical implementation within the region.

This paper sought to establish a cross-sectional multidimensional framework for entrepreneurship orientation, entrepreneurial action learning, dynamic capability, and entrepreneurial performance based on the new context of the entrepreneurship environment of SMEs in Sichuan Province, China. Entrepreneurship orientation was treated as the antecedent variable for entrepreneurial performance, while entrepreneurial performance served as the outcome variable for entrepreneurship orientation. Entrepreneurial action learning was introduced as the mediating variable, regulating variable with dynamic capability, contributing to the construction of a fundamental theoretical framework for understanding the mechanisms and management strategies influencing entrepreneurial performance. Combining theoretical expansion, questionnaire design, and data collection, this study explored the relationships among entrepreneurship orientation, entrepreneurial action learning, dynamic capability, and entrepreneurial performance.

CHAPTER 2
REVIEW OF THE LITERATURE

"Influence of Entrepreneurial orientation and entrepreneurial action learning on entrepreneurial performance of SMEs in Sichuan Province of China". The research purpose of this article was to analyze the factors influencing entrepreneurial performance in SMEs in Sichuan Province of China, and to examine the causal relationship between entrepreneurial orientation and entrepreneurial action learning on entrepreneurial performance of SMEs. Furthermore, the article aimed to establish a relevant theoretical model. Thus, by collecting pertinent literature information, the goal was to achieve substantial contributions both in academia and practical applications. The following provided a detailed introduction to the theoretical framework, concepts, and related literature.

2.1 Entrepreneurship Theory

2.1.1 Entrepreneurship Models

Since the 1980s, research on entrepreneurship had been ongoing. In this field, scholars had sought to understand the essence of entrepreneurship, its driving factors, and key elements in the entrepreneurial process. Various entrepreneurship models had been proposed to deconstruct and comprehend the phenomenon of entrepreneurship. Some well-known models included the Gartner (1985) Entrepreneurship Model, Padmore and Gibson (1998) GEM (Global Entrepreneurship Monitor) Entrepreneurship Model, Timmons et al. (2004) Entrepreneurship Model, and Ma & Ta (2006) Entrepreneurship Model.

Gartner's (1985) views entrepreneurship as an activity based on strategic behavior, a process of innovation and entrepreneurial activities. Gartner introduced a dynamic multidimensional conceptual model of entrepreneurship, encompassing four elements: the external environment of entrepreneurship, entrepreneurial organization, entrepreneurs, and the entrepreneurial process. Entrepreneurship was seen as the result of the interaction of these four factors. Individuals played the role of executors in entrepreneurship, requiring rich practical experience, a proactive desire, and a willingness

to take risks. Organizations were the object of entrepreneurship, covering aspects such as cost control, degree of differentiation, and competitive strategy. The entrepreneurial process included opportunity discovery, business creation, the introduction of technology and products, and providing services to society. The entrepreneurial environment encompasses various factors such as political, economic, cultural, and technological. While Gartner's model laid the research foundation for subsequent entrepreneurship theories, it overlooked the importance of entrepreneurial opportunities.

Based on a survey of global entrepreneurship data, Padmore and Gibson (1998) conducted research, linking innovation and entrepreneurship to the economy of the same country or region through dynamic analysis. They pointed out that the core elements of entrepreneurship include entrepreneurial attitude, entrepreneurial activities, and entrepreneurial prospects. The GEM entrepreneurship model further explores the organic combination of subjective and objective factors in entrepreneurship, conducting in-depth research on the essence of entrepreneurship.

Timmons et al. (2004) entrepreneurship model suggested that during the entrepreneurial process, one must integrate opportunities, resources, and teams, continually achieving dynamic balance. They proposed a goal-oriented simplified entrepreneurship model, requiring entrepreneurial teams to seize opportunities and integrate relevant resources. In this model, entrepreneurial teams replaced the role of entrepreneurs, indicating potential challenges such as the instability of the market environment, the ambiguity of opportunities, and the uncertainty of time during the entrepreneurial process. To adapt to dynamic changes, entrepreneurial teams needed to respond flexibly and maintain a dynamic balance between opportunities, resources, and teams. Although this model didn’t elaborate on the mechanism of this balance, it emphasized the importance of addressing uncertainty and dynamic changes in the entrepreneurial process.

Ma & Ta (2006) proposed an entrepreneurship model that included entrepreneurial leaders, entrepreneurial practices, entrepreneurial claims, and entrepreneurial performance. Entrepreneurial leaders were individuals with strong execution and leadership skills, as well as firm beliefs and a strong passion for entrepreneurship. Entrepreneurial practices referred to specific actions and practical

approaches taken during the entrepreneurial process, including the process of integrating resources and persuading followers. Entrepreneurial claims covered the entrepreneur's views on innovation and creativity, as well as their understanding of entrepreneurial purposes and strategies. Entrepreneurial performance referred to the effects achieved by entrepreneurial activities, including financial and non-financial performance, as well as realizing social value and maximizing organizational benefits. The model presented three modes: the direct effects mode indicated that entrepreneurial claims, entrepreneurial practices, and entrepreneurial leaders directly influenced entrepreneurial performance; the mediating effect referred to the impact of entrepreneurial claims and entrepreneurial leaders on entrepreneurial performance through entrepreneurial practices as an intermediate variable; and the interactive effect indicated that entrepreneurial claims, entrepreneurial practices, and entrepreneurial leaders collectively influenced entrepreneurial performance.

The entrepreneurship model referred to the business model or operational strategy adopted by entrepreneurs when establishing a new enterprise or undertaking new business ventures. It provided a framework to help entrepreneurs understand and design business models, thereby achieving sustainable development and profitability for the enterprise. According to research by Osterwalder (2005) and others, an entrepreneurship model was defined as a "comprehensive description of how an organization creates, delivers, and captures value, outlining the logic and rules." It emphasized the importance of creating unique value, understanding customer needs, and designing marketing strategies.

Research on entrepreneurship models not only focused on the construction of business models but also addressed uncertainties and risk management in the entrepreneurial process. Studies by Zott (2011) and others indicated that entrepreneurship models need to consider how entrepreneurs create and deliver value through innovative combinations, as well as how they capture value through collaboration and network effects. Teece (2010) views the entrepreneurship model as a concept closely related to business strategy and innovation, emphasizing how entrepreneurs achieve competitive advantages and profitability through innovative business models.

There were different viewpoints and opinions among scholars regarding the definition of entrepreneurship. Based on a review of relevant literature, the relevant references were listed in Table 2.1.

Table 2.1 Different Definitions of Entrepreneurship

Author	Year	Definition and Emphasized Aspects
Joseph Schumpeter	1942	The main focus is on the concepts of innovation and creative disruption. He believes that entrepreneurs are those who drive economic development by introducing new products, new production methods, new markets, or new organizational forms, and by disrupting the existing economic order. He emphasizes that entrepreneurs are not just mere risk-takers, but drivers of creating new markets and changing industry structures.
Knight	1921	His definition of entrepreneurship primarily focuses on risk-taking and market entry. He emphasizes the role of entrepreneurs as risk-takers, who are willing to venture resources and take on the potential risks of failure in pursuit of returns and opportunities.
Peter Drucker	1985	His definition of entrepreneurship emphasizes innovation and creating new value. He describes entrepreneurship as an innovative activity that goes beyond merely starting new businesses.
Lumpkin & Dess	1996	The study investigated entrepreneurial orientation in small businesses and analyzed the impact of the external environment on entrepreneurial orientation.
Merluzzi	2014	In cultural and historical studies, entrepreneurship may be seen as the process through which individuals or groups pursue new opportunities and value using innovative, risk-taking, and creative behaviours.
Shane & Venkataraman	2000	Emphasizing entrepreneurship as a process of seeking and harnessing new opportunities, it highlights entrepreneurs as decision-makers and opportunity explorers who create fresh value through innovative and creative means.

On the practical level, the book by Osterwalder and Pigneur (2010) provided a practical tool known as the Business Model Canvas, assisting entrepreneurs in systematically building, assessing, and optimizing business models. The book emphasized achieving business success through the design of clear value propositions, the selection of appropriate distribution channels, and the establishment of strong customer relationships. Additionally, Ries (2011) introduced the concept of "Lean Startup," integrating entrepreneurship models with continuous innovation and rapid experimentation, highlighting the importance of continuous learning and iteration in the entrepreneurial process.

From this perspective, the entrepreneurship model was a business model framework utilized by entrepreneurs in the entrepreneurial process, aimed at helping them understand customer needs, design value propositions, select distribution channels, establish customer relationships, and achieve profitability. Research and practical applications of entrepreneurship models had led to the development of a range of tools and methods to aid entrepreneurs in planning and managing the entrepreneurial process, thereby increasing the chances of success.

Since this study examined factors influencing performance in enterprises during the entrepreneurial process and involved sampling entrepreneurial enterprises, it was necessary to provide a preliminary definition of entrepreneurial enterprises. In this paper, entrepreneurial enterprises referred to companies with innovative spirit and entrepreneurial intent, whose core activities involved pursuing market opportunities and meeting customer needs through innovative products, services, or business models (Covin & Slevin, 1991). These enterprises typically operated in environments characterized by uncertainty and risk, actively seeking opportunities for growth and success through entrepreneurial orientation and learning through entrepreneurial actions. (Covin & Slevin, 1991) pointed out that entrepreneurial orientation helped guide companies in seeking new business opportunities in competitive markets and enabled them to adapt more keenly to market changes. At the same time, entrepreneurial action learning refers to companies continuously accumulating experience and knowledge through practical experience, improving entrepreneurial actions and decisions through trial and error and feedback.

Baron and Ensley (2006) research also indicated that entrepreneurs identify meaningful patterns to recognize opportunities, thereby influencing the entrepreneurial process.

2.1.2 International Entrepreneurial Spirit

More and more scholars and practitioners were paying attention to entrepreneurial spirit (Wiklund et al., 2011). International entrepreneurial spirit referred to a set of traits and behaviours exhibited by entrepreneurs in a cross-border context. These traits included a sense of adventure, a global perspective, innovative thinking, cross-cultural competence, learning ability, strategic positioning, and more (Oviatt & McDougall, 1994; Zahra & George, 2017). According to the research by Benjamin (2018) and others, the essence of international entrepreneurial spirit could be summarized as the desire to transcend borders, embrace innovation and opportunity, possess cross-cultural abilities, take calculated risks and adapt, maintain a global outlook, and leverage resources. It embodied an open, forward-thinking, innovative, and adaptive attitude that encourages individuals and businesses to actively explore and exploit commercial opportunities on a global scale, thereby driving the development and prosperity of the global economy. Santoso et al. (2023) stated that in the process of industrialization, economic development requires an entrepreneurial spirit, and entrepreneurial spirit had been proven to play a crucial role in several aspects.

2.1.3 Entrepreneurial Process

The entrepreneurial process was the entire journey that an entrepreneur undergoes from conceptualizing an idea to successfully establishing a business. In entrepreneurial theory, Timmons introduced the well-known Entrepreneurship Opportunity-Resources-Team (EOR) framework in his book "New Venture Creation: Entrepreneurship for the 21st Century." This model consisted of three interrelated circles: opportunity recognition, resource acquisition, and the formation and operation of the entrepreneurial team. In the first circle, entrepreneurs identified potential business opportunities through observation, questioning, networking, and personal experiences. In the second circle, entrepreneurs gathered and integrated resources to execute their entrepreneurial plans. In the third circle, entrepreneurs established and managed the entrepreneurial organization to ensure its long-term development and success (Timmons, 1994).

1. Entrepreneurial Opportunity Recognition

Entrepreneurial opportunity recognition was a crucial step in the entrepreneurial process. In entrepreneurship theory, Shane and Venkatarama (2000) introduced the resource-based perspective, emphasizing that entrepreneurs should utilize their resources and capabilities to discover and exploit opportunities. They argued that the resources and capabilities of entrepreneurs were the key factors in determining their ability to recognize and capitalize on opportunities. Additionally, cognitive and social factors also influence entrepreneurs' opportunity recognition. For instance, cognitive process theory suggested that entrepreneurs' cognitive patterns influence their perception and evaluation of opportunities, while social network theory emphasized the importance of entrepreneurs' social connections in obtaining valuable information and resources.

2. Entrepreneurial Traits

The personal traits of entrepreneurs had also received extensive attention in entrepreneurship theory, McClelland (1961) emphasized the need for achievement motivation among entrepreneurs, considering it was a significant factor driving entrepreneurial behavior. Additionally, entrepreneurs needed to possess traits such as creative thinking, persistence, decisiveness, and adaptability. Among these, creative thinking was crucial for the development of innovation and unique business models. Persistence helped entrepreneurs overcome difficulties and challenges. Furthermore, entrepreneurs' social capital and experience also exert a significant influence on entrepreneurial performance.

3. Entrepreneurial Performance Evaluation

Entrepreneurial performance evaluation was another key topic in entrepreneurship theory. Both entrepreneurs and investors sought to understand the likelihood of success for an entrepreneurial venture. In entrepreneurship theory, there were several commonly used methods to assess entrepreneurial performance. Among them, Maslow's Hierarchy of Needs emphasized the importance of satisfying different levels of needs for entrepreneurs (Maslow, 1943). Once basic needs were met, entrepreneurs sought higher levels of achievement, driving the continued development of entrepreneurship. Additionally, Resource Dependence Theory (RDT) suggested that entrepreneurs need to effectively acquire and manage external resources throughout the

entrepreneurial process to maximize entrepreneurial performance (Pfeffer & Salancik, 1978).

From this, it could be seen that entrepreneurial theory encompassed various aspects such as the entrepreneurial process, entrepreneurial opportunity recognition, entrepreneur characteristics, and entrepreneurial performance assessment. In practice, entrepreneurs could use these theories to guide their entrepreneurial activities and gain a better understanding of and respond to the various challenges and opportunities in the entrepreneurial process.

2.2 Conceptual Definition and Research Review of Variables

2.2.1 Entrepreneurial Orientation

Entrepreneurial orientation, as a strategic inclination of a business, was manifested in the types of decisions made, methods employed, and operational styles adopted by the organization, highlighting the mode of operation. This orientation was bound to give rise to a new mental model and business philosophy. According to Lai and Gibbons (1997) a company's entrepreneurial behaviour could be understood as the expansion of its capability scope through the integration of new resource combinations in the pursuit of diversification. Entrepreneurial orientation could be considered from three levels: individual, organizational, and industrial. Initially proposed by Miller (1983), the concept of corporate entrepreneurship was viewed as the embodiment of entrepreneurial spirit at the organizational level, encompassing three specific dimensions: innovation, risk-taking, and proactiveness. In this model, innovativeness represented a company's pursuit of new technologies, products, and ideas, as well as novel management tools and methods. Risk-taking referred to the tendency of entrepreneurs or managers to invest resources in uncertainty and risk. Proactiveness was exhibited through a company's prediction of future demand changes, adopting a strategy of taking the lead, and exploring new opportunities. In driving socio-economic transformation, innovation played a pivotal role. It encompassed aspects such as opportunity exploration, resource integration, and economic value creation. Innovativeness became one of the key factors in measuring the extent of entrepreneurial orientation within a company. Risk-taking was an important characteristic of entrepreneurial activity, reflecting managers' willingness to undertake

substantial risk investments. Lu (2022) et al. proposed that being a market pioneer was the optimal strategy for capitalizing on market opportunities. By exploiting and utilizing market asymmetry, pioneers could attain excess profits and enhance consumer brand awareness. Therefore, proactiveness was often regarded as the third significant dimension of entrepreneurial orientation.

Table 2.2 Literature Review on Entrepreneurial Orientation

Study	Dimensional Division
Miller (1983)	Innovative, Risk-Taking, Proactive.
Zahra and Covin (1995)	Corporate Innovation, Strategic Renewal.
Lumpkin and Dess (1996)	Innovativeness, Risk-Taking, Behavioral Proactiveness, Autonomy, Competitive Aggressiveness.
KuratkoIreland and Hornsby (2001)	Innovativeness, Proactiveness, Business Expansion, Self-Innovation.
Hayton (2002)	Corporate Innovation, New Business Expansion.
Lan & Zhang and Miao (2023), Qian (2022), Huang & Fu and Lin (2022)	Innovativeness, Risk-Taking, Behavioral Proactiveness;
Gai &Chen and Wang (2022)	Innovativeness, Risk-Taking, Behavioral Proactiveness, Competitive Aggressiveness;
Feng (2022)	Innovativeness, Risk-Taking, Behavioral Proactiveness, Autonomy, Competitive Aggressiveness;
Ren (2021)	Behavioral Proactiveness, Autonomy, Competitive Aggressiveness;
Yuan (2021)	Innovativeness, Risk-Taking, Behavioral Proactiveness, Autonomy, Competitive Aggressiveness.

For a considerable period in its early stages, progress in research on entrepreneurial orientation proceeded slowly. Most empirical studies directly employed existing scales, primarily focusing on research in the United States. However, scholars like Tang (2008) building upon the existing research, continued to utilize scales developed within the context of the United States (Covin & Slevin, 1989) and delved into the three dimensions of entrepreneurial orientation specific to the Chinese environment. Given that China, as a representative of a transitional economy, exhibited a certain

uniqueness in terms of institutions and organizational environment, future research should continuously examine the applicability of entrepreneurial orientation scales in China and further adjust them to develop measurement tools that align with the country's business environment. Currently, whether it was the development of new products, expansion into new markets, sales and services of new products, or even innovation in organizational structures and process flows, all required the cross-fertilization of knowledge from different fields. The innovation model had gradually evolved into collaborative innovation between companies and partners, aimed at gaining complementary assets, sharing costs, and jointly bearing risks. Cross-domain collaborative innovation had given rise to new dynamics, wherein consistently addressing market demands and putting ideas into practice were more likely to shape novel consumer value. In the new dynamic competitive landscape, a company's new competitive advantage increasingly relies on its ability to recombine resources after acquisition. Based on this, this paper advocated that entrepreneurial orientation should encompass four dimensions: collaborative innovation, risk sharing, proactive action, and dynamic competition. This formed a holistic and comprehensive new concept of entrepreneurial orientation.

(1) Collaborative Innovation

Entering the 21st century, concepts such as globalization, process innovation, and collaborative innovation gradually became the primary directions of innovation theory development. American scholar Ansoff (1971) introduced the concept of synergy based on the perspective of Return on Investment (ROI), suggesting an effect where 1+1 was greater than 2. Subsequently, Harken (1988) pioneered the field of "synergology". Hargrove (1998) and others, from a broader perspective, view collaboration as a systemic structure within a company that involves interconnectedness, shared goals, and integrated resources. After the 1970s, researchers delved deeper into the interactions between internal and external business environments, organizational structures, learning capabilities, decision-making behaviours, and other factors to understand their influence on corporate innovation. They generally believed that enhancing the effects of technological innovation primarily involves coordinating the alignment of various elements within and outside the company to create synergistic effects. Kahn (1996)

emphasized that collaboration involves two levels: interaction and assistance. Interaction focused on structured communication and cooperation between departments, while assistance emphasized unstructured communication between departments. XI (2001) and others pointed out that collaboration spans various connections among different departments within an organization. Meanwhile, Zhu (2003) and others constructed a concept model for enterprise collaborative innovation, advancing mechanisms for innovation collaboration from a collaborative perspective.

In recent years, with the widespread application of next-generation internet technologies such as big data and cloud computing, especially the flourishing emergence of platform-based enterprises centered on third-party payments and co-working spaces in e-commerce, collaborative innovation had been catalyzed directly in multiple industry sectors. This had led to the birth of numerous emerging fields, formats, and models, such as the sharing economy and cross-border e-commerce (Xia, 2016). When companies innovated, they were proactive, daring to take risks, increasing market share, and gaining a competitive advantage to enhance performance (Akomea et.al., 2023). A notable example within this context was the widely popular shared bicycle trend at the end of 2016, which triggered significant attention and interest due to its cross-domain collaborative innovation (Fang, 2018). Therefore, this paper suggested that the elements of collaborative innovation mainly encompass effective communication mechanisms, a flexible and robust innovative corporate structure, a corporate culture that fosters collaborative innovation, incentive mechanisms that drove innovation, and strategic thinking that embraced collaborative innovation.

(2) Risk Sharing

Entrepreneurs' professional responsibilities encompassed multiple roles, including guiding, controlling, supervising, and assuming risks. Knight (1921) emphasized the significant role entrepreneurs play as decision-makers in uncertain environments. Additionally. Nelson (1986) explicitly noted that a willingness to take risks was a key trait of successful entrepreneurs. Moreover, the perspective studied by Diermeier (1999) and others suggested that entrepreneurs, driven by a desire for high profits, found ways to transfer entrepreneurial risks to other relevant parties. Many scholars had shown great interest in the risk orientation of entrepreneurs in decision-

making environments, with Jackson (1972) categorizing risk-taking into four dimensions: financial, physical, moral, and social. Palmer (1973) argued that one of the key traits of entrepreneurial activity lied in the evaluation and assumption of risks. Several researchers advocated comparing entrepreneurs' risk propensity with that of ordinary individuals when assessing their risk inclination. Overall, entrepreneurs demonstrated a certain level of cognitive rationality in decision-making. While they were aware of the risks associated with entrepreneurship, they still actively chose entrepreneurship, highlighting their higher risk-taking propensity. However, in a fiercely competitive market environment, the increasing complexity of technology, the compression of product development cycles, and the enhanced uncertainty and cross-disciplinary integration of innovation were gradually revealing a networked development pattern for collaborative innovation. Although the networked development of collaborative innovation could promote the formation and consolidation of innovation advantages, it also carried potential risks, such as asset specificity, strategic convergence, and innovation inertia (Wu & Geng, 2003).

Based on the aforementioned perspectives, this paper advocated that entrepreneurs should adopt various strategies to mitigate entrepreneurial risks. They should familiarize themselves with favourable entrepreneurial policies, actively establish social network relationships, and formulate appropriate business strategies as key elements. Furthermore, by expanding the entrepreneurial team, attracting venture capital, and seeking government support funds, entrepreneurs could effectively diversify risks and reduce personal investment risks.

(3) Leading Mobility

Leading mobility referred to the proactive stance of a company in market competition, where it took assertive actions to gain market share, led industry trends, and attained competitive advantage. Proactiveness emphasized a company's willingness to take risks, innovate ahead of others, and actively embrace change to achieve a leadership position and long-term competitive advantage in the market. In the context of entrepreneurial orientation, proactiveness held significant importance. With increasing market competition and rapid technological advancements, companies that didn’t dare to take proactive actions might struggle to stand out amidst the competition. Proactiveness helped companies seize market opportunities, anticipate consumer needs, and accelerate

product and service innovation, thereby achieving rapid growth and sustainable development.

Proactiveness manifested in various aspects. Firstly, companies need keen market insights to promptly identify market changes and opportunities. Secondly, companies had to possess innovative capabilities to continuously introduce new ideas and lead the industry's direction. Additionally, proactiveness required companies to have the ability for swift decision-making and execution to promptly respond to changing market demands.

Research indicated that proactiveness was crucial for innovation and entrepreneurship. According to studies by Hitt (2011) and others, proactiveness helped companies gain first-mover advantage, increase market share, and enhance brand value. Additionally, Knight (1967) pointed out that in uncertain environments, proactiveness could help companies reduce risks stemming from uncertainty and achieve successful innovation.

However, achieving effective proactiveness was not an easy task. This required companies to foster an innovative culture that encouraged employees to experiment and innovate. Additionally, companies need to establish flexible organizational structures to swiftly adjust and adapt to market changes. Moreover, the leadership and decision-making abilities of leaders were also critical factors in achieving proactiveness. Proactiveness within entrepreneurial orientation was an indispensable component of the innovation and entrepreneurship process. By actively taking proactive actions, companies could seize market opportunities, lead industry trends, gain competitive advantage, and achieve long-term success in innovation and entrepreneurship.

(4) Dynamic Competition

Dynamic competitiveness referred to a company's continuous adaptation to changes and swift adjustment of strategies during the entrepreneurial process to address the ever-changing market environment and competitive pressures. Dynamic competitiveness emphasized a company's sensitivity to market and technological changes, as well as its agility and rapid responsiveness, to maintain a competitive advantage and achieve long-term innovation success. In entrepreneurial orientation, as markets continuously evolve and technologies rapidly advance, companies that couldn’t

flexibly adjust their strategies may struggle to survive and thrive in intense competition. Dynamic competitiveness helped companies remain vibrant in competition, sustain innovation, continually seek new business opportunities, and achieve sustainable growth.

Dynamic competitiveness manifested in various aspects. Firstly, companies need to possess keen market insights to swiftly capture market changes and trends. Secondly, companies had to have the ability for rapid decision-making and execution to adjust strategies promptly when facing market changes. Additionally, companies need to have innovative capabilities to continuously introduce fresh ideas to adapt to changing market demands.

Research showed that dynamic competitiveness was crucial for innovation and entrepreneurship. According to studies by Eisenhardt and Martin (2000), dynamic competitiveness helped companies maintain a competitive advantage and achieve sustained innovation and success in ever-changing environments. Additionally, Teece (1997) and others pointed out that dynamic competitiveness was a critical foundation for continuous innovation within companies.

However, achieving effective dynamic competitiveness was not easy. It required companies to establish flexible organizational structures that facilitate the flow and sharing of information. Additionally, fostering an innovative culture to encourage employees to experiment with new ideas and methods was necessary. Furthermore, companies need to establish agile decision-making mechanisms to facilitate rapid adjustments and transformations. By continually adapting to changes and flexibly adjusting strategies, companies could maintain a competitive advantage and achieve sustained innovation and success in fierce competition.

2.2.2 Entrepreneurial Action Learning

Entrepreneurial action learning referred to the process in which entrepreneurs continuously adjust, reflect, and improve their entrepreneurial actions through practice, experiential accumulation, and cognitive processes during the entrepreneurial journey. According to Rae (2012), entrepreneurial action learning emphasized the process through which entrepreneurs gain knowledge and insights from actual actions, rather than solely relying on textbook knowledge or training courses. In the context of innovation and entrepreneurship, entrepreneurial action learning referred to the process in which

entrepreneurs continuously acquired new knowledge and skills through practical actions, experiential accumulation, and observation of others' behaviors, thereby enhancing entrepreneurial capabilities and influencing entrepreneurial behaviors. This learning approach underscored the significance of practice and experience in entrepreneurial success, as well as the ability of entrepreneurs to adapt and adjust strategies to navigate the ever-changing market environment. Dickfos et al. (2014) pointed out that a blended learning approach, combining theory and practice through simulation, aligned well with the needs of learners engaging in professional development. Learning organizations acquired knowledge faster than their competitors and design methods to give their services and products a competitive edge (Alsuwaidi & Alshami & Akmal, 2021). Through learning, companies gained information about customer expectations, market changes, and competitors adopting the latest technologies to create new products and services that surpass their rivals (Kharabsheh & Ensour & Bogolybov, 2017). From this perspective, many studies suggested that companies emphasizing learning tend to exhibit high levels of innovation (Baker & Sinkula, 2002; Tang, 2006). Knowledge was considered one of the most crucial resources for entrepreneurial firms (Fernhaber & Covin & Shepherd, 2009). Shin et al. (2020) suggested that entrepreneurial firms could develop strategic marketing capabilities by acquiring external knowledge resources. Additionally, Weerawardena et al. (2015) found that early internationalized firms in the United States and Australia enhanced their marketing capabilities through market-oriented learning.

Entrepreneurial action learning could manifest through various means, including acquiring information from both internal and external sources, learning from the experiences of other companies, collecting new and explicit data, and developing analytical and structural learning. This encompassed knowledge acquisition, information dissemination and interpretation, organizational memory, as well as internal discussions and dialogues within the company (Bonfanti et al., 2019). Firstly, entrepreneurs accumulated valuable experiences through actual entrepreneurial activities, including both successes and failures, drawing lessons and continually optimizing entrepreneurial strategies. Secondly, entrepreneurs could learn from the behaviors of other entrepreneurs or businesspeople, gaining insights from their successes and learning from their mistakes

to guide their own entrepreneurial practices. Additionally, entrepreneurs could actively seek feedback and advice during the entrepreneurial process, engaging with mentors, partners, or advisors to obtain valuable guidance and recommendations.

Entrepreneurship research perspectives encompassed theories of entrepreneurial functions, entrepreneurial behavior, and learning. Entrepreneurial function theory focused on the environment, while entrepreneurial behavior theory emphasized the process of entrepreneurship. Entrepreneurial learning theory complemented and expanded upon entrepreneurial function and behavior theories. Research indicated that entrepreneurial action learning played a significant role in innovation and entrepreneurship. According to Reuber (1997), entrepreneurial action learning helped entrepreneurs apply beneficial experiences to entrepreneurial practice, enhancing entrepreneurial capabilities and innovation outcomes. Additionally, Petkova (2009) emphasized that entrepreneurial action learning was a crucial way for entrepreneurs to reflect on past mistakes during the entrepreneurial process, helping them avoid repeating errors and continuously optimizing entrepreneurial decisions. Ahuja (2001) categorized entrepreneurial action learning into exploratory action learning and exploitative action learning dimensions. Exploratory entrepreneurial learning encompassed activities such as searching, variation, risk-taking, experimentation, gambling, adaptability, discovery, and innovation in the entrepreneurial process. On the other hand, exploitative entrepreneurial learning included activities like refinement, selection, production, efficiency, and execution. However, exploratory learning might require higher research and experimentation costs and might not easily translate into competitive advantages, while exploitative learning could be limited by less-than-expected stable equilibriums. Hence, finding a balance between these two in entrepreneurial action learning became an important issue (Fang, 2018).

The action learning theory emphasized that organizational learning was a dynamic rather than static process. According to Zahra (2002) and others, entrepreneurial action learning referred to the learning that took place during the entrepreneurial process through the synthesis of entrepreneurial experiences, the integration of external resources, and the involvement of new employees in entrepreneurial activities. This form of learning encompassed not only theoretical knowledge of entrepreneurship but also entrepreneurial

practices, as well as aspects such as interpersonal communication, summarization, and reflection (Fang, 2018). Entrepreneurial action learning held key significance in integrating entrepreneurial theory and practice. It was also regarded as a vital extension and complement to the theories of entrepreneurial behavior. In exploring entrepreneurial action learning, experts and scholars delved into the topic from their respective perspectives. Different scholars had slightly varied definitions of entrepreneurial action learning, as shown in Table 2.3.

Table 2.3 Conceptual Expressions and Dimensional Division of EAL

Study	Conceptual Expressions and Dimensional Division
March (1991)	Exploratory Action Learning, Utilitarian Action Learning.
Rae & Carswell (2001)	Entrepreneurial learning is not only an individual learning process but also a socialized learning behavior. It involves generating new entrepreneurial ideas and discovering new entrepreneurial opportunities based on existing knowledge.
Minniti & Bygrave (2001)	Entrepreneurs need to learn not only from their successful experiences but also absorb lessons from failed cases
Petkova & Springel (2009)	Entrepreneurial action learning involves entrepreneurs reflecting on and learning from their past mistakes in the entrepreneurial process.
Chen & Li (2010), Xi (2020)	Innovative thinking, external resource acquisition, information sharing, experiential reflection, strategic experimentation.
Li (2022)	External resource acquisition, experiential reflection, strategic experimentation, cognitive learning.
Shao (2022)	Strategic experimentation, cognitive learning.
Xu & Qu (2022), He (2023), Li & Zhu & Li (2018), Zhou & Li (2021)	Experiential reflection, strategic experimentation, cognitive learning.

The objective of this study was to delineate the role of entrepreneurial action learning in the new context of transitioning from static to dynamic entrepreneurial management, as well as the states of the learning process. Therefore, this study primarily investigated and discussed exploratory learning, transformative learning, and developmental learning. Exploratory learning aims to comprehensively and diversely

explore thinking within the business to acquire the necessary knowledge and skills for entrepreneurship, reflecting the underlying process of entrepreneurial action learning. Transformative learning highlighted how businesses effectively apply and expand acquired knowledge, reflecting achieved results from entrepreneurial action learning. Developmental learning emphasized the internal absorption and application process of acquired knowledge, showcasing the long-term maintenance and ongoing action learning of entrepreneurial knowledge by the business. These three aspects were interdependent and mutually reinforcing, exerting different influences on entrepreneurial activities. However, existing literature was relatively insufficient in studying these three modes of entrepreneurial action learning, which hampered the overall enhancement of the effectiveness of entrepreneurial action learning.

In contrast to the binary perspective on organizational learning in existing literature, this study emphasized the crucial role of transformative learning in the construction of resources and the formation of innovative capabilities for entrepreneurial firms. It was a pivotal element in the implementation of a catch-up strategy. Furthermore, it further subdivided exploitative learning into two dimensions: transformative learning and developmental learning. Within transformative learning, a variety of resources related to capabilities and strategic assets, along with different types of knowledge, were integrated. The learning process involved the integration of explicit and tacit knowledge both internally and externally for entrepreneurial firms, encompassing the abilities to combine and configure. In practical application, entrepreneurial firms didn’t seek permanent "sustainable" competitive advantages. Instead, they analyzed the potential for appropriability, imitability, and transferability. Through transformative learning, they facilitated technology diffusion and recombination, achieved through the integration of external knowledge with internal capabilities. This integration learning process drove the success of entrepreneurial firms.

(1) Exploratory learning

Exploratory learning referred to the learning approach employed by entrepreneurs during the entrepreneurial process, wherein they extensively explored and contemplated in order to acquire new knowledge, insights, and experiences. This learning approach aimed to cultivate open-mindedness, adaptability, and innovative capabilities

within entrepreneurs, providing robust support for innovative entrepreneurial activities. Specifically, exploratory learning involved activities such as searching, changing, taking risks, experimenting, playing, being flexible, discovering, and innovating, essentially encompassing the exploration and acquisition of new knowledge (Yang & Wang & Zhang, 2021).

In exploratory learning, entrepreneurs strove to expand their realms of knowledge, seeking new business opportunities and entrepreneurial prospects. They actively sought out new market trends, technological breakthroughs, and consumer demands, with the intention of applying this information to their entrepreneurial practices. This learning approach enabled entrepreneurs to better grasp the pulse of the market and seize opportunities concealed within fluctuations. Exploratory learning also helped entrepreneurs expand their interpersonal networks and resources. Entrepreneurs actively engaged in various social activities, industry conferences, and entrepreneurial communities, establishing connections with fellow entrepreneurs, investors, and industry experts to draw inspiration and knowledge from others' experiences and insights. This learning approach not only aided in fostering beneficial collaborative relationships but also provided entrepreneurs with additional resource support. Li et al. (2022) indicated that exploratory learning could assist businesses in overcoming obstacles related to existing capabilities, thereby enhancing various aspects of a company's capabilities.

Exploratory learning emphasized the ongoing process of experimentation and trials within the entrepreneurial journey. Entrepreneurs continually venture into new business models, product designs, and market strategies, gaining feedback and experiential lessons from their practical efforts. This learning approach enabled entrepreneurs to better comprehend market demands and fluctuations, thereby adjusting and optimizing their entrepreneurial plans.

It was important to note that while exploratory learning was brimming with opportunities, it also carried certain risks. Entrepreneurs might encounter failures and setbacks, yet it was through these experiences that they could continuously refine and enhance their entrepreneurial strategies, ultimately achieving success. Exploratory learning assisted entrepreneurs in expanding their knowledge domains, building interpersonal relationships, and conducting practical experiments, providing robust

support for innovative entrepreneurial activities. Through consistent exploratory learning, entrepreneurs could adapt to changes more effectively, seize opportunities, and propel their entrepreneurial ventures toward success.

(2) Transformational learning

Transformational learning referred to the process where entrepreneurs applied acquired knowledge and experience to actual entrepreneurial activities, thereby fostering innovation and enhancing competitiveness. It served as a bridge between acquiring knowledge and putting it into practical use, assisting entrepreneurs in translating theory into actionable steps. In transformational learning, entrepreneurs went beyond mere acquisition of knowledge; the focus lied in converting knowledge into tangible innovations and business opportunities. Entrepreneurs integrate insights gained during the learning process into innovative product designs, market positioning, and business models, thereby driving the development of entrepreneurial projects. This learning approach enabled entrepreneurs to better understand how to transform theory into business practices, achieving sustainable development in entrepreneurial activities.

Transformational learning also involved the integration of external knowledge and internal resources to create new business value. Entrepreneurs actively sought collaborations with partners, suppliers, and customers to combine knowledge and resources from various domains, resulting in unique products or services. This learning method helped entrepreneurs expand the boundaries of innovation, break down traditional industry barriers, and achieve cross-domain integration. Additionally, transformational learning emphasized continuous reflection and adjustment during practice. Entrepreneurs constantly draw lessons from their actual entrepreneurial experiences, identifying problems and making timely corrections. This approach enabled entrepreneurs to keenly capture market changes and opportunities, formulate responsive strategies, and increase the likelihood of entrepreneurial success.

It was important to note that transformational learning is not an instantaneous process; it required ongoing efforts and practical application from entrepreneurs. Entrepreneurs need to possess acute insight and execution capabilities, effectively applying the acquired knowledge and experience to real entrepreneurial activities. Therefore, transformational learning aided entrepreneurs in converting theoretical

knowledge into innovative practices, integrating external resources, continuous reflection and adjustment, thus propelling the development and success of entrepreneurial projects.

(3) Developmental learning

In the context of entrepreneurial action learning, developmental learning primarily emphasized entrepreneurs continuously developing and enhancing their skills, knowledge, and capabilities through practical operations and experiences to adapt to the ever-changing challenges of the entrepreneurial process. Developmental learning within entrepreneurial action learning exhibited the following characteristics:

Practical experience: Entrepreneurs acquired valuable practical experience by actively participating in entrepreneurial activities such as product development, market promotion, and customer interaction. These experiences helped them gain a deeper understanding of the intricacies and real-life situations of entrepreneurship.

Reflection and improvement: Developmental learning emphasized entrepreneurs' reflection on their actions, identifying factors contributing to success and failure, and extracting lessons from them. This reflection encouraged entrepreneurs to continuously improve their methods and strategies.

Practice-oriented: Developmental learning underscored the integration of learning and practice, where entrepreneurs gradually enhanced their skill levels by applying new knowledge and skills in real-life contexts.

Self-directed learning: Entrepreneurs possessed autonomy in developmental learning. They autonomously identify areas requiring learning, engaged in learning and growth through practical operations and self-reflection.

2.2.3 Dynamic Capability

Dynamic capability was a crucial concept in the entrepreneurial process, encompassing how businesses adapt and respond to changes in the external environment and continually adjust and innovate in highly competitive markets. According to research by Teece (1977) and others, dynamic capability was defined as an organization's ability to integrate, innovate, and adapt to change by leveraging its resources and competencies. This involved rapidly identifying new opportunities, adjusting strategic objectives, reallocating resources, and building new core competencies. The formation and development of dynamic capabilities were influenced by various factors. Building on

prior research, this paper primarily investigated three aspects of dynamic capabilities: organizational restructuring capability, resource integration capability, and opportunity sensing capability. These aspects contributed to a business's ability to effectively navigate and capitalize on changing market conditions, fostering innovation and adaptability.

Table 2.4 Literature on Dimensions of Dynamic Capability Research

Study	Sense capability	Shape oportunity	Seize oportunity	Managing threat	reconfiguration capability	Integration ability	learning ability
Garrido et al. (2020)	√	√	√	√	√		
Zhou et al., (2019)	√				√	√	
Takahashi et al., (2013)	√		√			√	
Wilden et al., (2013)	√	√	√		√	√	
Nedzinskas et al., (2013)	√	√	√	√	√		
Arun & Yildirim Ozmutlu (2022)	√					√	√
Jantunen et al., (2018)	√		√			√	

(1) Organizational Restructuring Capability

Organizational restructuring capability was one of the core processes of dynamic capability. Specifically, organizational restructuring capability referred to an organization's ability to reconfigure, combine, or integrate its resources in response to changes in the external environment and market opportunities. This included aspects such as resource acquisition, resource integration, resource release, and resource development. Amiryany (2012) and others argued that organizational restructuring capability, along with innovation strategy, was one of the most important strategic characteristics of SMEs. It involved the ability to readjust business concepts, thereby increasing, merging, or splitting resources (Campbell, 1999). Greene (1999) and others suggested that small entrepreneurial firms had to map out both existing and emerging extensive resource bases and capabilities within the company. Competitive strategies and the value chain required to serve current strategies form the foundation of this process (Porter & Argyres &

McGahan, 2002). Resource recombination was the driving force behind the creation of new enterprises (Borch & Madsen, 2007). Therefore, businesses had identified new combinations of internal production resources and expanded the boundaries of their capabilities. Venkataraman (1990) and others argued that there was a corresponding synergy between the old internal resource combination and new external resources, representing a unique knowledge-sharing ability possessed by successful enterprises.

The theories of strategic entrepreneurship, dynamic capabilities, and resource-based theory were interconnected, forming a comprehensive framework for strategic management. Dynamic capabilities theory emphasized how enterprises adapt and evolve in rapidly changing environments, while resource-based theory asserted that a firm's resources and capabilities were the fundamental sources of its competitive advantage. These three major theories together constituted the foundation for sustained development and success of enterprises in competitive markets.

(2) Resource Integration Capability

Resource Integration Capability was an important component of dynamic capabilities. It primarily referred to the ability of enterprises or entrepreneurs to effectively integrate, combine, and utilize various types of resources in an ever-changing market environment, in order to create sustained competitive advantage and innovative value. Teece (2007) emphasized that resource integration capability enabled entrepreneurs to harmonize, allocate, and combine diverse resources in dynamic environments, supporting innovation, achieving strategic objectives, and enhancing competitiveness.

Resource integration capability held significant importance in innovation and entrepreneurship. Helfat and Peteraf (2003) pointed out that innovation required various types of resources, such as funding, technology, talent, market insights, and more. Resource integration capability enabled entrepreneurs to effectively identify, acquire, and integrate these resources, coordinating and combining them to create unique value propositions. The driving force behind innovation was a key manifestation of resource integration capability. Eisenhardt and Martin (2000) emphasized that entrepreneurs could generate new products, services, or solutions by combining knowledge and skills from different domains, thereby leading market transformations. This innovation ability

empowered businesses to consistently introduce new ideas and solutions to meet ever-changing market demands.

Resource integration capability also granted entrepreneurs the ability to swiftly adapt to changes. Research by Sirmon and Hitt (2009) demonstrated that in dynamic environments, market conditions and competitive situations could shift rapidly. Resource integration capability enabled entrepreneurs to promptly adapt to changes by reconfiguring resources to address new challenges and opportunities. This flexibility empowered businesses to better navigate uncertainty and risk. Most importantly, resource integration capability contributed to building sustainable competitive advantage. By integrating various resources, enterprises could create a unique value chain that was difficult to imitate, thereby maintaining a leading position in the market. This sustained competitive advantage enabled businesses to achieve ongoing success in the fiercely competitive landscape of innovation and entrepreneurship (Teece, 2007).

Therefore, resource integration capability played a crucial role in innovation and entrepreneurship. It not only facilitated the achievement of innovation and strategic objectives but also enhanced the adaptability of entrepreneurs in dynamic environments. By fully leveraging resource integration capability, entrepreneurs could more effectively seize opportunities, address challenges, and attain long-term business success.

(3) Opportunity perception capability

Teece (2003) mentioned that perception capability was an organizational skill that assists businesses in identifying and comprehending crucial information from the external environment, such as market changes, technological advancements, and competitor actions. Eisenhardt and Martin (2000) considered perception capability as a core component of dynamic capabilities, playing a significant role within organizations. They explained how it sensitively perceived changes in the external environment, and how it played a vital role in the competitive advantage of an organization.

2.2.4 Entrepreneurial Performance

Entrepreneurial performance was the measurement of the outcomes and effects of business entrepreneurial activities (Wiklund & Shepherd, 2005). Entrepreneurial performance was one of the criteria for assessing entrepreneurial outcomes and effectiveness (Fang, 2018). In-depth research on the antecedent factors of entrepreneurial

performance had been conducted by scholars both domestically and internationally, as evidenced by the relevant literature shown in Table 2.5.

Table 2.5 Compilation of Literature on Factors Affecting Entrepreneurial Performance

Independent Variables	Mediating Variables	Source
Leadership Style	Entrepreneurial orientation	Ma (2014)
Entrepreneurial Orientation	Entrepreneurial Action Learning	Xi (2020); Fang (2018); Wang (2008)
Entrepreneurial Orientation		Hossain and Asheq (2019); Meekaewkunchorn et al., (2021); *Shah and Ahmad (2019)*
Entrepreneurial Orientation	Organizational Improvisational Capability	Su and Du (2022)
Three-Dimensional Capital	Entrepreneurial Action Learning	Zhang & Wu and Ma (2022)

Currently, both domestic and international research on the influence of entrepreneurial performance could be primarily categorized into three directions. Firstly, from the perspectives of leadership style and entrepreneurial team characteristics, an analysis was conducted to explore their relationship with entrepreneurial performance. The research emphasized aspects such as leadership theories (Davis & Morris & Allen, 1991; Ling et al., 2008; Zahra & Jennings & Kuratko, 1999), entrepreneurial spirit (Agle et al., 2006; Bake & Sinkula, 2009; Bandura, 1989), team heterogeneity, and team atmosphere (Barney, 1986; Begley & Boyd, 1987). Secondly, research was carried out from the angles of entrepreneurial environment and entrepreneurial capability to investigate their connections with entrepreneurial performance. Special attention was given to aspects like entrepreneurial environment (Bandura, 1977; Bitzenis & Nito, 2005; Busenitz et al., 2003; Campbell et al., 1993), entrepreneurial behaviors (Castrogiovanni, 1991; Chakravarthy, 1982), entrepreneurial competencies (Chen & Hambrick, 1995), team collaboration, and entrepreneurial decision-making (Deng & Dart, 1994; Denison & Mishra, 1995). Lastly, an analysis was approached from the viewpoints of corporate

entrepreneurship and knowledge capital to study their associations with entrepreneurial performance. The main outcomes were concentrated in areas such as innovativeness (Dess & Beard, 1984), risk-taking propensity (Drucker, 2002), and strategic foresight (Jambulingam & Kathuria & Doucette, 2005).

Research on entrepreneurial performance indicated that there existed a complex and intertwined relationship between corporate entrepreneurship and performance. However, a comprehensive and clear understanding of the mechanisms, processes, and related management activities of corporate entrepreneurship hadn't yet been fully developed (Zahra & Covin, 1995). Entrepreneurial orientation provided a valuable starting point for corporate entrepreneurship research and could be used to dissect the underlying mechanisms of entrepreneurial performance. Nonetheless, an excessive focus on entrepreneurial orientation might expose companies to challenges of high risk and scarce resources. Due to slight variations in the mediating variables selected by scholars, discrepancies arise in the conclusions drawn from overall mechanism studies (Frese & Gielnik, 2014). Therefore, a thorough exploration and excavation of the indirect impact of entrepreneurial orientation on entrepreneurial performance contributed to a more comprehensive understanding of the mechanisms at play between entrepreneurial orientation and entrepreneurial performance (Rauch et al., 2009).

Entrepreneurial orientation, as a significant predictor of firm performance, had garnered significant attention (Fang, 2018). During field investigations of Chinese high-tech enterprises, research had focused on exploring the relationship between the interactive memory system of risk teams and entrepreneurial orientation. This interactive memory system represented the distribution, integration, and utilization of team knowledge. Additionally, the study delved into the mitigating effects of factors at various levels, such as team, firm, and environment, on this relationship. The research findings explicitly indicated that the interactive memory system of emerging entrepreneurial teams not only reinforced their entrepreneurial orientation but also positively influenced by internal team trust, the organic nature of joint venture structures, and the external environmental dynamism. This study provided a novel perspective for a deeper understanding of the micro-foundations of entrepreneurial orientation in new venture development (Dai et al., 2016). Furthermore, Entrialgo (2000) emphasized that the

ultimate pursuit of business management and strategy was to maximize profits, achieved by minimizing resource inputs.

Entrepreneurial performance was used as a means to assess whether entrepreneurial outcomes meet the expected standards (Rothschild, 1999). Shi and Wang et al. (2015) considered performance as a comprehensive concept encompassing the ultimate outcomes of business operations, serving as a scale to measure the degree of goal achievement. In this realm, Heather and others emphasized that entrepreneurial performance represented entrepreneurs' satisfaction with their entrepreneurial outcomes and served as a fundamental method for evaluating performance (Gibson et al., 2014). On the other hand, Rieckhoff et al. (2012) pointed out that entrepreneurial performance measured the extent to which entrepreneurial enterprises achieved both long-term and short-term business goals. Tang et al. (2012) defined entrepreneurial performance as the degree of satisfaction entrepreneurs had with the final results of their business activities. Additionally, Beattie et al. (2010) viewed entrepreneurial performance as a crucial indicator for examining operational activities, while Weick (2015) considered it a measure of entrepreneurial goal attainment. In practical applications, Deshpandéet et al. (2013) interpreted entrepreneurial performance as a reflection of entrepreneurs' satisfaction with the rate of achieving business goals and operational results. Meanwhile, Doorn et al. (2015) defined entrepreneurial performance as entrepreneurs' satisfaction with the final results of achieving expected goals. Furthermore, Zhao et al. (2011) explained entrepreneurial performance as entrepreneurs' anticipation of fruitful entrepreneurial outcomes, evaluated by measuring the degree of goal attainment and assessing the results of strategic implementation. Finally, Schillo (2011) indicated that entrepreneurial performance could be measured through aspects such as market share, sales levels, cost control, profitability, and overall performance. It could also be evaluated based on criteria such as product design, technological development, employee productivity, customer satisfaction, marketing, and corporate reputation. Some scholars' perspectives on measuring entrepreneurial performance were summarized in Table 2.6.

Table 2.6 Summary of Literature on Measuring Entrepreneurial Performance by Some Scholars

Study	Measurement	Definitions
Liden and Stilwell and Ferris (1996) ; Venkatraman (1989)	Objective Performance and Subjective Performance	Objective performance refers to various financial indicators, such as sales growth rate, net profit, etc. Subjective performance, on the other hand, refers to non-financial indicators, including satisfaction, issue resolution, and other subjectively determined measurements.
Venkatraman and Ramanujam (1986)	Financial Performance, Career Performance, and Organizational Effectiveness	Financial performance refers to the accomplishment of economic indicators within a company, such as operating revenue and profitability levels. Career performance primarily encompasses operational achievements beyond financial metrics, including market share, product quality, and new product introductions. Organizational effectiveness encompasses the satisfaction levels of customers, shareholders, and employees towards the company.
Murphy and Trailer and Hill (1996)	Financial Indicators, Operational Indicators, and Composite Indicators	Financial indicators primarily pertain to organizational effectiveness, whereas operational indicators relate to product or service quality and market share. Composite indicators involve a combination of both financial and operational indicators to assess performance.
Gruen and Osmonbekov and Czaplewski (2006)	Entrepreneurial Performance Distinction between Economic Indicators and Non-Economic Indicators	Economic indicators refer to the financial performance metrics of a company, while non-economic indicators refer to the subjective satisfaction of the entrepreneur, including personal growth and the attainment of individual goals.
Vickery (1991)	Financial Metrics and Non-Financial Metrics	Financial indicators primarily focus on profitability (short-term) and business growth (long-term) as measures, while non-financial indicators are primarily measured by satisfaction and overall business success rate.
Gruen and Osmonbekov and Czaplewski (2007)	Overall Satisfaction and Financial Satisfaction	Physical satisfaction is an important metric for evaluating company marketing activities and measuring the achievement of entrepreneurship. Financial satisfaction compares actual sales revenue and profits obtained by the company with the expectations prior to entrepreneurship.

2.3 Overview of Theoretical Framework

2.3.1 Resource-based Theory (RBV)

Resource-Based View (RBV), first proposed by Wernerfelt (1984), has played a significant role in the development of strategic management theory. The theory posits that the scarce, non-imitable, unique, and non-substitutable tangible and intangible heterogeneous resources owned by a company are its "strategic resources," capable of forming a sustained competitive advantage (Barney, 1991; Wernerfelt, 1984). Specifically, companies focus on cultivating resources unique to competitors to ensure their scarcity, leveraging their resource advantages to explore market opportunities while mitigating threats from the external environment to realize the value of these resources. The theory also emphasizes increasing the difficulty and cost for competitors to imitate the company's unique resources, ensuring their non-imitability, and making it challenging and costly for competitors to replicate the company's unique resources, ensuring their non-substitutability. Therefore, RBV is significant in explaining how organizations depend on their own resources and capabilities to create value and maintain sustained competitive advantages.

The academic community had long emphasized the issue of resource utilization, with RBV focusing on how to leverage existing resources and capabilities. It highlighted the necessity of considering the combination of resource capabilities, where each resource, which might not be rare or valuable on its own, became scarce and more valuable when combined in a company's strategic or business model (Miller, 2003). Additionally, dynamic capabilities involved the ability to acquire, integrate, and reconfigure resources. Therefore, business model innovation and dynamic capabilities were crucial factors for companies to effectively utilize their resources and form competitive advantages (Zhang, 2023).

In summary, RBV regards resources as the foundation of a company's development and provides theoretical support for exploring the performance improvement paths of entrepreneurial enterprises from a resource perspective. Entrepreneurial enterprises commonly face challenges and issues related to resource scarcity, and decision-makers should recognize the importance of acquiring, allocating, and effectively utilizing resources for the company. Hence, based on Resource-Based

Theory, this paper considered entrepreneurial orientation as a key strategic resource for companies in the analysis of the formation process of entrepreneurial enterprise performance, delving into how entrepreneurial enterprises leverage entrepreneurial orientation to achieve better performance returns, further enriching and expanding the application of RBV.

2.3.2 Dynamic Capability Theory (DCT)

Teece and Shuen (1997) first introduced the Dynamic Competence Theory (DCT) and defined dynamic capability as the ability of a firm to integrate, build, and reconfigure internal and external resources, technologies, and processes to adapt to changes in the external environment. This theory, in analyzing the construction of a firm's capability system, takes into full consideration the influence of the external environment, representing an extension and expansion of the RBV research. Subsequently, scholars in the field of strategic management conducted in-depth research on DCT. It extends the static characteristics based on the perspective of RBV, emphasizing that under the influence of environmental changes, any competitive advantage will gradually decline over time (Ruefli & Wiggins, 2003). Therefore, for sustained competitive advantage, companies need to continuously acquire, integrate, and reconfigure existing resources and operational capabilities (Helfat & Peteraf, 2003).

Some scholars, from the perspective of capability hierarchy theory, point out that dynamic capability was a high-order capability that could change basic capabilities. Teece et al. (1997) noted that dynamic capability was a high-order capability embedded in a firm's daily processes, continuously selecting, developing, and coordinating various basic capabilities to better adapt to the external environment and gained a competitive advantage. Companies with dynamic capability could spontaneously adjust and expand their basic capabilities (Helfat & Peteraf, 2003). Some scholars, drawing on the ideas of evolutionary economics, suggested that the evolution of dynamic capability was accompanied by knowledge management and learning, enabling companies to actively pursue new knowledge and adjust their strategies to adapt to the constantly changing external environment (Zollo & Winter, 2002). Martin and Eisenhardt (2000) argued that dynamic capability was a series of specific, identifiable routines or processes within a

company, including integrating resources, reconfiguring resources, and capabilities related to resource acquisition and release.

In conclusion, during the establishment and development of a company, facing dynamic changes in the external environment, companies need to match the relationship between internal resources and the external environment to maintain a competitive advantage. DCT primarily provided theoretical support for this study in the following aspects. Firstly, DCT asserted that companies with dynamic capabilities could timely update their resources and capabilities according to changes in the external environment, adapting to change and leveraging newly emerging opportunities to form a competitive advantage and influence firm performance. As the business environment was constantly changing, entrepreneurial orientation enabled companies to seize business opportunities in a dynamic environment, continually integrating and restructuring existing resources, acquiring new resources, thereby enhancing the company's learning absorption, resource integration, and environmental adaptation capabilities, and achieving improved entrepreneurial performance. Based on this, this study attempted to explore the moderating role of dynamic capability in the path of entrepreneurial performance improvement.

In the perspective of this paper, RBV emphasized that entrepreneurs continuously enhanced a company's competitive advantage by actively acquiring, integrating, and utilizing unique resources. This included keen insights into the types and combinations of resources, enabling effective utilization of these resources to seize market opportunities during the entrepreneurial process. RBV posited that a company's competitiveness stems from its unique resources and capabilities, and the task of entrepreneurs was to strengthen effective management and utilization of these resources through continuous learning, enabling the company to establish and sustainably operate successfully in a fiercely competitive market. DCT, in this paper, manifested as the ability of entrepreneurs to undertake corresponding risks, enabling the company to establish and sustainably operate successfully in a constantly changing market environment. This involved the company dynamically adjusting, integrating, and reconfiguring resources to adapt to changes in the external environment. DCT emphasized how entrepreneurs effectively adjust strategies and resource allocations to enable the company to gain an

advantage in competition. In summary, entrepreneurs, through the lens of RBV, enhanced organizational competitiveness through learning and adaptation, and with the support of DCT, flexibly respond to market changes, achieving successful entrepreneurship and operation for the company. These theories constituted a comprehensive theoretical framework for the innovative approaches and behavioral patterns of entrepreneurs, providing integrated theoretical support for the success of companies in a competitive market.

2.4 Overview of Related Research

2.4.1 Entrepreneurial Orientation and Entrepreneurial Performance

The influence of entrepreneurial orientation on entrepreneurial performance had become a focal point of research among strategic management scholars (Andrews & Ingham, 1972; Chandler, 1962; Schendel & Hofer, 1979). Companies with entrepreneurial orientation possessed the ability to identify new market opportunities and take on innovative risks (Wiklund & Shepherd, 2005; Wiklund & Shepherd, 2003). Individual-level entrepreneurial orientation forms the overarching framework for organizational decisions, driving the formulation of entrepreneurial strategic decisions aligned with the company's vision (Simsek et al., 2009). As a strategic orientation at the organizational level, entrepreneurial orientation showcased a company's decision-making behavior, cognitive patterns, and strategic philosophy in the process of venturing into new domains. Consequently, the mechanisms through which entrepreneurial orientation influenced entrepreneurial performance had become a research hotspot within the field of strategic management.

Regarding the relationship between entrepreneurial orientation and profitability: Corporate entrepreneurship involves diversifying and expanding the scope and capabilities of a company through the utilization of new resource combinations. Entrepreneurial orientation encourages organizational transformation, leveraging competitive advantages in the market to enhance profitability. Therefore, there existed a significant positive correlation between entrepreneurial orientation and a company's profitability. In terms of entrepreneurial orientation and growth: Company growth was an ongoing process of discovering and exploiting market opportunities to ensure sustained

development. Entrepreneurial orientation facilitated the optimization of internal resource allocation, the pursuit of favorable entrepreneurial opportunities, the expansion of market share, and the driving force behind corporate growth and development. Lussier (2001) based on empirical research on innovative small and medium-sized enterprises, pointed out that entrepreneurial orientation could promote rapid growth in small and medium-sized enterprises. Furthermore, Morris and Sexton (1996) found significant positive effects of entrepreneurial orientation on both customer-oriented aspects and growth in their study of 50 small businesses in Florida. Additionally, Rauch (2004) suggested that entrepreneurial orientation also had a positive impact on a company's growth performance. These studies collectively underscored the crucial role of entrepreneurial orientation in fostering company growth.

Entrepreneurial orientation was regarded as a crucial element for achieving success in businesses. It influenced the overall framework of corporate decision-making and gradually shaped a distinct management philosophy. Firstly, entrepreneurial orientation could lead to organizational restructuring and enhance a company's competitive advantage, thus establishing a significant positive correlation between entrepreneurial orientation and profitability. Secondly, a company's growth relied on the discovery of market opportunities and continuous innovation, facilitating a dynamic process of rapid development. Entrepreneurial orientation could drive the rapid growth of startups and small enterprises, encouraging proactive exploration and discovery of opportunities, resource integration, and proactive introduction of new products and services to the market. This provided a strategic platform for the company, aiding in the formation of competitive advantages and improving both profitability and growth (Fang, 2018). In summary, entrepreneurial orientation played a key role in a company's success, profitability, and growth.

Currently, research on entrepreneurial orientation primarily revolved around the perspectives of resource reconfiguration, dynamic capability building, and the measurement dimensions of entrepreneurial orientation. Many scholars had begun to investigate the mechanisms through which entrepreneurial orientation influences entrepreneurial performance, initially employing simple bivariate models for their studies. Research findings indicated a positive relationship between entrepreneurial

orientation and entrepreneurial performance, with entrepreneurial orientation being considered a vital component of business success. However, some studies had also found that there might be no correlation or a weak correlation between entrepreneurial orientation and performance.

In domestic research on the influence of entrepreneurial orientation on entrepreneurial performance, scholars had also started to focus on the role of mediating variables. Some studies demonstrated that the significant manifestation of firm-level entrepreneurial orientation was embodied by the organization rather than individual entrepreneurial traits. By relying on the collective efforts of the firm rather than individual endeavors, entrepreneurial orientation was transformed into firm performance. Consequently, entrepreneurial orientation could motivate companies to actively advance new products or services, substantially alter their product or service portfolios, emphasize research and technological innovation, proactively pursue technological and service leadership and innovation, and take the lead in introducing new products, services, management concepts, and production technologies. This emphasis on introducing new products or ideas ahead of competitors contributed to enhancing profitability and growth for businesses. However, Zhang and Li (2006) argued that the various dimensions of entrepreneurial orientation were relatively independent, and the relationship between entrepreneurial orientation and entrepreneurial performance was not entirely consistent.

Given the ongoing deepening of global economic integration, increasing competition, and the emergence of open innovation and other new entrepreneurial management contexts, this study had expanded the existing understanding and dimensions of entrepreneurial orientation. Specifically, starting from four dimensions of entrepreneurial orientation: collaborative innovativeness, shared risk-taking, proactive leadership, and dynamic competitiveness, the study analyzed their impact on entrepreneurial performance and explored potential differentiated relationships that may exist.

1. Collaborative innovativeness and entrepreneurial performance

Innovation referred to the pursuit of new technologies, products, concepts, as well as new management tools and methods by enterprises. It was one of the key means for enterprises to achieve competitive advantage (Dess & Lumpkin, 2005). Scholars

widely agreed on the significant impact of innovativeness on entrepreneurial performance. Schumpeter (1947) affirmed the role of innovation in the entrepreneurial process and economic development, stating that by developing and introducing new products and technologies, enterprises could stand out within the industry and differentiate themselves from competitors. Miller (1983) et al. found a positive relationship between innovativeness and firm performance, while Drucker (1985) believed that embracing change and innovation could enhance a firm's competitive level. Porter (1985) pointed out that significant technological innovations, valuable new products or services, and innovative changes in processes or operations could lead to differentiation-based competitive advantages against rivals. Scholars like Covin (1999) et al. argued that effectively implementing new conceptual and methodological frameworks, actively promoting new products or services, and substantially altering the product or service portfolio contribute to improved firm performance. Furthermore, entrepreneurial orientation encouraged enterprises to emphasize research and technological innovation, strategically acquire and implement technological resources, thereby enhancing financial performance. In conclusion, innovativeness played a crucial role in the entrepreneurial process of enterprises and exerted a significant impact on entrepreneurial performance.

According to the research of scholars like Wiklund (2003), innovative firms focused on enhancing the speed of innovation in products, services, and technology, seeking new business opportunities, and creating new added value. Meanwhile, Dess (2005) et al. pointed out that innovations in markets, technology, and management could change the value of resources, create new consumer demands, and have varying impacts on market rules. The viewpoint of scholars like Shane (2000) et al. considered that there was a clear positive relationship between innovativeness and entrepreneurial performance. Therefore, for innovative firms, their performance tended to be relatively higher (Cai & Dysprosium & Zhu, 2005). In summary, innovation was crucial for enhancing the quality of products and services, forming the basis for core competitive advantages, and significantly impacting entrepreneurial performance.

In the context of open innovation, the innovation approach of enterprises had gradually evolved into collaborative innovation with different partners, and the survival

and development of enterprises were closely tied to such collaborative innovation (Chen & Yang, 2012). Foreign research mainly focused on aspects such as achieving collaborative innovation, cooperation quality, and measuring collaborative entrepreneurial performance (Agranoff & McGuire, 1998; Donahue, 2009; Marques et al., 2015). It also examined the management of the evolutionary process of collaborative innovation, factors influencing collaborative innovation, and the matching of elements in collaborative innovation, addressing systematic, stage-related, and heterogeneous issues (Berwer & Rozum & Shpode, 2004; DeHoog, 1990). Fiaz (2013) indicated that collaborative innovation had a positive impact on driving and enhancing innovative capabilities, while Najib & Dewi (2014) argued that collaborative innovation played a significant role in promoting innovation entrepreneurship and sustained development of enterprises. In conclusion, collaborative innovation played a crucial role in the innovation and development of enterprises.

2. Proactiveness and Entrepreneurial Performance

Compared to innovativeness, proactiveness placed a stronger emphasis on actual actions. Enterprises with a proactiveness orientation forecasted future demand changes, actively adopt action strategies, and uncover new opportunities. Companies with a proactiveness orientation could create first-mover advantages, accurately capture business opportunities, and maintain competitive advantages (Lumpkin & Dess, 1995). In uncertain business environments, proactive firms were better positioned than their competitors to take swift actions and enter the market ahead of others, resulting in a positive correlation with entrepreneurial performance (Miller & Friesen, 1983). Lieberman & Montegomery (1988) underscored the significance of proactiveness, stating that this ability enabled firms to introduce new products, services, management concepts, and production technologies ahead of competitors, thus influencing firm performance. According to Hughes et al. (2007), firms possessing strong insights and imagination view proactiveness as the optimal choice for capitalizing on market opportunities, leading to a noticeable improvement in financial performance. Furthermore, scholars like Baker (2009) had put forth similar viewpoints, suggesting that proactiveness enabled firms to launch new products, ideas, or strategically exit mature or declining industries ahead of competitors, which positively impacts firm performance. Simultaneously, cross-

boundary collaborative innovation had become a key driver for firms to generate new things and enhance competitiveness. By focusing on market demands and taking action, new consumer value could be created. For example, Meituan, addressing issues such as the inconvenience of dining out for urban residents, traffic congestion, and inefficiencies in the food delivery market, launched the Meituan food delivery platform, combined with a rider delivery service. Through this platform, users could conveniently and quickly order meals and enjoy timely delivery. At the same time, Meituan was committed to optimizing delivery routes, reducing vehicle emissions, and improving delivery efficiency. This initiative not only met consumers' demand for a convenient lifestyle but also helped restaurants solve challenges in customer acquisition and logistics, driving the overall upgrade of the food delivery industry.

In today's context of intense global competition and rapidly changing market demands, Chinese enterprises are facing the imperative challenge of transformation. Failing to understand the changing factors in the business environment and taking corresponding actions will ultimately lead to missed opportunities. Taking proactive decisions was crucial for entrepreneurial success in a dynamic competitive environment (Kathleen, 1989). Abundant research related to entrepreneurship demonstrates that being proactive was the key to problem-solving and a source of competitive advantage (Kathleen, 1989; Wu & Wang, 2016). Proactive enterprises were often industry leaders, possessing not only a strong willingness but also the ability to seize market opportunities. In fiercely competitive market environments, proactive firms could make market decisions and take swift actions before competitors, strategically positioning new products and services. Leveraging exceptional market insights and acumen, they gained a sustainable first-mover advantage. Proactiveness entailed a proactive strategic perspective that enabled firms to more accurately anticipate market opportunities and demands, precisely position products and services, and proactively establish a market presence. This approach resulted in gaining a first-mover advantage and maintaining high entrepreneurial performance.

3. Risk propensity and entrepreneurial performance

Risk propensity referred to the inclination of entrepreneurs or managers to invest resources in ventures filled with uncertainty and risk. Entrepreneurship theory

suggested that there was a certain correlation between risk propensity and entrepreneurial performance (Miller & Friesen, 1983). Porter (1985) pointed out that managers of companies with risk propensity prefer projects that might yield high returns with lower risks. In dynamic and complex market environments, businesses tended to take proactive actions to seize market opportunities. However, some scholars argued that the relationship between risk propensity and entrepreneurial performance was not clear, which might be attributed to the choice of measurement indicators. Nevertheless, many scholars still recognized that risk propensity reflected a willingness of companies to invest in ventures with high risks and high returns when facing complex and dynamic environments. In contrast, conservative enterprises might be hesitant to take risks, making innovation difficult (Fang, 2018).

Zahra (1995) and others had found that entrepreneurship itself was not necessarily high risk. In fact, risk-taking firms were adept at market segmentation and reducing risks by closely monitoring market changes, thereby gaining returned that were sufficient to offset the involved risks. Scholars like Lumpkin (1996) argued that the emergence of risk was mainly due to a lack of control, information, and timing, while risk-taking firms were able to address uncertain markets, take entrepreneurial actions, and seize market opportunities. A firm's risk propensity reflected its bold entrepreneurial attitude and market opportunity exploitation in uncertain environments. This stance contributed to making more effective entrepreneurial investment decisions and action strategies, positively impacting firm performance. While risk decisions might entail the possibility of failure, lacking a risk-taking attitude could lead to slow responsiveness to environmental changes and difficulties in adapting to external dynamics and implementing effective innovative actions. Schumpeter (1947) suggested that each creative destruction could potentially result in business mergers or closures, and risk arose from a lack of control, information, and timing. Okamuro (2011) argued that collaborative innovation not only allowed firms to acquire complementary assets but also achieved cost sharing and risk-sharing effects. For instance, in its early stages, Meituan adopted a strategy of offering discounts and subsidies, which not only reduced the cost of ordering and delivery for users but also attracted a large number of users through these incentives, driving rapid platform growth and achieving a win-win for both users and the company.

As one of China’s leading food delivery platforms, Meituan not only provided convenient online ordering and fast delivery services but also optimized logistics and delivery resources, enhancing the efficiency of the entire food delivery industry and conserving social resources.

Relevant data indicated that the average lifespan of private enterprises in China was approximately 3.7 years, with even shorter lifespans of around 2.5 years for small and medium-sized enterprises. This pattern is also observed in Sichuan Province, where SMEs have similarly short lifespans. In contrast, the average lifespan of small and medium-sized enterprises in the United States is 8.2 years, while in Japan, it exceeds 10 years, reaching 12.5 years, and moving towards 20 years. The average lifespan of large corporations in China is 7-9 years, whereas in European and American countries, large enterprises have an average lifespan of 40 years, and in Japan, the average lifespan of large enterprises is 58 years (Baidu, 2023). Due to incomplete property rights protection, Chinese enterprises often face risks of vicious competition during their entrepreneurial processes. Therefore, taking effective measures to reduce entrepreneurial risks has become urgent and necessary. Risk-sharing is an important indicator that reflects a company's willingness to take bold actions and seize favorable development opportunities. In a highly complex and dynamic development environment, risk-sharing enterprises exhibit stronger market acumen and acuity, enabling them to capture more market opportunities and make rapid decisions, thereby further enhancing entrepreneurial performance.

4. Dynamic Competitiveness and Entrepreneurial Performance

The success or survival of new market entrants is often closely related to the proactive attitude and strong competitive behavior adopted by the operators. According to scholars such as Lumpkin (1995), competitiveness referred to the tendency of a company to directly and aggressively challenge competitors in order to achieve successful market entry or alter the overall competitive situation. This form of competitiveness implied that a company was willing to adopt non-traditional competitive strategies, such as challenging market leaders, analyzing and exploiting competitors' weaknesses, and developing high-value-added products. In this intensely competitive environment, a

proactive attitude and the adoption of strong competitive actions were crucial for the survival and success of new market entrants.

Proactiveness and competitiveness shared similarities to some extent, and in some literature, these two concepts were used interchangeably. Proactiveness represented a forward-looking innovative perspective and entrepreneurial behavior. It involved predicting consumer needs and expectations and taking actions earlier than competitors to introduce new products, ideas, or strategically exiting mature or declining industries. Competitiveness, on the other hand, focused on the interactions and responses between existing markets and competitors. Compared to the developmental trajectory of the West, entrepreneurial enterprises in China faced the convergence of multiple forces, such as market transformation, social change, consumer upgrading, technological revolution, and global competition. This made them confront a more intricate and complex environment (Fang, 2018).

In an ever-changing competitive environment, a company's new competitive advantage increasingly relied on the ability to recombine resources obtained and create value based on existing knowledge. Only by continuously developing novel technologies and methods on the foundation of existing knowledge could a company survive in the industry (Fang, 2018). Taking Meituan as an example, Meituan had made several innovations and improvements in its food delivery services. These included introducing an intelligent order allocation system, optimizing delivery route algorithms, implementing real-time delivery tracking, adopting eco-friendly packaging materials, launching "unmanned delivery vehicles," and using big data analysis to enhance the efficiency of matching merchants with users. Additionally, they had strengthened the management and training systems for delivery riders to address various issues encountered during the service process. These innovations had helped Meituan gain a significant competitive advantage in the highly competitive market.

Based on the four dimensions of entrepreneurial orientation mentioned above - collaborative innovativeness, risk-sharing, proactiveness, and dynamic competitiveness - and their respective relationships with entrepreneurial performance, this paper proposed the following hypothesis:

H1: Entrepreneurial orientation had a positive effect on entrepreneurial performance.

2.4.2 Entrepreneurial Orientation and Entrepreneurial Action Learning

Entrepreneurial orientation had a positive effect on entrepreneurial action learning. Entrepreneurial orientation emphasized innovation, risk-taking, and opportunity pursuit, inspiring entrepreneurs' motivation and need for learning. Enterprises with entrepreneurial orientation were more open and perceptive in identifying and seizing entrepreneurial opportunities, and they were willing to take risks and engage in innovative practices. This entrepreneurial orientation encouraged entrepreneurs to actively participate in entrepreneurial action learning, accumulating knowledge and experience through continuous experimentation, reflection, and adjustment in practice. Research indicated a positive correlation between entrepreneurial orientation and entrepreneurial action learning. For instance, a study found that innovation-oriented companies place greater importance on learning and knowledge accumulation, enabling them to better address entrepreneurial challenges (Rauch, 2009). Another study suggested that entrepreneurs' pursuit of opportunities and willingness to take risks could enhance their motivation and behavior for learning, thereby enhancing entrepreneurial action learning (Murnieks, 2014).

Conversely, entrepreneurial action learning also had a positive influence on entrepreneurial orientation. Through practice and accumulated experience, entrepreneurial action learning helped entrepreneurs enhance their entrepreneurial abilities and capability to tackle entrepreneurial challenges, thereby better implementing entrepreneurial orientation. Entrepreneurial action learning enabled entrepreneurs to receive feedback in practice, adjust and improve their entrepreneurial actions, and enhance entrepreneurial performance. Research showed a positive relationship between entrepreneurial action learning and entrepreneurial orientation. For example, a study found that entrepreneurs' practical experience and learning ability played a crucial role in promoting their innovation and market orientation (Kraus, 2015). Another study indicated that entrepreneurs' action learning capability could enhance their opportunity recognition and innovation abilities, thus improving entrepreneurial performance (Lévesque, 2013).

To better understand the relationship between entrepreneurial orientation and entrepreneurial action learning, scholars had employed various research methods and theoretical frameworks. Resource-based theory, action learning theory, among others, provided strong support for explaining the relationship between entrepreneurial orientation and entrepreneurial action learning. Furthermore, many studies had utilized qualitative and quantitative research methods, such as case studies, surveys, and statistical analysis, to delve into the correlation and influencing mechanisms between entrepreneurial orientation and entrepreneurial action learning.

In conclusion, studying the relationship between entrepreneurial orientation and entrepreneurial action learning held significant importance for entrepreneurs and policymakers. Understanding how entrepreneurial orientation influenced entrepreneurial action learning and how entrepreneurial action learning, in turn, promoted entrepreneurial orientation, aided entrepreneurs in devising more effective entrepreneurial strategies and decisions, thereby enhancing their chances of entrepreneurial success. This field of research not only guided entrepreneurial practices but also provided essential insights for policymakers.

Based on this, the present study proposed the following hypothesis:

H2: Entrepreneurial orientation had a positive effect on entrepreneurial action learning.

2.4.3 Entrepreneurial Action Learning and Entrepreneurial Performance

Studying the relationship between entrepreneurial action learning and entrepreneurial performance held significant importance. Entrepreneurial action learning referred to the process through which entrepreneurs acquired knowledge and skills by accumulating practical experience during entrepreneurship, thereby enhancing their entrepreneurial capabilities and ability to address entrepreneurial challenges. entrepreneurial performance, on the other hand, evaluated the success of entrepreneurial activities and included aspects such as financial performance, market performance, and innovative capabilities. Understanding the relationship between entrepreneurial action learning and entrepreneurial performance helped entrepreneurs improve their chances of entrepreneurial success and optimize their entrepreneurial strategies and actions.

Research indicated that entrepreneurial action learning had a positive effect on entrepreneurial performance. Entrepreneurial action learning assisted entrepreneurs in gaining knowledge and experience from practical endeavors, enhancing their ability to tackle entrepreneurial challenges. Through continuous reflection, adjustment, and improvement of their actions, entrepreneurs could enhance entrepreneurial performance. For instance, one study found a positive correlation between entrepreneurs' action learning abilities and entrepreneurial performance; stronger action learning abilities were associated with better entrepreneurial performance (Lévesque, 2013). Another study highlighted the significance of entrepreneurial learning orientation and knowledge accumulation in enhancing entrepreneurial performance (Cope, 2011).

There existed a mutually reinforcing relationship between entrepreneurial action learning and entrepreneurial performance. Entrepreneurial performance was both an outcome and feedback of entrepreneurial action learning, and it also promoted the learning and development of entrepreneurs. When entrepreneurs achieved successful entrepreneurial performance through practical efforts, they further strengthened their learning and refined their actions. By reflecting on and summarizing successful experiences and improving failed practices, entrepreneurs elevated their entrepreneurial performance. Research demonstrated the vital positive effect of entrepreneurial action learning on entrepreneurial performance. For example, one study discovered that successful experiences in entrepreneurial performance could enhance entrepreneurs' learning motivation and behavior, consequently leading to further improved entrepreneurial performance (Wang & Liu & Guo, 2017).

In summary, studying the relationship between entrepreneurial action learning and entrepreneurial performance held significant importance for both entrepreneurs and policymakers. Understanding how entrepreneurial action learning influences entrepreneurial performance and how entrepreneurial performance, in turn, promotes entrepreneurial action learning, aids entrepreneurs in optimizing their entrepreneurial strategies and actions, thereby increasing their chances of entrepreneurial success. Research in this field not only provided guidance for entrepreneurial practice but also offered crucial insights for policymakers.

Based on this, the present study proposed the following hypothesis:

H3: Entrepreneurial action learning had a positive effect on entrepreneurial performance.

H4: Entrepreneurial action learning played a mediating role in the entrepreneurial orientation on entrepreneurial performance.

2.4.4 Entrepreneurial Orientation with Dynamic Capability Adjustment

Dynamic capability adjustment plays a critical role within the context of entrepreneurial orientation. It refers to an organization's ability to timely modify and optimize resource allocation, strategies, and organizational structure when facing constantly changing market environments. This capability enables enterprises to swiftly adapt to market shifts and demands, thereby maintaining competitive advantages and fostering sustained innovation.

As per the research of Lumpkin (1996) and other scholars, the significance of dynamic capability adjustment lied in enabling businesses to take bold entrepreneurial actions and embrace a proactive stance in uncertain markets. Such an attitude contributed to more effective entrepreneurial investment decisions and action strategies, positively impacting firm performance. Within the framework of entrepreneurial orientation, dynamic capability adjustment assisted enterprises in promptly identifying new market opportunities and changes, facilitating flexible adjustments to their entrepreneurial directions. It empowered businesses to proactively predict market demands and consumer expectations, enabling swift introduction of new products or innovative actions, or strategic exits from mature or declining industries when appropriate. Through such adjustments, companies could maintain their innovative vitality, avoiding stagnation and backwardness, and thrive in fiercely competitive markets.

The influence of dynamic capability adjustment on firm competitiveness was profoundly significant. According to Porter's research (1991) dynamic capability adjustment allowed companies to better adapt to market competition and changes, thus achieving sustained competitive advantages. Dynamic capability adjustment empowered firms to swiftly realign strategies and resource allocation to cater to consumer demands, offer superior products and services, and secure a greater market share when market opportunities arise. Furthermore, as highlighted by Zahra (2006) dynamic capability

adjustment enabled enterprises to effectively respond to challenges posed by competitors. Through flexible strategic adjustments and resource allocation, companies could adeptly counter competitive moves, thereby maintaining their competitive edge and asserting a leading position in the market.

Meituan was founded in China in 2010, initially focusing on group-buying services as its main business, offering users discounted products and services from local merchants to meet their dining and entertainment needs. However, as market competition intensified and internet consumption patterns evolved, Meituan faced numerous challenges, such as the rise of competitors within the industry, limitations in its profit model, and the diversification of user demands. In this dynamic market environment, Meituan's founders and management team quickly adjusted their entrepreneurial orientation, realizing that the single group-buying model faced many bottlenecks and needed transformation and optimization. As a result, Meituan shifted toward becoming a more comprehensive local service platform, launching services such as Meituan Waimai, Meituan Dache, and Meituan Hotels to meet users' diverse needs in dining, transportation, and accommodation. Meituan introduced intelligent order systems, integrated convenient payment and real-time tracking through its mobile app, enhancing the user experience. Additionally, Meituan continually rolled out new services, such as unmanned delivery and community group buying, to adapt to the changing market environment and user needs. Beyond product and service innovation, Meituan actively conducted market research and gathered user feedback, adjusting its business strategies flexibly based on market demand, and quickly validating new business models through pilot projects to expand its market share.

These adjustments allowed Meituan to maintain a strong competitive edge in the fiercely competitive market. Through dynamic capability adjustments, Meituan successfully transformed from a group-buying platform into a comprehensive local service platform, adapting to market changes and solidifying its leading position in the industry. Therefore, dynamic capability adjustments had a positive impact on the company's competitiveness. They enabled the company to better adapt to market changes, seize opportunities, and effectively respond to challenges from competitors, thereby enhancing its competitiveness and market position.

Hence, the effect of dynamic capability adjustment on firm competitiveness was positive. It enabled companies to better adapt to market changes, seize opportunities, effectively respond to challenges posed by competitors, and consequently enhance their competitiveness and market position.

Based on this, the following hypothesis was proposed in this study:

H5: The effect of entrepreneurial orientation on entrepreneurial performance increased with favorable dynamic capability.

2.4.5 Dynamic Capability Adjustment has a Significant and Positive Impact on Entrepreneurial Action Learning

Dynamic capability adjustment had a significant and positive effect on entrepreneurial action learning. According to scholars like Carayannis (2010), dynamic capability adjustment could enhance entrepreneurs' learning and adaptability, enabling them to better cope with changes and challenges in the market environment. Through continuous learning and adjusting entrepreneurial actions, entrepreneurs could more effectively seize market opportunities, optimize entrepreneurial strategies, and enhance the competitiveness and innovation capabilities of their businesses.

Furthermore, as per research by Eisenhardt (1989) and others, dynamic capability adjustment could help entrepreneurs make more decisive decisions when facing market uncertainty and risk. By continually learning and accumulating experience, entrepreneurs could more accurately predict market changes, flexibly adjust entrepreneurial actions, reduce risks, and thereby increase the probability of entrepreneurial success.

Dynamic capability adjustment played a crucial role in facilitating entrepreneurs' learning and action optimization. According to scholars such as Wang (2007), dynamic capability adjustment referred to entrepreneurs' ability to promptly adjust resource allocation and strategies in a rapidly changing market environment. This enabled entrepreneurs to quickly learn and adapt to market changes, optimizing entrepreneurial actions and enhancing the likelihood of entrepreneurial success. Research indicated that under the guidance of dynamic capability adjustment, entrepreneurs could better capture market opportunities and flexibly adjust entrepreneurial strategies. This flexibility enabled entrepreneurs to promptly respond to market changes and demands,

reduce resource wastage, optimize resource allocation, and improve the efficiency and effectiveness of entrepreneurial actions. Additionally, as suggested by scholars including Gruber (2012), dynamic capability adjustment enabled entrepreneurs to better learn and respond to challenges. Through continuous learning and reflection, entrepreneurs could draw lessons from both failures and successes, continually optimizing entrepreneurial actions, and enhancing entrepreneurial performance.

The dynamic capability adjustments enabled Meituan to better understand market demands and consumer feedback. By continuously observing market changes, analyzing user needs, and monitoring competitors' strategies, Meituan gradually recognized the limitations of the single group-buying business model. Guided by these dynamic adjustments, Meituan quickly transformed into a comprehensive local service platform, launching diverse services such as Meituan Waimai and Meituan Dache to further meet users' diverse needs in dining, transportation, and accommodation. This allowed Meituan to better adapt to market changes and provide higher-quality products and services. Additionally, Meituan embraced failure and made timely adjustments, constantly improving its capabilities. When faced with increased competition and changing policies, Meituan implemented various optimizations and adjustments to address challenges and maintain its competitive edge in the market.

Dynamic capability adjustment held significance for entrepreneurial learning and action optimization. It empowered entrepreneurs to rapidly learn and adapt to market changes, optimize entrepreneurial actions, increase the likelihood of entrepreneurial success, enhance business competitiveness, and strengthen innovation capabilities. Consequently, entrepreneurs could achieve success in the intense market competition.

Based on this, the following hypothesis was proposed in this study:

H6: The effect of entrepreneurial action learning on entrepreneurial performance increased with favorable dynamic capability.

2.5 SMEs in China

2.5.1 Background of SMEs

International SMEs play a crucial role on a global scale, contributing significantly to economic growth, employment opportunities, and innovation. According

to data from the International Trade Centre, international SMEs hold a vital position in the global economy, representing the majority of businesses and serving as a driving force in the world economy (Center, 2020). The trend of internationalization among SMEs is becoming increasingly prominent, with many of them expanding across borders to engage in international trade and investment activities.

The background of international SMEs can be described from various aspects. Firstly, the process of globalization has opened up more opportunities for SMEs. Through international trade and investment, SMEs can expand their market share and gain access to a larger customer base and potential partners. Moreover, the development of the internet and e-commerce provides convenient platforms for international communication and collaboration among SMEs. Secondly, international SMEs play a significant role in innovation and technology transfer. Due to their flexibility and innovative capabilities, SMEs often adapt more quickly to market demands, offering innovative products and services. They also facilitate technology transfer by introducing innovative technologies into new markets, contributing to global economic development. However, international SMEs also face several challenges. For instance, factors such as legal, cultural, linguistic, and market differences associated with cross-border trade and investment increase operational risks and managerial complexities for SMEs. Additionally, issues related to financial funding and market access may constrain the internationalization process for SMEs.

In order to support the development of international SMEs, international organizations and governments of various countries have implemented a series of measures. These measures include providing trade and investment facilitation policies, promoting international cooperation and exchange, and offering technical consultancy and training. Additionally, multinational corporations, industry associations, and entrepreneurial incubators also play significant roles in providing SMEs with resource support and market orientation. Overall, international SMEs play a crucial role in the global economy. Through international trade and investment activities, they contribute to economic growth, innovation, and employment opportunities. However, SMEs also face challenges and require the support and assistance of governments, international

organizations, and relevant institutions to realize their potential for international development.

2.5.2 Definition of Small and Medium Enterprises in Sichuan Province

The definition of SMEs refers to enterprises registered and operating within the territory of Sichuan Province, possessing independent legal personality or established through legal procedures. These enterprises were based on ownership, operate relatively independently, had an annual employment of fewer than 200 people, and an annual sales revenue or total assets of less than 30 million Chinese Yuan (Government, 2011).

According to the classification criteria set by the Chinese government for SMEs, SMEs in Sichuan Province can be categorized based on enterprise size, ownership form, and industry characteristics (China, 2011). From a size perspective, SMEs are mainly divided into micro-enterprises, small enterprises, and medium-sized enterprises based on criteria such as employment numbers and annual sales revenue or total assets. Micro-enterprises generally have an annual employment rate of 10 people or fewer and an annual sales revenue or total assets of 1 million CNY or less. Small enterprises typically have an annual employment of between 10 and 50 people and an annual sales revenue or total assets between 1 million CNY and 10 million CNY. Medium-sized enterprises generally have an annual employment of between 50 and 200 people and an annual sales revenue or total assets between 10 million CNY and 30 million CNY. From the perspective of ownership form, SMEs can take various forms such as sole proprietorships, partnerships, and joint-stock enterprises. In terms of industry characteristics, SMEs are involved in various sectors, including manufacturing, services, agriculture, and more.

Table 2.7 SMEs Classification Standard

Sectors	Employees (number)	Operating income (in millions of dollars)	Total assets (in millions of dollars)
Agriculture, Forestry, Animal Husbandry and Fisheries		50-500	
Industry	20-1,000	300-40,000	
Construction Sector		300-80,000	300-80,000
Wholesale Business	5-200	1,000-40,000	
Retail Sector	10-300	100-20,000	
Transport Sector	*20-1,000*	200-30,000	
Warehousing Sector	20-200	100-30,000	
Postal Industry	20-1,000	100-30,000	
Accommodation Industry	10-300	100-10,000	
Catering Industry	10-300	100-10,000	
Information Transmission Industry	10-2,000	100-100,000	
Software and Information Technology Services	10-300	50-10,000	
Real Estate Development		100-200,000	2,000-10,000
Estate Management	100-1,000	500-5,000	
Rental and Business Services	1-300		100-120,000
Other Industries not Specified	10-300		

Source: Circular of the Ministry of Industry and Information Technology, the National Bureau of Statistics, the National Development and Reform Commission and the Ministry of Finance on the Issuance of Provisions on the Criteria for Classifying SMEs (Secretary, 2012)

The definition of SMEs in Sichuan Province is to a certain extent established based on relevant policies and regulations of the Chinese government. The government's definition criteria are primarily aimed at statistical, regulatory, and developmental purposes for SMEs. By defining SMEs, the government can formulate corresponding policies, provide support in areas such as finance, technology, and training, promote the healthy development of SMEs, and stimulate economic growth and employment.

2.5.3 Problems and Limitations of SMEs in Sichuan Province

On a global scale, the contribution of SMEs to the economy is highly significant, and the same holds true for Sichuan Province. SMEs play a crucial role in economic growth, job creation, innovation, and social development within the province. However, there are several issues currently faced by SMEs in Sichuan Province, which can be outlined as follows:

1. Financing Challenges

Many SMEs often encounter difficulties in obtaining financing when seeking to expand their operations or engage in innovation. This limitation hampers their development and competitiveness. According to the "China SME Report" (Lin, 2021). financial constraints are among the obstacles faced by SMEs in China, primarily due to the following factors: lack of credit history and collateral, high risk and uncertainty, high interest rates and stringent requirements, limited financing channels, short-term loans and working capital challenges, and the macroeconomic environment (Lin, 2021).

2. Market Competition

SMEs in Sichuan Province face a series of challenges and obstacles, with intense market competition encompassing several key aspects: limited resources, brand awareness and recognition, positioning and differentiation, price competition, market entry barriers, sales and distribution channels, market fluctuations, and rapid transformations. Addressing the challenges of market competition for SMEs requires effective marketing strategies, strengthening brand development and differentiation, as well as enhancing product and service quality. On the governmental front, providing training and consulting services to support SMEs in enhancing their competitiveness is crucial. Additionally, fostering cooperation and alliances through collaborations with other enterprises to share resources and market channels can also aid SMEs in achieving a stronger market position amidst competition (Lin, 2021).

3. Talent Shortage

In terms of talent, SMEs face significant challenges, primarily manifesting in the following aspects: competing with large corporations for talent, lacking growth opportunities, constrained salary levels, shortage of specialized professionals, inadequate training and development, and high employee turnover. Addressing these issues can

involve offering competitive compensation and benefits, providing growth opportunities for employees, emphasizing company culture, enhancing training and development initiatives, strengthening collaboration with universities, and cultivating positive employee relations (Lin, 2021).

4. Insufficient Management Capabilities

Regarding management capabilities, a common challenge among SMEs is the lack of adequate management skills. Typically founded by entrepreneurs or small teams, SMEs often operate on a smaller scale and lack well-established management systems and professional management teams. This issue is primarily reflected in insufficient managerial experience, unclear strategic planning, inefficient organizational structures, decisions lacking a scientific basis, poor talent management, non-standard financial management, and inadequate marketing strategies. Addressing this challenge requires proactive efforts from the company's management to enhance and refine its management system. This could involve strengthening management training, improving the scientific basis for decision-making, establishing appropriate organizational structures and divisions of labor, enhancing talent management and incentive measures, and focusing on structured financial management and the formulation and execution of marketing strategies. Additionally, seeking external consultation and collaboration, such as bringing in professional management teams or advisors, can help optimize management processes and elevate management standards within the company (Lin, 2021).

5. Technological Innovation

Technological innovation is crucial for the competitiveness and long-term development of SMEs. However, due to factors such as limited resources and other constraints, SMEs often face the following challenges in the realm of technological innovation: inadequate research and development funding, lack of specialized talent, limited technology commercialization capabilities, difficulties in protecting technology-related intellectual property rights, and a lack of collaborative partners. To address these issues, measures such as government support, enhanced talent development, technology commercialization, intellectual property rights protection, and collaboration can be adopted. These actions can assist SMEs in enhancing their competitiveness and achieving sustainable development.

2.5.4 Development Approaches for SMEs

The development approaches for SMEs are a comprehensive and multifaceted topic that requires a holistic consideration of factors such as market positioning, product quality, marketing strategies, and talent management (Igwe et al., 2019). The following are some methods for SMEs development. According to research by Hague et al. (2004). SMEs in their initial stages of development need to conduct thorough market research to understand the demands, competitive landscape, and potential customer segments of the target market. Based on the research findings, they should establish a clear market positioning, identify their competitive advantages, and ensure that their products or services meet market demands. Market research refers to the process of collecting, analyzing, processing, and interpreting information related to a specific market using scientific methods during a certain period. This information is used to guide marketing activities (Wang, 2021). Market positioning involves distinguishing a product or brand from competitors in the target market, creating a distinct identity, and establishing corresponding competitive advantages (Armstrong et al., 2014).

In terms of investing in research and development and innovation, according to the research by Amara and Landry (2005). SMEs need to allocate a certain proportion of funds to research and development and innovation to continuously enhance the competitiveness of their products or services. Collaborating with universities or research institutions to jointly undertake research and development projects can help reduce costs and improve efficiency. The investment in research and development and innovation by SMEs is a crucial pathway to driving business transformation, upgrading, and enhancing core competitiveness (Hungund & Mani, 2019). Innovation is a key element for the sustained development of enterprises. By continually investing in research and development and innovation, businesses can maintain their market competitiveness and explore new market opportunities (Chen & Zhu & Zhang, 2017).

In terms of talent development and management, according to the research, Kapferer and Jean-Noël (2012) established an efficient management team and nurturing excellent talent is crucial for the development of SMEs. Attracting and retaining talented employees, continuously enhancing their professional skills, contributes to the long-term stable growth of the business. The success of SMEs largely depends on their talent

development and management capabilities. Only with a high-quality team and skilled managers can enterprises stand out in the fiercely competitive market (Armstrong & Taylor, 2020). Talent development and management are the cornerstones of the sustained development of SMEs. By nurturing and motivating employees, businesses can enhance their overall competitiveness and adaptability (Ivancevich & Matteson & Konopaske, 1990).

In terms of brand building and marketing strategy, according to the research by Kapferer and Jean-Noël (2012), SMEs should focus on brand building and the formulation of marketing strategies. Through active brand promotion and effective marketing techniques, SMEs can enhance brand visibility and recognition, attracting more potential customers. Brand building and marketing strategies are essential means for enterprises to establish brand awareness and loyalty in the market. By engaging in proactive brand promotion and employing effective marketing strategies, businesses can acquire more customers, increase sales, and expand market share (Keller & Parameswaran & Jacob, 2011). Brand building is not just a logo or a name; it represents consumers' perception and emotional experience of the company. In the process of brand building, SMEs should emphasize the importance of brand experience and customer relationships (Huang & Sarigöllü, 2012).

In terms of funding support and financing, according to the research by Berger, Udell, and Finance (2006), SMEs may face issues of insufficient funds during their development process. Therefore, seeking appropriate financing methods and funding support is of great significance to ensure the stable and continuous operation of the enterprise. Funding support and financing are critical issues for the development of SMEs. Only by addressing the problem of funding shortage can enterprises establish a stable foundation for operation and growth (Hall & Lerner, 2009).

Therefore, the development methods of SMEs encompass various aspects including market research and positioning, investment in research and innovation, talent cultivation and management, brand building and marketing strategies, as well as funding support and financing. These aspects can mutually reinforce each other, forming a virtuous cycle that drives the healthy, stable, and sustainable development of SMEs.

2.6 Hypothesis Structure Model

Based on relevant concepts, theories, and research, researchers formulated a series of hypotheses that were pertinent to this research objectives. The following were the specific contents of the research hypotheses:

H1: Entrepreneurial orientation had a positive effect on entrepreneurial performance.

H2: Entrepreneurial orientation had a positive effect on entrepreneurial action learning.

H3: Entrepreneurial action learning had a positive effect on entrepreneurial performance.

H4: Entrepreneurial action learning played a mediating role in the entrepreneurial orientation on entrepreneurial performance.

H5: The effect of the entrepreneurial orientation on entrepreneurial performance increased with favorable dynamic capability.

H6: The effect of entrepreneurial action learning on entrepreneurial performance increased with favorable dynamic capability.

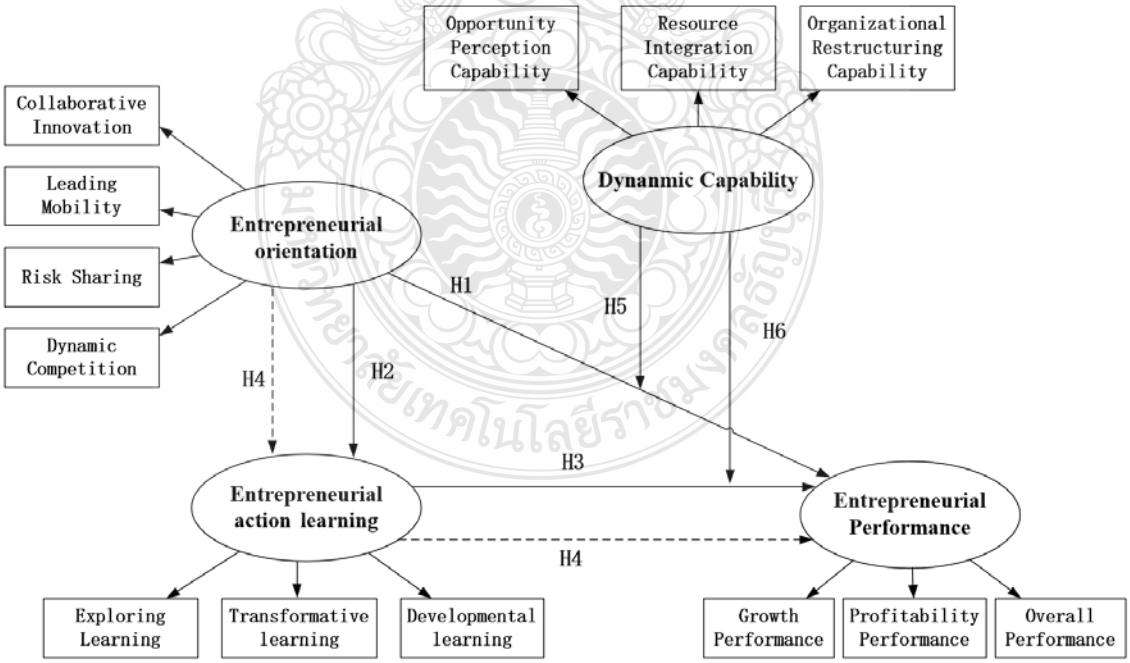


Figure 2.1 Research Hypotheses

CHAPTER 3
RESEARCH METHODOLOGY

This chapter elucidated the research methodology employed to validate the conceptual framework and tested the hypotheses proposed in Chapter Two. To begin, the research design was described, followed by a comprehensive overview of the research methods. This included the selection of the sample population and sampling approach, as well as the data collection methods. The characteristics of the population of SMEs within the research scope were delineated, and the criteria for selecting this population as the sample were expounded upon. The measurement tools utilized during the research process and the statistical methods employed for data analysis were discussed. In the concluding section, the research findings were presented. This encompasses detailed information about the variables used in the research framework, along with the creation of measurements or questionnaires for data collection.

3.1 Research Design

The research model of the study titled "Influence of Entrepreneurial Orientation and Entrepreneurial Action Learning on Entrepreneurial Performance of SMEs in Sichuan Province of China" employed a quantitative analysis approach. The origins of the research questions could be traced back to concepts and relevant theories in the literature review. Based on this foundation, a causal research framework might be established to identify the components of entrepreneurial orientation, entrepreneurial action learning, and entrepreneurial performance of SMEs in Sichuan Province. These components, including factors, elements, or structures, would be derived from research findings and theoretical references in literature. To ensure effective development of the research questions, clear and operationally defined definitions, aligned with reference theories, would be provided. These questions would be presented to the target sample group in a concise and understandable manner, collecting information from them.

The study adapted multi-stage sampling method to collect survey data from the target population. This method allowed for broad coverage of the target population, enhanced production efficiency, and obtained accurate information (Kerlinger & Lee &

Bhanthumnavin, 2000). A cross-sectional survey research method was utilized in this study for data collection from businesses. Cross-sectional survey was a data collection method used to gather representative cross-sectional data from the population of interest for in-depth understanding of the situation (Creswell & Poth, 2016). The choice of a cross-sectional survey design was made because it was suitable for descriptive, explanatory, and exploratory research purposes, primarily focusing on individual-level research (Creswell, 2014). The adoption of a cross-sectional quantitative survey design allowed for the collection of extensive data from respondents, enhancing the generalizability of the research findings. The survey covered information related to entrepreneurial orientation, entrepreneurial action learning, dynamic capability, and factors associated with entrepreneurial performance. The research targeted SMEs in Sichuan Province.

3.2 Unit of Analysis

3.2.1 Population

This study selected SMEs in Sichuan Province as the survey participants. The chosen enterprises for the survey had been registered for over six months (Biggadike, 1989; Carpenter & Westphal, 2001). Companies established for more than six months had passed the initial developmental phase and had achieved operational stability, enabling the implementation of effective management systems and entrepreneurial orientation. The surveyed entities were independent businesses, excluding subsidiaries or branches under corporate group headquarters or parent companies. Enterprises lacking a production or research and development department were also excluded. Sample data were collected through methods such as on-site surveys, online questionnaires, or emails to obtain valid responses. To ensure the authenticity of the data, questionnaires were completed by founders, entrepreneurs, or managers of the companies, including CEOs, vice presidents, directors, and department managers. For research purposes, the researcher provided information exclusively for legally registered corporate entities, which were considered the sample population as they formed an accessible group of businesses. Based on the research findings, the study could trace the ongoing operations database maintained by the Ministry of Industry and Information Technology of the

People's Republic of China (referred to as the MIIT), covering various industries. This database possessed a distinct feature that the study focused on entrepreneurial enterprises within a reasonable timeframe, providing reliable performance data. The credibility of enterprise types, establishment years, investment amounts, and employee numbers in the database was taken into consideration.

3.2.2 Sample Group

When conducting quantitative survey research, the creation of a sample that adequately represented the theoretical population became highly significant. The construction of the sample required meticulous decisions concerning the sampling framework, sample size, and the selection of respondents. Johnson et al. (2006) established a standard for sample size, suggesting that the sample size should be 10-20 times the number of observed variables. For data analysis involving SEM, Yuan and Bentler (2000) recommended a sample size exceeding 400 samples. The significance of sample size in multiple regression analysis was emphasized by Pedhazur and Kerlinger (1982). They advised ensuring an adequate sample size when conducting multiple regression analysis to guarantee the reliability of estimation results and the stability of analytical outcomes. This viewpoint was widely recognized and considered a consensus principle in research methodology. Meanwhile, Pedhazur and Kerlinger (1982) argued that using a sample size of at least 30 times the number of parameters being estimated in multiple regression analysis. It helped to reduce the risk of model overfitting and provided a sufficient number of observations for each predictor variable. Bentler and Chou (1987) suggested that when latent variables had multiple indicators, as few as 5 cases per variable are sufficient. A widely accepted rule of thumb was to have a minimum of 10 cases/observations per indicator variable when setting the lower limit for an adequate sample size (Nunnally, 1967). The rationale for this "10 rule" had been discussed in publications (Hoyle, 1999).

In this study, multi-stage sampling method for sampling employed. The researcher used a sample size guideline of 10 times the number of questionnaire items. The questionnaire consisted of 58 items (see the questionnaire in the appendix), therefore, a minimum sample size of 580 small and medium-sized entrepreneurial enterprises in Sichuan Province was required. To ensure questionnaire robustness, the researcher had

expanded the sample size to 600, aiming to enhance the accuracy and reliability of variance estimation.

According to the Chinese National Economic Industry Classification and Code (GB/T 4754-2017), the research sample involved in this thesis covers 19 different industries. These industries included agriculture, forestry, animal husbandry, and fishery; mining; manufacturing; electricity, heat, gas, and water production and supply; construction; wholesale and retail trade; transportation, storage, and postal services; accommodation and catering services; information transmission, software, and information technology services; finance; real estate; leasing and business services; scientific research and technical services; water conservancy, environmental and public facility management; residential services, repair, and other services; education; health and social work; culture, sports, and entertainment; public administration, social security, and social organizations. The specific quantities of each industry were shown in Table 3.1 (arranged in descending order based on the number).

Table3.1 Industry Group to Which the Sample Belong

Serial No.	Industry Categories	No. of industries
1	Wholesale and Retail Trade	227826
2	Leasing and Business Services	117502
3	Agriculture, forestry, animal husbandry and fisheries	101202
4	Public administration, social security and social organizations	86659
5	Manufacturing industry	74685
6	Construction Industry	73600
7	Scientific research and technical services	50437
8	Information Transmission, Software, and Information Technology Services	39433
9	Education	36256
10	Real Estate Industry	32999
11	Culture, Sports, and Entertainment 18	26974
12	Transportation, Warehousing, and Postal Services	23676
13	Residential Services, Repair, and Other Services	21730
14	Accommodation and Food Services	19613

Table 3.1 Industry Group to Which the Sample Belong (Cont.)

Serial No.	Industry Categories	No. of industries
15	Health and Social Work	17476
16	Water Conservancy, Environmental and Public Facilities Management	7682
17	Electricity, Heat, Gas, and Water Production and Supply Industry	6117
18	Mining industry	3643
19	Financial Services	3496
20	Total	971006

Classification Source: National Economic Industry Classification and Code (GB/T 4754-2017) (China, 2022; NBS, 2017)

This study employed a multi-stage sampling method. The first step involved purposive sampling within industry groups, selecting the five industries with the highest quantities out of 19 as the target. The second step included stratified random sampling from small and medium-sized enterprises within the chosen five industries. Based on the proportional distribution of enterprises in these five industries, the researcher calculated the required sample size for each industry, as shown in Table 3.2.

Table 3.2 List of Sample Sizes by Industry

Serial No.	Industry Categories	No. of Firm	Proportionate Sample Size by Industry
1	Wholesale and Retail Trade	227,826	224
2	Leasing and Business Services	117,502	116
3	Agriculture, forestry, animal husbandry and fisheries	101,202	100
4	Public administration, social security and social organizations	86,659	86
5	Manufacturing industry	74,685	74
6	**Total**	**607, 874**	**600**

3.3 Research Instrumentation

In this section, the researcher primarily introduced the research methods utilized in this study, which had been categorized as quantitative research methods based on the specific context. The primary survey tool employed was the questionnaire. To explore the variables and information related to the study “Influence of Entrepreneurial orientation and entrepreneurial action learning on entrepreneurial performance of SMEs in Sichuan Province of China” the specific operational approach was as follows:

3.3.1 Questionnaire

This study utilized a questionnaire survey as a tool to collect quantitative data regarding the “Influence of Entrepreneurial orientation and entrepreneurial action learning on entrepreneurial performance of SMEs in Sichuan Province of China” The survey covered aspects related to entrepreneurial orientation, entrepreneurial action learning, dynamic capability, and entrepreneurial performance. The questionnaire design was based on relevant theories and considerations related to the research topic to ensure data validity. The process of creating the questionnaire involved five steps to ensure its accuracy and comprehensiveness.

1.The in-depth study of the concepts and theories related to entrepreneurial orientation and entrepreneurial action learning and their impact on entrepreneurial performance of SMEs in Sichuan Province of China, provided the fundamental framework for constructing the questionnaire survey used in this research.

2. By using content analysis to summarize the results of the first step, relevant variables were identified, and based on this fundamental information, a questionnaire survey consisting of 5 sections was designed as follows:

①. This section was used to collect respondents' personal information and company data, including gender, age, education level, company status, entrepreneurial experience, company type, number of employees, registered capital, company operating time, company value, and target entrepreneurial performance.

②. This section of the questionnaire survey was used to measure the variables related to entrepreneurial orientation. A 5-point rating scale was used, with specific scores representing the following meanings: 1 = Very little; 2 = Less; 3 = Neutral; 4 = More; 5 = Very much.

③. This section of the questionnaire was used to measure the variables related to entrepreneurial action learning. A 5-point rating scale is utilized, with specific scores representing the following meanings: 1 = Very little; 2 = Less; 3 = Neutral; 4 = More; 5 = Very much.

④. This section of the questionnaire survey is used to measure the variables related to dynamic capabilities. A 5-point rating scale was employed, with specific scores representing the following meanings: 1 = Very little; 2 = Less; 3 = Neutral; 4 = More; 5 = Very much.

⑤. The fifth section of the questionnaire survey was primarily used to measure the variables related to the entrepreneurial performance of the company. A 5-point rating scale was employed, with specific scores representing the following meanings: 1 = Very little; 2 = Less; 3 = Neutral; 4 = More; 5 = Very much.

3. Using the questionnaires generated in the second step, the study would utilize the Item Objective Consistency Index (IOC) (DOC88.com, 2021) to assess the consistency and accuracy of the questionnaires between Chinese and English languages, ensuring their content aligns completely with the research objectives. Each question's quality would be evaluated by assigning a score of +1, 0, or -1 based on the following criteria:

+1 = Clearly measured;

-1 = Measurement uncertain;

0 = Not clear.

4. Based on expert suggestions and the IOC scores obtained above, the questionnaire was edited and adjusted. Subsequently, the researchers piloted the edited questionnaire with 30 respondents from non-sample companies.

5. Based on the experimental data from the questionnaire survey, the Cronbach's alpha coefficient (α coefficient) was used to assess the internal consistency of the questionnaire, thus determining its reliability. This method was widely employed for evaluating the accuracy of measurement tools, such as scales, and was primarily used to examine the overall quality of research instruments and questions. Therefore, this method served as a quality assurance measure for research tools (Vogt & Williams, 2011). The quality of each question was measured based on the corrected item-total correlation, and

the overall tool's correlation should not be lower than 0.3. According to the Cronbach's alpha coefficient, the questionnaire's reliability reached the standard of not less than 0.70.

3.3.2 Define Scoring

In the second to fifth sections of the questionnaire, which pertain to entrepreneurial orientation, entrepreneurial action learning, dynamic capabilities, and entrepreneurial performance, this study used a 5-point rating scale to determine the scores. Respondents were required to select one of the five levels to reflect their most agreed-upon viewpoint. The specific rating criteria were as follows: 1 = Very little; 2 = Less; 3 = Neutral; 4 = More; 5 = Very much. The meanings of each score are shown in Table 3.3.

Table 3.3 Value of Questionnaire

Level of Attitude	Score
Strongly disagree	*1*
Disagree	2
Neutral	3
Agree to some extent	4
Strongly agree	5

To analyze and interpret the scores, the researcher adapted from Fisher (1953) to define the level of agreement for these factors and calculated the following ranges:

Range = (Maximum value - Minimum value) / Number of layers.

Based on the calculated range values, the researcher categorized them into the following five different levels of agreement:

An average value between 0.00 and 1.00 indicated the lowest level of agreement.

An average value between 1.01 and 2.00 indicated a relatively low level of agreement.

An average value between 2.01 and 3.00 indicated a neutral level of agreement.

An average value between 3.01 and 4.00 indicated a moderate level of agreement.

An average value between 4.01 and 5.00 indicated the highest level of agreement.

3.3.3 Data Coding and Entry

To simplify data processing and facilitate better exposition in the later stages, each variable was assigned a code based on the abbreviation of its name, as shown in Table 3.4.

Table 3.4 Abbreviation of Constructs and Observed Variables

Construct	Observed variable	Type of variable
Entrepreneurial Orientation (EO)	Collaborative Innovation (EO_CI) Leading Mobility (EO_LM) Risk Sharing (EO RS) Dynamic Competition (EO_DC)	Independent Variable
Entrepreneurial Action learning (EAL)	Exploring Learning (EAL_EL) Transformative Learning (EAL_TL) Developmental Learning (EAL_DL)	Mediating Variable
Dynamic Capability (DC)	Opportunity Perception Capability (DC_OPC) Resource Integration Capability(DC_RIC) Organizational restructuring capability (DC_ORC)	Moderator Variable
Entrepreneurial Performance (EP)	Growth Performance (EP_GP) Profitability Performance (EP_PP) Overall Performance (EP_OP)	Dependent Variable

3.4 Indicators and Measurement Variables

To measure each element within every variable, the researcher utilized mature measurement scales previously employed by scholars.

3.4.1 Measurement of Personal Information

Personal information comprises the gender, age, educational attainment, position, company name, location, nature, industry category, number of employees, company age, and company size of the respondents. The specific questionnaire content was detailed in Table 3.5.

Table 3.5 Personal Information

Question No.	Questions	Question No.	Questions
Q1	Gender	Q7	Type of Enterprise
Q2	Age	Q8	The industry category to which the company belongs
Q3	Education Level	Q9	Number of Employees
Q4	Position	Q10	Years in Operation
Q5	Company Name	Q11	Annual Sales of the Company
Q6	The company is located in		

3.4.2 Entrepreneurial Performance as the Dependent Variable

This study aimed to measure the performance of the mentioned SMEs. Researchers employed various types of indicators as performance metrics for entrepreneurial performance. This study primarily focused on financial performance, with an emphasis on both growth performance and profitability performance. These two dimensions comprehensively reflected the entrepreneurial performance of SMEs (Prajogo & Ahmed, 2006; Yusuf & Attahir, 2002). Additionally, considering that different enterprises might excel in various aspects, incorporating overall performance as a dimension was crucial. This approach allowed for a more comprehensive evaluation (Jaworski & Kohli, 1993).

1. Growth Performance

Growth performance typically measured the achievements of an enterprise in aspects such as scale, market share, and asset growth within a specific time frame (Prajogo & Ahmed, 2006), reflecting the company's competitive position and extent of business expansion in the market. Henderson and Cockburn (1994) emphasized the measurement of firm capabilities in relation to scale, asserting that a company's impact in the realm of innovation was connected to its research and development capabilities. In a longitudinal analysis. Zahra and Covin (1995) highlighted the mutual influence between entrepreneurial performance and the contextual environment. The study conducted by

Wiklund and Shepherd (2003) established a close correlation between knowledge-based resources, entrepreneurial orientation, and the performance of SMEs.

2. Profitability Performance

Profitability performance was commonly used to measure a company's financial performance, including short-term profitability and long-term growth trends (Yusuf & Attahir, 2002). This reflected the impact of entrepreneurial activities on financial outcomes. Hitt et al. (2001) suggested that profitability performance was a key criterion for assessing the effectiveness of a company's business strategy, encompassing both profit levels and long-term profitability. Miller and Friesen (1983) emphasized the economic performance of a company, asserting a close connection between it and the business environment. Barney (1991) viewed profitability performance as intertwined with a company's resources and sustainable competitive advantage. According to the research by Hitt et al. (2003) profitability performance encompassed not only financial indicators but also the growth of market share and market profits. This indicated the significant influence of entrepreneurial activities on a company's financial and market performance. Additionally, Dess and Lumpkin (2005) highlighted the close relationship between profitability performance and entrepreneurial orientation, showing how entrepreneurial orientation could significantly affect a company's profit-making ability and financial performance.

3. Overall Performance

Entrepreneurial performance, as a manifestation of entrepreneurial success in SMEs, reflected the process through which entrepreneurs transform entrepreneurial opportunities into market value through entrepreneurial activities. The profitability and growth of SMEs were crucial factors influencing their survival and development. In addition to growth performance and profitability performance, considering that different enterprises might excel in various aspects, overall performance was included as a dimension of entrepreneurial performance (SONG & Morgan, 2019). Overall performance could be measured for small and medium-sized entrepreneurial enterprises from three aspects: the creation of marketable technology-based products or services, the sale of developed products or services, and the attainment of profit margins exceeding the industry average (Liu, 2022).

The definition of entrepreneurial performance measurement variables was shown in Table 3.6.

Table 3.6 Definitions of the Entrepreneurial Performance Measurement Variables (EP)

Variables	Definition	Source
Entrepreneurial Performance	Entrepreneurial performance is the measurement of the outcomes and effects of a company's entrepreneurial activities. It serves as one of the standards for assessing the outcomes and effectiveness of a company's entrepreneurial endeavors.	Wiklund and Shepherd (2005)； Fang (2018)
Growth performance	Measuring the achievements of a company within a specific timeframe in terms of scale, market share, and asset growth reflects the company's competitive position and the extent of its business expansion in the market.	Zahra and Covin (1995)；Prajogo and Ahmed (2006); Van Geenhuizen (2007); Yi (2010); Antoncic and Hisrich (2001); Ma (2008)
Profitability performance	It is commonly used to measure a company's financial performance, including short-term profitability and long-term growth trends, reflecting the impact of entrepreneurial activities on financial outcomes.	Yusuf and Attahir (2002)；HittIreland and Sirmon (2001); Van Geenhuizen (2007); Yi (2010); Antoncic and Hisrich (2001); Ma (2008)
Overall performance	Overall performance is a comprehensive evaluation of the entire organization, enterprise, or individual across multiple aspects or dimensions.	Liu (2022)；Jaworski and Kohli (1993)；SONG and Morgan (2019)

3.4.3 Entrepreneurial Orientation as Independent Variables

In this study, based on the results of literature review, the researcher focused on entrepreneurial orientation, dividing it into four aspects Collaborative Innovation Proactiveness、Risk-taking propensity and Autonomy. The definition of entrepreneurial orientation measurement variables was shown in Table 3.7.

Table 3.7 Definitions of the entrepreneurial orientation Measurement Variables (EO)

Variables	Definition	Source
Entrepreneurial Orientation	Entrepreneurial orientation is a specific attitude and behavior pattern within an organization.	Lumpkin and Dess (1996)；Cho and Lee (2018)；Covin and Wales (2012)
Collaborative Innovation	Synergistic innovation refers to the tendency of an organization to actively seek and drive innovation, continuously introducing new ideas, products, services, or processes. It places innovation at the core of its driving force to adapt to market changes and gain a competitive advantage.	Al Mamun et al. (2017)；Covin and Wales (2012)；Avlonitis and Salavou (2007)；Miller (1983)；Fang (2018)
Leading Mobility	Proactive initiative refers to the organization's proactive stance in actively seeking and seizing opportunities, rather than passively waiting for market changes or competitors' actions.	Kreiser et al. (2010)；Ibidunni et al. (2018)；Kreiser et al. (2013); Miller (1983)；Fang (2018)
Risk Sharing	Risk-taking refers to the attitude and willingness of an organization or business towards risk and uncertainty, as well as the extent to which it is willing to take risks to pursue potential returns and innovative opportunities.	Covin and Wales (2012)；Kreiser et al. (2013)；Hoque et al. (2018); Miller (1983)；Fang (2018)
Dynamic Competition	Dynamic competitiveness refers to an organization's ability to gain competitive advantage through innovation, adaptation, and adjustment in an ever-changing market environment. In the context of innovation and entrepreneurship, dynamic competitiveness emphasizes how a company can flexibly adapt to market changes and maintain a competitive edge in the evolving competitive landscape.	Eisenhardt and Martin (2000); Teece & Pisano and Shuen (1997); Miller (1983)；Fang (2018)

3.4.4 Entrepreneurship action learning as Independent Variables

In this study, the researcher based on the results of literature review, focused on entrepreneurial action learning and divided it into three aspects: exploratory learning, Transformative Learning, Developmental learning. The definition of entrepreneurial action learning measurement variables was shown in Table 3.8.

Table 3.8 Definitions of the entrepreneurial action learning Measurement Variables

Variables	Definition	Source
Entrepreneurial action learning	Entrepreneurial action learning is a learning approach based on practice and action, aiming to enhance entrepreneurs' capabilities and wisdom through active engagement in practical actions and experiences during the entrepreneurial process. It involves continuous experimentation, reflection, and learning from these experiences to gain knowledge and expertise, ultimately optimizing the effectiveness and outcomes of the entrepreneurial journey.	Rae (2012); Antonites (2005); Pittaway et al. (2009)
Exploratory learning	Exploratory learning refers to the learning process in which entrepreneurs continuously explore, experiment, and adapt during practical actions. This learning approach emphasizes gaining knowledge and insights through hands-on experience, trial and error, and experimentation, thereby gaining a competitive advantage in the ever-changing entrepreneurial environment.	Fang (2018); Ries (2011); Sarasvathy (2009)
Transformative learning	Transformative learning refers to the learning process in which entrepreneurs change their cognition, attitudes, and behaviors through experiences, reflection, and insight. This type of learning emphasizes a profound understanding and internalization, as well as the application of learning to practical contexts, thereby driving personal and organizational transformation and development.	Bennis and Goldsmith (2010); Fang (2018)
Developmental learning	Developmental learning emphasizes that entrepreneurs actively explore, research, and learn to continuously develop their knowledge, skills, and abilities in order to adapt to the ever-changing entrepreneurial environment.	Knowles(1975) ; Fang (2018)

3.4.5 Dynamic Capability as Mediating Variables

In this paper, based on the results of the literature review, the researcher focused on dynamic capability and would conduct research analysis through the following three aspects: Opportunity perception capability, Resource integration capability,

Table 3.9 Definitions of the Dynamic Capability Measurement Variables (DC)

Variables	Definition	Source
Dynamic Capability	Dynamic Capability refers to the ability of an organization or business to flexibly integrate, reconfigure, and adjust its resources, knowledge, technology, and skills in a continuously changing environment. This capacity enables the organization to adapt to new market opportunities and challenges, fostering innovation and sustaining a competitive advantage over time.	Teece and Pisano and Shuen (1997) ; Winter (2003) ; Barreto (2010)
Opportunity perception capability	Opportunity perception capability refers to the ability of an organization or business to timely and keenly perceive and identify changes, trends, and opportunities in the external environment. This also involves the capacity to flexibly adjust and adapt internal resources and capabilities in response.	Gölgeci et al. (2019) ; Hermano and Martin-Cruz and Pajares (2022); Zhang and Gao and Zhang (2022); O'reilly and Tushman (2008); Feng (2012)
Resource integration capability	Resource integration capability refers to the effective integration, combination, and utilization of various types of resources by enterprises or entrepreneurs to create and provide competitive products, services, or solutions.	Teece and Pisano and Shuen (1997); Barreto (2010); O'reilly and Tushman (2008); Feng (2012)
Organization Restructuring	Resource restructuring refers to the flexible reconfiguration and integration of internal resources within an organization or enterprise in response to changes in the external environment and market opportunities. This is done to support new innovative projects and business models.	Teece and Peteraf and Leih (2016); Konlechner and Müller and Güttel (2018); Ambrosini and Bowman (2009); O'reilly and Tushman (2008); Feng (2012)

3.5 Data Collection

The data collection process was a crucial step in the research, and the quantity and quality of data collected could impact the representativeness of the sample, potentially compromising the accuracy of the survey results. In this survey, under the guidance of the supervisor, the questionnaire was developed, subjected to IOC testing,

and modified based on suggestions from experts. Following these steps, the researcher utilized the "Wen Juan Xing" online survey platform and disseminated the survey link to participants via email, WeChat, QQ, Message, and other means to collect data. Due to time and cost constraint during the data collection phase, the researcher sought assistance from friends, relatives, and alumni to identify individuals meeting the sample criteria and asked them to complete the questionnaire. The researcher first contacted these individuals, explained the purpose and significance of the survey, and requested truthful response to ensure the validity and authenticity of the survey. The data collection period was concentrated in November to December 2023.

3.6 Reliability and Validity Analysis

In the study "Influence of Entrepreneurial Orientation and Entrepreneurial Action Learning on Entrepreneurial Performance of SMEs in Sichuan Province of China," it was necessary to test the reliability and validity of the variables and factors. Reliability testing mainly focused on the internal consistency reliability and construct reliability of the scale, while validity testing examined the content validity and construct validity of the scale. The study used a questionnaire survey and drew on the experience of relevant measurement scales. Additionally, expert consultations and literature reviews were employed to explore the influence of entrepreneurial orientation and entrepreneurial action learning on entrepreneurial performance of SMEs in Sichuan Province. Regarding the reliability of the questionnaire, it primarily referred to the consistency and stability of the measurement results when the same questionnaire was used repeatedly or at different time points. Therefore, reliability analysis was a critical step in evaluating the stability and reliability of the questionnaire measurement tool. Ensuring the reliability of the questionnaire was essential to accurately capture the phenomena and concepts being measured during the research and evaluation process.

3.6.1 Reliability Analysis

Cronbach’s Alpha coefficient (α coefficient) was the most commonly used reliability index for assessing internal consistency. A higher α value indicated stronger correlation among the measurement items, suggesting that these items truly reflected the content domain being measured. According to the research findings of Henson (2001)

when developing a measurement tool, if the α coefficient reached 0.70 or above, it meant that the measurement results were reliable. If the α coefficient exceeded 0.80, it indicated a high level of reliability for the questionnaire. This study employed SPSS 26.0 to conduct reliability testing on four variables: entrepreneurial orientation, entrepreneurial action learning, dynamic capability, and entrepreneurial performance. The reliability assessment was determined by testing the Cronbach's Alpha coefficient for each variable.

Prior to the formal collection of the questionnaires, a pre-test was conducted and 81 questionnaires were collected and the results of the Cronbach's alpha coefficient analysis of the pre-test were shown in Table 3.10.

Table 3.10 Results of the α Coefficient Tests for Variables (N = 81)

Variables	Cronbach's α	$\bar{X}$	SD	Variables	Cronbach's α	$\bar{X}$	SD
EO_CI	.793	3.751	.830	DC_OPC	.863	3.636	.832
EO_LM	.899	3.936	.833	DC_RIC	.848	3.416	.885
EO_RS	.789	3.791	.804	DC_ORC	.922	3.455	.805
EO_DC	.848	3.751	.856	DC	.806	3.602	.841
EO	.895	3.964	.792	EP_GP	.793	3.751	.830
EAL_EL	.856	3.956	.761	EP_PP	.899	3.936	.833
EAL_TL	.912	3.895	.713	EP_OP	.789	3.791	.804
EAL_DL	.879	3.884	.743	EP	.848	3.751	.856
EAL	.859	3.880	.708				

Cronbach's alpha coefficient results indicated that the values for all items used in the model ranged from 0.789 to 0.922, with a mean ranged of 3.416 to 3.964, and a standard deviation ranged of 0.708 to 0.885.

The Entrepreneurial Orientation construct comprised four items, with an overall Cronbach's alpha coefficient of 0.895. The mean ranged from 3.751 to 3.936, and the standard deviation ranged from 0.804 to 0.856, demonstrating the reliability of this construct and the acceptance of Entrepreneurial Orientation measurement in the model.

The Entrepreneurial Action Learning construct consisted of three items, with an overall Cronbach's alpha coefficient of 0.859. The mean ranged from 3.884 to 3.956, and the standard deviation ranged from 0.713 to 0.761, indicating the reliability of this

construct and the acceptance of Entrepreneurial Action Learning measurement in the model.

The Dynamic Capability construct included three items, with an overall Cronbach's alpha coefficient of 0.848. The mean ranged from 3.751 to 3.936, and the standard deviation ranged from 0.804 to 0.856, demonstrating the reliability of this construct and the acceptance of Dynamic Capability measurement in the model.

The Entrepreneurial Performance construct comprised three items, with an overall Cronbach's alpha coefficient of 0.859. The mean ranged from 3.416 to 3.602, and the standard deviation ranged from 0.805 to 0.885, indicating the reliability of this construct and the acceptance of Entrepreneurial Performance measurement in the model.

The total reliability statistic for the 13 items was 0.975. The Cronbach's alpha coefficient well exceeded 0.7, indicating reliability and acceptance for further analysis of the model.

3.6.2 Validity Analysis

1. Content Validity

The content validity of the questionnaire reflected whether the questionnaire could comprehensively and accurately reflect the concepts or phenomena to be measured. In content validity assessment, researcher focused on whether the questions in the questionnaire cover the content of interest in the study and didn’t include irrelevant questions to the research objectives. It was an important quality indicator of the questionnaire, ensuring that the measurement tool was reasonable and effective, and could accurately capture the characteristics of the research subjects. In this study, the content validity of the questionnaire was mainly measured using the following methods.

Expert review: Inviting experts in the relevant field to review the questionnaire, researcher judged whether the questionnaire covered key content based on their professional knowledge and experience and provided necessary modification suggestions. In this study, prior to the formal distribution of the survey questionnaire, the researcher conducted a content validity assessment by inviting three experts to review and discuss the questionnaire items. After modifying the content of each item based on expert suggestions, the Index of Content Validity (IOC) was calculated. The criteria for IOC were interpreted as follows: +1 = Congruent; 0 = Questionable; -1 = Incongruent.

Subsequently, adjustments and appropriate deletions were made to the questionnaire content with assessment results of "0" and "-1."

Content relevance: Checking the relevance of the questions in the questionnaire to the research objectives, confirming whether the questions cover the content to be measured, and avoiding irrelevant or redundant questions.

Pre-testing: Conducting a pilot study on a small sample to collect feedback and suggestions from participants to identify potential issues or misunderstandings.

Reference to literature: Referring to similar questionnaires used in previous studies to confirm the consistency of the questionnaire with those previously used in research.

2. Construct Validity

The construct validity of the questionnaire referred to the degree of consistency between the latent variables measured by the questionnaire and other variables that were theoretically related. In this study, the assessment of the construct validity of the questionnaire mainly focused on two aspects: convergent validity and discriminant validity (Geng, 2008).

Convergent validity referred to the degree of internal consistency among measurement items under the same latent variable, indicating that they collectively reflect the same concept. In this study, testing for Composite Reliability (CR) and Average Variance Extracted (AVE) was conducted for each item to assess convergent validity (Straub & Boudreau & Gefen, 2004).

Composite reliability (CR) was a measure used to assess the internal consistency among observed variables of a latent variable. It was commonly employed to validate the reliability of concept measurements and reflects the stability and consistency of observed variables when measuring a particular construct. AMOS (Analysis of Moment Structures) was a software used for structural equation modeling (SEM) and complex data analysis (Hair, 2009). It was utilized to estimate the fit and validity of structural equation models. Although AMOS software didn’t directly provide the AVE and CR value, it could be calculated by using the following approach:

$$AVE = \sum \frac{\lambda^2}{n}$$

$$\mathbf{R} = (\sum \boldsymbol{\lambda})^2 / \left[(\sum \boldsymbol{\lambda})^{2+} \sum \boldsymbol{\theta} \right]$$

In this context:

AVE stands for average variance extracted

CR stands for Conceptual Reliability;

λ represents the standardized parameters of observed variables on latent variables, also known as standardized factor loadings;

ε represents the error variables of indicator variables;

θ represents the error variables of indicator variables.

It was generally considered that acceptable levels for CR and AVE were above 0.7 and 0.5, respectively, to support convergent validity (Diamantopoulos & Siguaw, 2000; Henson, 2001). Discriminant validity provided evidence that a construct was unique and captured phenomena that other constructs did not. Therefore, researcher chose AMOS 23.0 to analyze and statistically assess both convergent and discriminant validity. To evaluate convergent validity, this study employed the method of confirmatory factor analysis (CFA) to test whether measurement items could adequately reflect their respective latent factors. In CFA, standardized factor loadings could be calculated, indicating the degree of association between measurement items and latent factors. Higher factor loadings suggested better convergent validity.

During the questionnaire design and data collection process, researcher could ensure the reliability of the questionnaire by considering the following aspects:

①. Ensure that the questionnaire questions were expressed clearly and unambiguously, avoiding ambiguous or confusing questions.

②. Ensure that the questions in the questionnaire were relevant to the concepts or phenomena to be measured, avoiding irrelevant or repetitive questions.

③. Use standardized reliability testing methods and, when necessary, conduct repeated reliability testing to obtain more comprehensive results.

3. Discriminant Validity

Discriminant validity refers to the degree of distinction between the measurement items of different latent variables, indicating that the measurement items

can differentiate between different constructs. Discriminant validity refers to the ability to distinguish between variables when using different indicators to measure different variables. The criterion for assessing discriminant validity is determined by comparing the average variance extracted (AVE) of a variable with its correlation coefficients with other variables. When the AVE of a variable exceeds the squared value of its correlation coefficient with other variables, the variable is considered to have good discriminant validity, indicating that it can effectively differentiate from other variables. In this study, the researchers used the squared values of the correlation coefficients between variables and the AVE of the variables to measure discriminant validity. Average Variance Extracted (AVE) should be greater than 0.50 (Fornell & Larcker, 1981; Hair et al., 2010).

Through the aforementioned methods, researchers could comprehensively consider the convergent and discriminant validity of the questionnaire to assess its construct validity, thereby ensuring that the questionnaire was an effective measurement tool capable of accurately reflecting the concepts or phenomena under study.

3.7 Models for Testing Mediating and Moderating Effects

3.7.1. Mediation Effects Test for Entrepreneurial Action Learning.

In this study, the mediating effect of entrepreneurial action learning between entrepreneurial orientation and entrepreneurial performance was examined by using an adaptation of the mediation model. The model for testing the mediating role of entrepreneurial action learning was illustrated in figure 3.1.

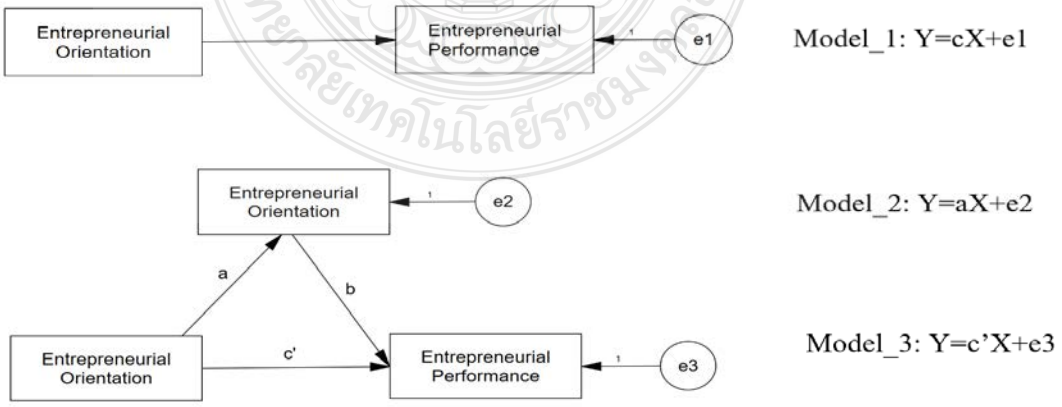


Figure 3.1 Mediation Effect Path Diagram of Entrepreneurial Action Learning

In this context, the coefficient c in Model_1 represented the total effect of entrepreneurial orientation on entrepreneurial performance. The coefficient a in Model_2 represented the effect of entrepreneurial orientation on entrepreneurial action learning. The coefficient b in Model_3 was the effect of entrepreneurial action learning on entrepreneurial performance after controlling for the influence of entrepreneurial orientation. The coefficient c' was the direct effect of entrepreneurial orientation on entrepreneurial performance after controlling for the influence of entrepreneurial action learning.

According to research by Williams and MacKinnon (2008), the statistical power of testing the mediation effect in bootstrap with bias-corrected confidence intervals was employed. Bootstrap involved repeatedly sampling with replacement from the original sample. Bias-corrected bootstrap was used to assess the statistical power of testing the mediation effect. The process involved repeated sampling with replacement from the original sample. Hayes (2009) suggested that this process should be repeated at least 1000 times, but he recommended 5000 repetitions, and the confidence interval estimation should be at 95%. Based on the literature mentioned above, this study employed the bootstrap method to test the mediation effect of entrepreneurial action learning, extracting 5000 bootstrap samples for a 95% confidence interval estimation.

3.7.2 Test of the Moderating Effect of Dynamic Capability

In this study, DC was a moderator variable that played a role in the moderating effect. X represented the independent variable, W represented the moderator variable, and Y represented the dependent variable, and the effect of X on Y varies when W took on different values. After normalizing X and W, they were multiplied together to produce a third variable: the interaction term (ZX*XW). This variable (ZX*XW) was then incorporated into the structural equation modeling along with X and W. In this study, EO was the independent variable, EAL was the mediator variable, DC was the moderator variable, and EP was the dependent variable. In this study, to determine the moderating effect of DC, the data for each dimension of the observed variables must first be mean-centered to determine the means of each observed variable. After obtaining these means, a new mean-centered variable needs to be created. In the case of one of the observed

variables CI for EO and one of the observed variables OPC for DC, this new variable was referred to as "Center CI", "Center OPC", i.e., the mean values were subtracted from the original variables and denoted as (Center CI and Center OPC). Similarly, the same procedure was applied to the remaining observed variables. After creating these new center observations, a product term (interaction) variable need to be created. This involved multiplying the two center variables together. These interaction variables were labeled "Inter_CIOPC". After forming the mean-centered and interaction variables, the data could be saved and the conditioning model could be constructed in AMOS (Robinson & Schumacker, 2009).

3.8 Sequence of Analysis

In this study, the quantitative research method was used. According to the needs of the study, the researcher would use structural equation modeling analysis to statistically and analytically analyze the questionnaire data. Structural equation modeling (SEM) is a multivariate statistical method that uses linear equations to represent the relationship between observed and latent variables, as well as the relationship between latent variables. SEM not only measures the direct relationship between independent and dependent variables, but also assesses the indirect relationship through the mediating variables. In this study, the researcher used entrepreneurial orientation as a mediating variable and dynamic capability as a moderating variable and hypothesized that entrepreneurial orientation not only directly affected entrepreneurial performance, but also indirectly influenced it through entrepreneurial action learning and dynamic capability. These indirect effects couldn’t be predicted and analyzed through multiple regression analysis alone. Therefore, in this study, SEM was employed to analyze the direct and indirect relationships between research variables. Additionally, SPSS 26.0 was utilized to test the moderating effects of dynamic capabilities. In the model evaluation of SEM, this study used the following assessment metrics to determine the degree of fit between the statistical results and the predetermined fit criteria of the model (as shown in Table 3.11).

Table 3.11 Evaluation of Model Fit: Goodness-of-fit Indices

Index	Range	Cutoff criterion
Chi-square	>=0	p>0.05
Chi-square/Df	0-1	<5
GFI	0-1	>.9
AGFI	0-1	>.8
CFI	0-1	>.9
TLI	0-1	>.9
RMR	>0	
SRMR	>0	<.08
RMSEA	0-1	.06

If the model was not suitable, it would be modified and recreated to analyze the model. If the model was suitable, weighting analysis and analysis of p-values, direct or indirect relationships between variables would be performed. Based on the results of the above analysis a quantitative study was produced.

CHAPTER 4
RESEARCH RESULTS

This chapter primarily involved a detailed analysis of the collected data to confirm the conceptual framework, hypotheses, conceptualization of constructs, and the correctness of variables related to the impact of Entrepreneurial Orientation and Entrepreneurial Action Learning on the entrepreneurial performance of small and medium-sized enterprises in Sichuan Province. The analysis focused on the following four aspects: 1. Characteristics of respondents and data preparation, including demographic features and sample characteristics. Basic statistical methods were employed to analyze general data of respondents, including frequency distribution, percentages, arithmetic mean, standard deviation, etc. 2. Reliability and validity testing. 3. Confirmatory Factor Analysis (CFA) was conducted to assess the development and validity of the models for Entrepreneurial Orientation, Entrepreneurial Action Learning, and Entrepreneurial Performance. 4. Structural Equation Modeling (SEM) was employed to analyze the causal relationship models of the impact of Entrepreneurial Orientation and Entrepreneurial Action Learning on the performance of small and medium-sized enterprises in Sichuan Province.

4.1 Demographic Data

This study aimed to explore the impact of entrepreneurial orientation and entrepreneurial action learning on the entrepreneurial performance of SMEs in Sichuan Province, China. The research employed a quantitative approach, distributing questionnaires and collecting survey data for analysis. Following a successful pre-test where all indicators met the required conditions, formal data collection through questionnaires took place. The survey distribution period extended from November 30, 2023, to December 15, 2023. Ideally, the ratio of measurement items to respondents should be 1:10. In this study, with 58 questionnaire items, the researcher aimed to ensure the collection of at least 580 valid responses. The unit analysis of the questionnaire would be conducted on a per-unit basis. To prevent low response rates, the researcher distributed a total of 1000 questionnaires, corresponding to 1000 units, covering five industry

categories: wholesale and retail, leasing and business services, agriculture, forestry, animal husbandry, and fishing, public administration, social security, and social organizations, as well as manufacturing. Respondents were only required to provide information for registered businesses.

In this questionnaire collection process, a total of 645 questionnaires were ultimately collected. Among the collected questionnaires, those with missing content or completely consistent responses were excluded, resulting in 629 valid survey responses. The effective response rate was 62.9%. The questionnaire comprised 58 questions, and the total sample size was 629, meeting the requirement of a sample size of 580 or more.

Table 4.1 provided basic characteristics of the 629 sampled enterprises, including ownership nature, industry category, number of employees, year of establishment, and annual sales revenue, illustrating the basic features of the selected sample enterprises in this study.

Table 4.1 Descriptive Statistics of Sampled Enterprises (N=629)

Item	**Item type**	**Sample size**	**Percentage**
Sex	*Male*	346	55.01
	Female	283	44.99
Age	*Below 20 years old*	24	3.82
	20-30 years old	276	43.88
	31-40 years old	154	24.48
	41-50 years old	144	22.89
	Above 51 years old	31	4.93
Educational level	*Specialized and below*	199	31.64
	Undergraduate	233	37.04
	Master's Degree	179	28.46
	Doctoral student	18	2.86
Job level	*Grassroots Management*	256	40.70
	Middle Management	216	34.34
	Senior Management	134	21.30
	Company Founder	23	3.66
Nature of Company	*State-owned*	51	8.11
	Private	4	0.64
	Foreign-owned	143	22.73
	Joint Venture	410	65.18
	Other	21	3.34

Table 4.1 Descriptive Statistics of Sampled Enterprises (N=629) (Cont.)

Item	Item type	Sample size	Percentage
Industry category to which the company belongs	Wholesale and retail trade	163	25.91
	Leasing and Business services	34	5.41
	Agriculture, forestry, animal husbandry and fisheries	126	20.03
	Public administration, social security and social organizations	153	24.32
	Manufacturing	153	24.32
Number of Employees	1-50 persons	10	1.59
	51-300 persons	41	6.52
	301-1000 persons	241	38.32
	100-2000 persons	228	36.25
	More than 2000 persons	109	17.33
Years of establishment	Less than 3 years	89	14.15
	4-10 years	73	11.61
	11-15 years	207	32.91
	15-20 years	145	23.05
	More than 20 years	89	14.15
Annual sales of the company	100-500 million yuan	111	17.65
	500-1000 million yuan	150	23.85
	1000-2000 million yuan	158	25.12
	2000-2500 million yuan	127	20.19
	2500-3000 million yuan	83	13.20

(1) Gender: Among the respondents, 346 (55.01%) were males and 283 (44.99%) were females.

(2) Age: There were 24 respondents under 20 years old, accounting for 3.82%, 20-30 years old respondents, accounting for 43.88%, 31-40 years old respondents, accounting for 154 respondents, accounting for 24.48%, 41-50 years old respondents, accounting for 144 respondents, accounting for 22.89% of the total number of respondents, and there were 31 respondents over 51 years old, accounting for 4.93%.

(3) Educational level: Regarding the literacy level of the respondents, there were 199 respondents with specialties or below, accounting for 31.64%, 233 respondents with bachelor's degree, accounting for 37.04%, 179 respondents with master's degree, accounting for 28.46%, and 18 respondents with doctoral degree, accounting for 2.86%. The composition of the above cultural levels was also in line with the demand for talent levels in Sichuan Province.

(4) Job level: In terms of the job level of the respondents, there were 256 grassroots managers, accounting for 40.70%, 216 middle managers, accounting for 34.30%, 134 respondents belonging to the company's top management, accounting for 21.30%, and 23 company founders, accounting for 3.66%.

(5) Nature of enterprise property rights: There were 51 state-owned enterprises, accounting for 8.11%; 4 private enterprises, accounting for 0.64%; 143 wholly foreign-owned enterprises, accounting for 22.73%; 410 Sino-foreign joint ventures, accounting for 65.18%; and 21 other types of enterprises, accounting for 3.34%.

(6) Industry Classes to which Enterprises Belong: Among the surveyed enterprises, there were 163 wholesale and retail trade enterprises, accounting for 25.91%, 34 leasing and merchandise service enterprises, accounting for 5.41%, 126 agriculture, forestry, animal husbandry and fishery enterprises, accounting for 20.03%, 153 public administration, social security and social organizations, accounting for 24.32%, and 153 manufacturing enterprises, accounting for 24.32%.

(7) Number of employees in enterprises: The effective samples recovered from the survey of this study were most numerous in enterprises with 51-100 employees, totaling 241, accounting for 38.32% of the total sample; 228 enterprises with 101-150 employees, accounting for 36.25% of the total sample; 109 enterprises with 151-200 employees, accounting for 17.33% of the total sample; and enterprises with 31-50 employees, accounting for 41, accounting for 6.52% of the total number of samples; the number of enterprises in the sample between 10-30 persons was 10, accounting for 1.59% of the total number of samples.

(8) Number of Years of Establishment of Enterprises: Among the valid samples recovered from the survey of this study, enterprises between 11-15 years were the most numerous, with a total of 207 enterprises, accounting for 32.91% of the total number of

samples; enterprises between 15-20 years were 145 enterprises, accounting for 23.05% of the total number of samples; enterprises with less than 3 years of existence were 115 enterprises, accounting for 18.28% of the total number of samples; enterprises with more than 20 years of existence were 89 enterprises, accounting for 14.15% of the total number of samples; enterprises with 4-30 employees were 10 enterprises, accounting for 1.59% of the total number of samples 14.15%; the number of enterprises in the sample of 4-10 years was 73, accounting for 11.61% of the total sample.

(9) Annual Sales of Enterprises: Among the valid samples recovered from the survey of this study, the annual sales of enterprises between 10-20 million yuan was the largest, with a total of 158 enterprises, accounting for 25.12% of the total number of samples; 150 enterprises between 5-10 million yuan, accounting for 23.85% of the total number of samples; 127 enterprises between 20-25 million yuan, accounting for 20.19% of the total number of samples; 127 enterprises between 1-5 million yuan, accounting for 20.19% of the total number of samples; and 159 enterprises between 4-10 years, accounting for 14.15% of the total number of samples. The number of enterprises between $1-5 million was 111, accounting for 17.65% of the total number of enterprises in the sample, and the number of enterprises between $25-30 million was 83, accounting for 13.20% of the total number of enterprises in the sample.

4.2 Descriptive Statistics

The following section summarized the characteristics of the data collected for the study and presents them in a quantitative and comparable manner. The data characteristics summarized the attributes of the impact of entrepreneurial orientation, entrepreneurial action learning, and dynamic capability on the entrepreneurial performance of small and medium-sized enterprises in Sichuan province, with entrepreneurial performance as the dependent variable. The statistical analysis included minimum and maximum scores, mean, and standard deviation values, as shown in Table 4.2.

Table 4.2 Descriptive Statistics of Overall Data Characteristics

Overall features of data	Number of Item	Min	Max	$\bar{X}$	S.D.
Entrepreneurial Orientation	*12*	1	5	3.423	1.332
Entrepreneurial action learning	11	1	5	3.480	1.259
Dynamic capability	13	1	5	3.468	1.253
Entrepreneurial Performance	11	1	5	3.469	1.271
Total	47	1	5	3.460	1.279

Table 4.2 provided an assessment of the overall variables, showing an average score of 3.460 and a standard deviation of 1.279, indicating a relatively high level. When considering individual variables, entrepreneurial action learning had the highest average, while entrepreneurial orientation had the lowest average. Dynamic capability and entrepreneurial performance had average levels in the middle range.

In the later stages of this study, structural equation modeling was employed for analysis, with the requirement that all indicators follow a normal distribution. In statistics, measures such as skewness and kurtosis were commonly used to assess normal distribution. When the absolute value of skewness for observed indicators was less than 3, and kurtosis values for experimental data were less than 10, it indicated relative consistency in the measurement data, and the fluctuations were considered acceptable. Although it was not a strict normal distribution, the sample could be considered approximately normal (Kline, 2023). The mean represented the average agreement of surveyed users with the observed variables of latent variables, and the standard deviation reflected the degree of dispersion of the score values of observed variables from the mean. Statistical analysis of these observed variables included minimum and maximum scores, mean and standard deviation values, skewness, and kurtosis.

4.2.1 Descriptive Statistical Analysis of Entrepreneurial Orientation

The construction attributes of Entrepreneurial Orientation were measured through four observed variables: Collaborative Innovation, Leading Mobility, Risk Sharing, and Dynamic Competition. Table 4.3 presented the output results of the Entrepreneurial Orientation indicators after analysis by using SPSS.

Table 4.3 Descriptive Statistics for Entrepreneurial Orientation

Entrepreneurial Orientation	Min	Max	$\bar{X}$	S.D.	Skewness	Kurtosis
Collaborative Innovation	1	5	3.493	1.085	-0.395	-0.927
Leading Mobility	1	5	3.470	1.121	-0.339	-1.093
Risk Sharing	1	5	3.453	1.130	-0.338	-1.044
Dynamic Competition	1	5	3.277	1.343	-0.529	-1.020
Total	1	5	3.423	0.912	-0.005	-1.458

From Table 4.3, it could be observed that the absolute values of skewness for each variable were less than 3, and the absolute values of kurtosis were less than 10. This indicated that the measurement data was relatively consistent, and the fluctuations were acceptable. Therefore, it could be considered that the measurement data for each indicator follows a normal distribution. The overall mean was 3.423, which was at a relatively high level, suggesting a generally high level of agreement among respondents for each observed variable. When considering each factor individually, it was noted that Collaborative Innovation and Leading Mobility had relatively high average levels, while Dynamic Competition had a lower average level. The standard deviations ranged from 0.912 to 1.343, indicating that there were no outliers or systematic errors in the survey data. However, the standard deviation being greater than 0.5 suggested that there was a certain bias in users' perceptions, likely due to differences in professional backgrounds and regional locations of the respondents. This also indirectly indicated that the survey platform was an open and free platform, allowing users to express their views. Overall, this research data was suitable for further testing.

4.2.2 Entrepreneurial Action Learning

The construct attributed of entrepreneurial action learning were measured through three observed variables, namely Exploratory learning, Transformative learning, and Developmental learning. Table 4.4 presented the output results of the entrepreneurial action learning indicators after SPSS analysis. Statistical analysis of these observed variables included minimum and maximum scores, mean and standard deviation values, skewness, and kurtosis.

Table 4.4 Descriptive Statistics of Entrepreneurial Action Learning

Entrepreneurial action learning	Min	Max	$\bar{X}$	S.D.	Skewness	Kurtosis
Exploratory learning	1	5	3.430	1.099	-0.231	-1.250
Transformative learning	1	5	3.491	1.090	-0.412	-0.963
Developmental learning	1	5	3.499	1.058	-0.345	-1.035
Total	1	5	3.472	0.899	-0.070	-1.366

From Table 4.4, it could be observed that the absolute values of skewness for each variable were less than 3, and the absolute values of kurtosis were less than 10. This indicated that the measured data is relatively consistent, and the fluctuations are acceptable. Therefore, it could be considered that the measurement data for each indicator followed a normal distribution. The overall mean value of entrepreneurial action learning was 3.472, indicating a relatively high average level of agreement for each observed variable. When considering each factor individually, it was found that the average levels of Developmental learning and Transformative learning were relatively high, while the average level of Exploratory learning was relatively low. The standard deviations for all variables were between 0.899 and 1.099, indicating that there were no outliers or systematic errors in the survey data. However, since the standard deviation was greater than 0.5, it suggested that respondents had a certain bias in their perception of things. This might be attributed to differences in the professional backgrounds and regional locations of respondents on the survey platform. It also indirectly indicated that the survey platform was an open and free platform, allowing users to express their own insights and opinions. In summary, considering these factors, the survey data was suitable for conducting further validation work.

4.2.3 Dynamic Capability

The construct attributes of dynamic capability were measured through three observed variables, namely Opportunity perception capability, Resource integration capability, and Organizational restructuring capability. Table 4.5 presented the output results of the various indicators of dynamic capability after SPSS analysis. Statistical analysis of these observed variables included minimum and maximum scores, mean and standard deviation values, skewness, and kurtosis.

Table 4.5 Descriptive Statistics of Dynamic Capability

Dynamic Capability	Min	Max	$\bar{X}$	S.D.	Skewness	Kurtosis
Opportunity perception capability	1	5	3.461	1.044	0.345	-1.094
Resource integration capability	1	5	3.465	1.081	0.376	-1.008
Organizational restructuring capability	1	5	3.475	1.059	0.339	-1.122
Total	1	5	3.466	0.875	0.032	-1.444

From Table 4.5, it could be observed that the absolute values of skewness for each variable of dynamic capability were less than 3, and the absolute values of kurtosis were less than 10. This indicated that the measured data was relatively consistent, and the fluctuations were acceptable. Therefore, it could be considered that the measurement data for each indicator fellow a normal distribution. The overall mean value of dynamic capability was 3.468, indicating a relatively high average level of agreement for each observed variable. When considering each factor individually, it was found that the average level of Organizational restructuring capability was relatively high, while the average levels of Opportunity perception capability and Resource integration capability were relatively low. The standard deviation was between 0.875 and 1.081, indicating that there were no outliers or systematic errors in the survey data. However, since the standard deviation was greater than 0.5, it suggested that respondents had a certain bias in their perception of things. This might be attributed to differences in the professional backgrounds and regional locations of respondents on the survey platform. It also indirectly indicated that the survey platform was an open and free platform, allowing users to express their own insights and opinions. In summary, considering these factors, the survey data was suitable for conducting further validation work.

4.2.4 Entrepreneurial Performance

The construct attributes of entrepreneurial performance were measured through three observed variables, namely Growth performance, Profitability performance, and Overall performance. Table 4.6 presented the output results of the various indicators of entrepreneurial performance after SPSS analysis. Statistical analysis of these observed

variables included minimum and maximum scores, mean and standard deviation values, skewness, and kurtosis.

Table 4.6 Descriptive Statistics of Entrepreneurial Performance

Entrepreneurial Performance	Min	Max	$\bar{X}$	S.D.	Skewness	Kurtosis
Growth performance	1	5	3.475	1.027	-0.273	-0.990
Profitability performance	1	5	3.472	1.054	-0.304	-1.063
Overall performance	1	5	3.453	1.087	-0.375	-1.000
Total	1	5	3.468	0.868	-0.024	-1.303

From Table 4.6, it could be observed that the absolute values of skewness for each variable of entrepreneurial performance were less than 3, and the absolute values of kurtosis were less than 10. This indicated that the measured data was relatively consistent, and the fluctuations were acceptable. Therefore, it could be considered that the measurement data for each indicator fellow a normal distribution. The overall mean value of entrepreneurial performance was 3.469, indicating a relatively high average level of agreement for each observed variable. When considering each factor individually, it was found that the average levels of Growth performance and Profitability performance were quite high, while the average level of Overall performance was relatively low. The standard deviation was between 0.868 and 1.087, indicating that there were no outliers or systematic errors in the survey data. However, since the standard deviation was greater than 0.5, it suggested that respondents had a certain bias in their perception of things. This might be attributed to differences in the professional backgrounds and regional locations of respondents on the survey platform. It also indirectly indicated that the survey platform was an open and free platform, allowing users to express their own insights and opinions. In summary, considering these factors, the survey data was suitable for conducting further validation work.

4.3 Reliability and Validity Tests

4.3.1 Reliability and Validity Tests of Entrepreneurial Orientation

The results of convergent validity testing for entrepreneurial orientation were presented in Table 4.7.

Table 4.7 Convergent Validity Analysis Results for Entrepreneurial Orientation

Variables	Indicators	Standardized Factor Loadings	R^2	θ $(1- R^2)$	CR	AVE
Collaborative Innovation	EO_CI1	.798	.637	.363	.819	.601
	EO_CI2	.776	.602	.398		
	EO_CI3	.751	.564	.436		
Leading Mobility	EO_LM1	.831	.691	.309	.836	.630
	EO_LM2	.775	.601	.399		
	EO_LM3	.773	.598	.402		
Risk Sharing	EO_RS1	.817	.667	.333	.842	.641
	EO_RS2	.798	.637	.363		
	EO_RS3	.786	.618	.382		
Dynamic Competition	EO_DC1	.871	.759	.241	.898	.746
	EO_DC2	.852	.726	.274		
	EO_DC3	.868	.753	.247		

According to Table 4.7, it could be observed that all factor loadings of the indicators were greater than 0.5, indicating that each indicator had good representativeness for its corresponding latent variable. The average variance extracted (AVE) for each variable was also greater than 0.5, and the composite reliability (CR) was greater than 0.7 for all variables. This suggested that the convergent validity in this study was acceptable.

Table 4.8 presented the correlation matrix output from the AMOS analysis in this study. The data indicated that the discriminant validity of Entrepreneurial Orientation was generally acceptable, allowing for further analysis.

Table 4.8 Discriminant Validity Analysis Results for Entrepreneurial Orientation

Variables	Collaborative Innovation	Leading Mobility	Risk Sharing	Dynamic Competition
Collaborative Innovation	**.601**			
Leading Mobility	.283	**.630**		
Risk Sharing	.376	.319	**.641**	
Dynamic Competition	.299	.319	.310	**.746**

Note: Bold text represented AVE.

4.3.2 Reliability and Validity Tests of Entrepreneurial Action Learning

The results of convergent validity testing for entrepreneurial action learning were presented in Table 4.9.

Table 4.9 Convergent Validity Analysis Results for Entrepreneurial Action Learning

Variables	Indicators	Standardized Factor Loadings	R^2	θ $(1- R^2)$	CR	AVE
Exploratory learning	EAL_EL1	.812	.659	.341	.887	.664
	EAL_EL2	.822	.676	.324		
	EAL_EL3	.829	.687	.313		
	EAL_EL4	.795	.632	.368		
Transformative learning	EAL_TL1	.791	.626	.374	.833	.624
	EAL_TL2	.786	.618	.382		
	EAL_TL3	.793	.629	.371		
Developmental learning	EAL_DL1	.821	.674	.326	.870	.627
	EAL_DL2	.795	.632	.368		
	EAL_DL3	.776	.602	.398		
	EAL_DL4	.774	.599	.401		

According to Table 4.9, it could be observed that the standardized factor loadings for all indicators were greater than 0.5, indicating that each indicator had good representativeness for its respective latent variable. The Average Variance Extracted (AVE) values for each variable were greater than 0.5, and the Composite Reliability (CR) values were all greater than 0.7. This suggested that the convergent validity of the study was acceptable.

Table 4.10 presented the correlation matrix output from the AMOS analysis in this study. The data indicated that the discriminant validity of entrepreneurial action learning was generally acceptable, allowing for further analysis.

Table 4.10 Discriminant Validity Analysis Results for Entrepreneurial Action Learning

Variables	Exploratory learning	Transformative learning	Developmental learning
Exploratory learning	**.664**		
Transformative learning	.352	**.624**	
Developmental learning	.410	.373	**.627**

Note: Bold text represented AVE.

4.3.3 Reliability and Validity Tests of Dynamic Capability

The results of convergent validity testing for dynamic capability were presented in Table 4.11.

Table 4.11 Convergent Validity Analysis Results for Dynamic Capability

Variables	Indicators	Standardized Factor Loadings	R^2	θ $(1- R^2)$	CR	AVE
Opportunity perception capability	DC_OPC1	.801	.642	.358	.895	.630
	DC_OPC2	.800	.640	.360		
	DC_OPC3	.798	.637	.363		
	DC_OPC4	.785	.616	.384		
	DC_OPC5	.784	.615	.385		
Resource integration capability	DC_RIC1	.642	.613	.387	.876	.640
	DC_RIC2	.640	.669	.331		
	DC_RIC2	.637	.658	.342		
	DC-RIC4	.616	.618	.382		
Organizational restructuring capability	DC_ORC1	.764	.584	.416	.870	.626
	DC_ORC2	.790	.624	.376		
	DC_ORC3	.814	.663	.337		
	DC_ORC4	.796	.634	.366		

According to Table 4.11, it could be observed that the factor loadings of all indicators were greater than 0.5, indicating that each indicator had good representativeness for its corresponding latent variable. The average variance extracted (AVE) for each variable was greater than 0.5, and the composite reliability (CR) was greater than 0.7, suggesting that the convergent validity of this study was acceptable.

Table 4.12 presented the correlation coefficient matrix output from the AMOS analysis in this study. The data indicated that the discrimination validity of dynamic capability was generally acceptable, allowing for further analysis.

Table 4.12 Discriminant Validity Analysis Results for Dynamic Capability

Variables	Opportunity perception capability	Resource integration capability	Organizational restructuring capability
Opportunity perception capability	**.630**		
Resource integration capability	.338	**.640**	
Organizational restructuring capability	.349	.355	**.626**

Note: Bold text represented AVE.

4.3.4 Reliability and Validity Tests of Entrepreneurial Performance

The results of convergent validity testing for entrepreneurial performance were presented in Table 4.13.

Table 4.13 Convergent Validity Analysis Results for Entrepreneurial Performance

Variables	Indicators	Standardized Factor Loadings	R^2	θ ($1- R^2$)	CR	AVE
Growth Performance	EP_GP1	.716	.513	.487	.834	.558
	EP_GP2	.778	.605	.395		
	EP_GP3	.754	.569	.431		
	EP_GP4	.737	.543	.457		
Profitability Performance	EP_PP1	.789	.623	.377	.851	.588
	EP_PP2	.738	.545	.455		
	EP_PP3	.766	.587	.413		
	EP_PP4	.773	.598	.402		
Overall performance	EP_OP1	.735	.540	.460	.794	.563
	EP_OP2	.761	.579	.421		
	EP_OP3	.754	.569	0.431		

According to Table 4.13, it could be seen that the factor loadings of all indicators were greater than 0.5, indicating that each indicator had good representativeness for its corresponding latent variable. The average variance extracted (AVE) for each variable was greater than 0.5, and the composite reliability (CR) was greater than 0.7, indicating that the convergent validity of this study was acceptable.

Table 4.14 presented the results of the discriminant validity analysis for entrepreneurial performance based on the correlation coefficient matrix output by the AMOS23.0 analysis. The data indicated that the discriminant validity of entrepreneurial performance was generally acceptable, allowing for further analysis.

Table 4.14 Discriminant Validity Analysis Results of Entrepreneurial Performance

Variables	Growth performance	Profitability performance	Overall performance
Growth performance	**.558**		
Profitability performance	.449	**.588**	
Overall performance	.376	.319	**.563**

Note: Bold text represented AVE.

Table 4.15 Correlation Analysis Among the Observed Variables

Items	EO_ CI	EO_ LM	EO_ RS	EO_ DC	EAL_ EL	EAL_ TL	EAL_ DL	DC_ OPC	DC_ RIC	DC_ ORC	EP_ GP	EP_ PP	EP_ OP
EO_CI	1												
EO_LM	.439**	1											
EO_RS	.508**	.478**	1										
EO_DC	.468**	.481**	.484**	1									
EAL_EL	.292**	.307**	.282**	.236**	1								
EAL_TL	.297**	.328**	.293**	.260**	.509**	1							
EAL_DL	.276**	.291**	.293**	.259**	.563**	.519**	1						
DC_OPC	.198**	.199**	.220**	.235**	.304**	.252**	.267**	1					
DC_RIC	.210**	.215**	.223**	.248**	.311**	.286**	.284**	.515**	1				
DC_ORC	.223**	.207**	.197**	.245**	.313**	.309**	.310**	.522**	.521**	1			
EP_GP	.304**	.291**	.313**	.237**	.267**	.309**	.279**	.260**	.282**	.227**	1		
EP_PP	.314**	.245**	.246**	.288**	.225**	.231**	.220**	.250**	.285**	.230**	.567**	1	
EP_OP	.261**	.286**	.307**	.236**	.257**	.239**	.201**	.253**	.177**	.192**	.501**	.467**	1

Note: *** Significance at the 0.01 level (two-tailed), indicating significant correlation.*

4.3.5 Pearson Correlation Analysis

In order to comprehensively reveal the degree of correlation and mutual influence between variables, the researchers chose the Pearson correlation coefficient as a statistical tool to measure the linear relationship between variables. The Pearson correlation coefficient is a commonly used statistical method, with values ranging from -1 to 1, reflecting the strength and direction of the linear relationship between two variables. It quantifies the correlation between variables and provides preliminary validation of theoretical assumptions. Table 4.15 presented the correlation analysis among the observed variables.

From table 4.15, an asterisk (*) indicated significance at the 0.05 level, while double asterisks (**) represented significance at the 0.01 level. Generally, a significance level of sig<0.05 was considered significant. When independently examining the relationship between each independent variable and each dependent variable, there was a significant correlation between the independent and dependent variables. From the data in Table 4.15, it could be observed that the correlation coefficients between the four variables were all greater than 0, ranging between 0.340 and 0.435, indicating a moderate positive correlation between the variables. For instance, the correlation coefficient between entrepreneurial orientation and entrepreneurial action learning was 0.435, suggesting that if an entrepreneurial venture had an entrepreneurial orientation, entrepreneurial action learning would increase. However, this only provided a simple description of the influence between two variables and did not rule out the possibility of interactions between influencing factors. Therefore, further analysis using structural equation modeling was needed.

4.4 Confirmatory Factor Analysis (CFA)

During the confirmatory factor analysis in this study, researchers employed the Structural Equation Model (SEM), which consisted of both a structural model and a measurement model. The measurement model within the structural equation model was used to describe the relationships between latent variables and observable variables, while confirmatory factor analysis served as the primary method to assess the validity of the measurement model. In this research, utilizing the AMOS tool, researchers established pairwise correlation models among the variables and conducted confirmatory factor analysis. The primary objective of confirmatory factor analysis was to validate the model's validity by

examining the relationships between questionnaire items and their corresponding factors. Through the output results, researchers could distinctly observe significant correlations among variables, further substantiating the theoretical framework and research hypotheses that were constructed.

Based on Confirmatory Factor Analysis (CFA), the results of the Confirmatory Factor Analysis for the Entrepreneurial Orientation, Entrepreneurial action learning, dynamic capability, entrepreneurial performance of SMEs in Sichuan Province were presented in the measurement model shown in Figure 4.1, by using the statistical software AMOS23.0, to validate the development and validity of the model.

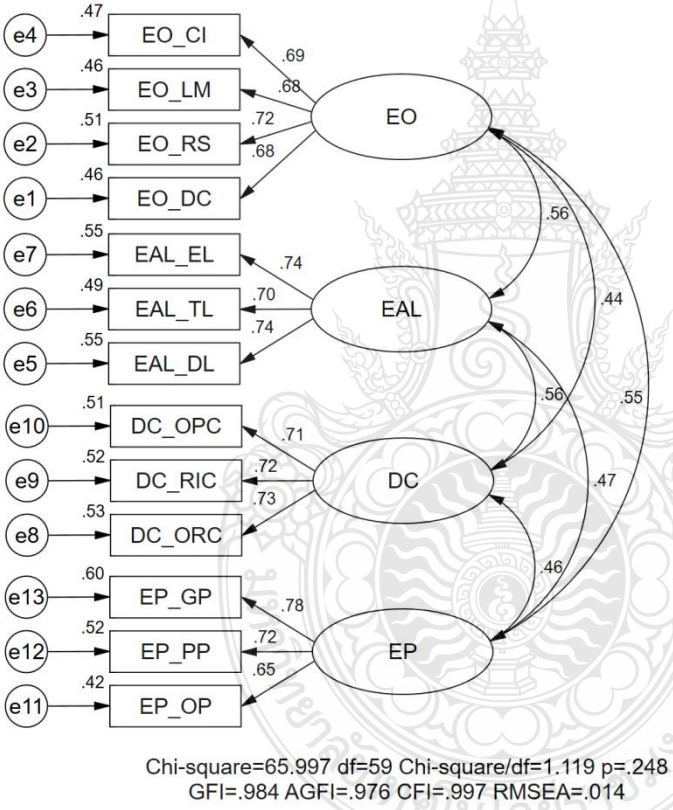


Figure 4.1 Confirmatory Factor Analysis Model

In this study, the researcher examined the fit of the initial research model, and the indicators' data were presented in Table 4.16.

Table 4.16 The CFA fit Indices Results

Fit indexes	Fit Standards	Model
$\chi 2$		65.997
Df		59
$\chi 2$/Df	<5	1.119
RMSEA	<0.08	.014
CFI	>0.90	.997
IFI	>0.90	.997
GFI	>0.90	.984
AGFI	>0.80	.976
TLI	>0.90	.996
RMR	>0	.027

The test results in Table 4.16 indicated that the $\chi 2$ for the Entrepreneurial Orientation Confirmatory Factor Analysis (CFA) model was 65.997, with degrees of freedom (Df) equal to 59. The $\chi 2$/Df ratio was 1.119, suggesting a good fit for the model. The RMSEA value was 0.014, falling within the acceptable range (RMSEA < 0.06). The CFI and IFI values were 0.997 each, and the GFI was 0.984. Additionally, the AGFI and TLI values were 0.976 and 0.996, respectively, all exceeding the standard value of 0.90. The RMR value was 0.027, meeting the criteria for acceptance (RMR > 0). Based on the various fit indices, it could be observed that the model fitted well, meeting the criteria for acceptance. Therefore, the fit of the structural model was deemed acceptable, and the model was confirmed.

4.5 Hypothesis Testing and Results Analysis

To further investigate the interactions between variables, it was necessary to employ structural equation modeling for measurement and analysis. Structural equation modeling served as a comprehensive tool that integrated various statistical analysis methods to thoroughly examine the relationships among latent variables, manifest variables, and disturbance or error variables involved in the model. It could be used for both analysis and measurement, providing a robust analytical framework for uncovering the impact mechanisms of entrepreneurial orientation and entrepreneurial action learning on the entrepreneurial performance of small and medium-sized enterprises (SMEs) in Sichuan Province. In this study, structural equation modeling analysis was conducted by using AMOS

23.0 software, and the model tested the existence of mediating effects among entrepreneurial orientation, entrepreneurial action learning, and entrepreneurial performance.

During hypothesis testing, the significance level of the variables was primarily assessed through the non-standardized path coefficient estimates. The value of the estimate indicated the magnitude of the mutual influence between variables, with a value closer to 1 indicating a stronger impact. "S.E." stood for standard error, and "C.R." represented the critical ratio, equivalent to the T-value, where C.R. = Estimate / S.E. Typically, when C.R. was greater than or equal to 1.96, the study was considered significant. The p-value reflected significance, and when the significance level was less than 0.01, the result was denoted as "***". If the significance level was greater than 0.01, the actual numerical value was displayed.

Structural Model, the indirect effects model, examined the direct effects between entrepreneurial orientation, entrepreneurial action learning, and entrepreneurial performance, while simultaneously testing the mediating effect of entrepreneurial action learning. The structural equation model was illustrated in Figure 4.2.

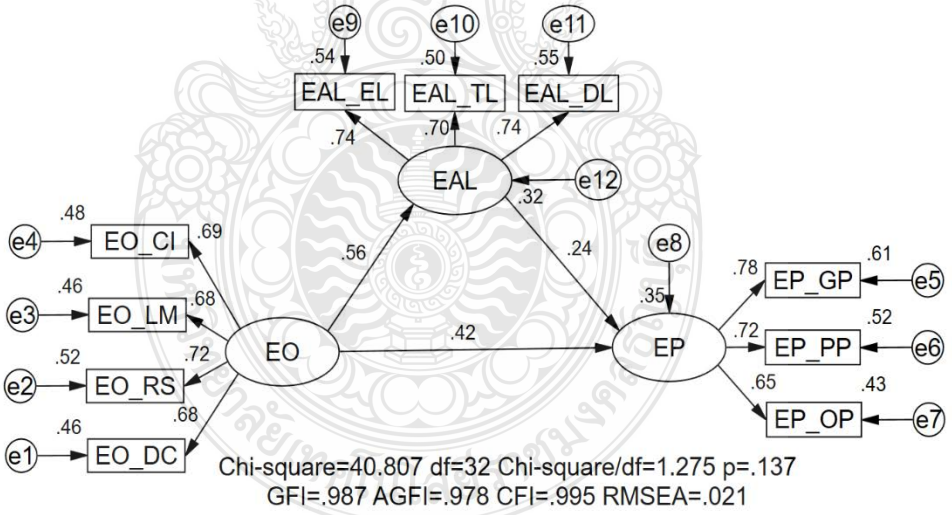


Figure 4.2 Structural Model 1

The structural model was designed to investigate the effect of entrepreneurial orientation and entrepreneurial action learning on entrepreneurial performance, while simultaneously testing the mediating role of entrepreneurial action learning. The remaining fit indices of the model were shown in Table 4.17 and were within an acceptable range.

Table 4.17 Model 1 Fit Analysis for Structural Model

Fit indexes	Fit Standards	Model Fit
χ2		572.542
Df		496
χ2/Df	<5	1.154
RMSEA	<0.08	.016
CFI	>0.90	.993
IFI	>0.90	.993
GFI	>0.90	.949
AGFI	>0.80	.939
TLI	>0.90	.992
NFI	>0.90	.951
RMR	>0	.049

The fit indices of the model were as follows: χ^2=40.807, Df=32, χ^2/Df=1.275, RMSEA=0.021, CFI=0.995, IFI=0.995, GFI=0.987, AGFI=0.978, TLI=0.994, NFI=0.979, RMR=0.028.

4.5.1 Direct Effects Test

The analysis results of Structural Model indicated that the non-standardized coefficient between entrepreneurial orientation and entrepreneurial performance was 0.403, with a standardized regression weight (β) of 0.422 ($p < 0.01$), a standard error (S.E.) of 0.064, and a critical ratio (C.R.) of 9.159. The non-standardized coefficient between entrepreneurial orientation and entrepreneurial action learning was 0.582, with a standardized regression weight (β) of 0.566 ($p < 0.01$), a standard error (S.E.) of 0.064, and a critical ratio (C.R.) of 9.159. The non-standardized coefficient between entrepreneurial action learning and EP was 0.218, with a standardized regression weight (β) of 0.235 ($p < 0.01$), a standard error (S.E.) of 0.059, and a critical ratio (C.R.) of 3.699. The detailed coefficients were shown in Table 4.18.

Table 4.18 Hypothesis Testing for Structural Model

Hypothesis	Estimate	*β*	S.E.	C.R.	*p*-value
H1：EO→EP	.403	.422	.066	6.153	***
H2：EO→EAL	.582	.566	.064	9.159	***
H3：EAL→EP	.218	.235	.059	3.699	***

Note: ***p-value < 0.001 (statistical significance at 0.001 level)
** p-value < 0.01 (statistical significance at 0.01 level)
* p-value < 0.05 (statistical significance at 0.05 level

From Table 4.18, the non-standardized coefficient for the impact of entrepreneurial orientation on EP was 0.403, which was less than the impact coefficient of entrepreneurial orientation on entrepreneurial action learning (0.582), but greater than the impact coefficient of entrepreneurial action learning on entrepreneurial performance (0.218). This suggested that the influence of entrepreneurial orientation on entrepreneurial action learning was greater than its influence on entrepreneurial performance. The results from Table 4.18 indicated that the significance levels of the impacts of entrepreneurial orientation on entrepreneurial performance, entrepreneurial orientation on entrepreneurial action learning, and entrepreneurial action learning on entrepreneurial performance were all less than 0.01. When the p-value was less than 0.05, it signified a significant effect, which could be accepted. This validated the hypotheses H1, H2, and H3.

4.5.2. Mediation Effects Test for Entrepreneurial Action Learning

In this study, the mediating effect of entrepreneurial action learning between entrepreneurial orientation and entrepreneurial performance was examined by using an adaptation of the mediation model. The model for testing the mediating role of entrepreneurial action learning was illustrated in Figure 3.1. The test results were shown in Table 4.19.

Table 4.19 Mediation Effect Test of Entrepreneurial Action Learning

Effect Types	***Estimate***	**β**	***Lower***	***Upper***	***P***	**Effect Proportion**
Total Effect	.556	.530	.431	.647	***	-
Direct Effect	.422	.403	.279	.540	***	76.17%
Mediation Effect	.132	.127	.058	.212	***	23.83%

Note: ***p-value < 0.001 (statistical significance at 0.001 level)
** p-value < 0.01 (statistical significance at 0.01 level)
* p-value < 0.05 (statistical significance at 0.05 level

From the results of Figure 4.2, and Table 4.19, it was evident that the direct effect of entrepreneurial orientation on entrepreneurial performance was 0.422. The indirect effect of entrepreneurial action learning, denoted as a*b, was calculated as 0.562 * 0.235,

approximately equal to 0.132, constituting 23.83% of the total effect. Moreover, the p-value was less than 0.01, indicating that the mediating effect of entrepreneurial action learning between entrepreneurial orientation and entrepreneurial performance was significant. Therefore, hypothesis H4 was validated

In summary, the hypothesis testing results of structural model were presented in Table 4.20.

Table 4.20 The Hypothesis Testing Results of Model

Effect Model	Hypotheses	Structural relationship	Estimate	S.E.	C.R.	p-value
Direct effect	H1	EO→EP	.403	.065	6.206	***
	H2	EO→EAL	.582	.064	9.162	***
	H3	EAL→EP	.218	.058	3.731	***
Indirect effect	H4	EO→EAL→EP	.556	—	—	***

Note: ****p-value < 0.001 (statistical significance at 0.001 level)*
*** p-value < 0.01 (statistical significance at 0.01 level)*
** p-value < 0.05 (statistical significance at 0.05 level*

4.5.3 Test of the Moderating Effect of Dynamic Capability

In this study, DC was a moderator variable that played a role in the moderating effect. This study was examined using AMOS 23.0, and the relevant theoretical sections were based on chapter 3.7.2.

1.Test of the Moderating Effect of DC on the Relationship Between EO and EP.

Structural Model 2 examined the direct effect of EO on EAL and EP, the effect of EO on EP with EAL as the mediating variable, and the direct effect of EO on EP with DC as the moderating variable, as shown in Figure 4.3.

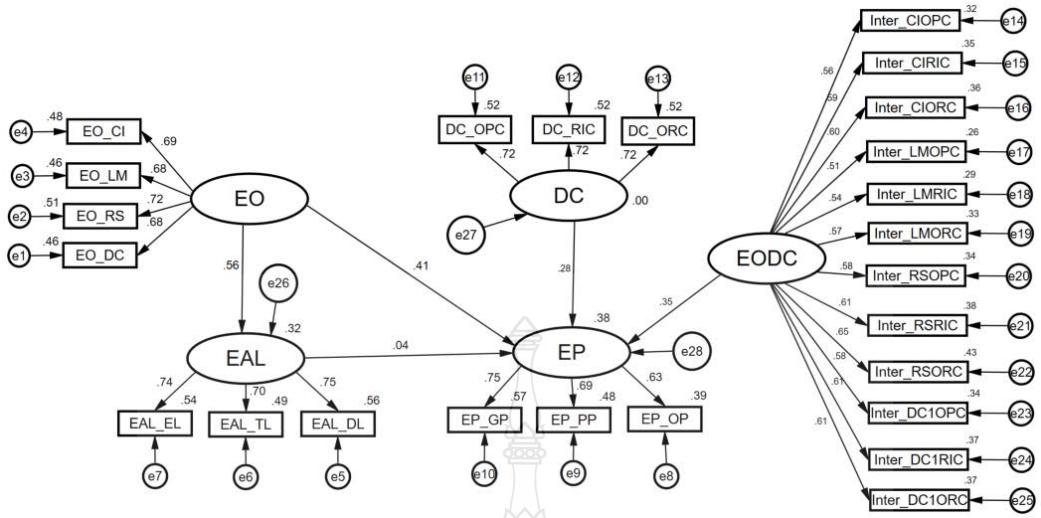


Figure 4.3 Structure Model 2

The fit indices of the model were CMIN = 2039.759, DF = 270, CNIN/DF = 7.555, p-value = .000, GFI = 0.806, AGFI = 0.767, RMR = 0.156, RMSEA = 0.102 (P = 0.000), NFI = 0.684, CFI = 0.712, as shown in Table 4.21.

Table 4.21 Model 2 Fit Analysis for Structural Model

Fit indexes	Fit Standards	Model 2
$\chi 2$		2039.759
Df		270
$\chi 2$/Df	<5	7.555
RMSEA	<0.08	.102
CFI	>0.90	.712
IFI	>0.90	.714
GFI	>0.90	.806
AGFI	>0.80	.767
TLI	>0.90	.680
RMR	>0	.156

The results in Figure 4.3 showed that the model did not meet the model fitting criteria and most of the indicators were outside the acceptable range of indicators. For example, the acceptable level of $\chi 2$/Df was <5, while the model had a value of 7.555 for $\chi 2$/Df, the value of RMSEA was 0.102, which was an acceptable level of <0.08. The value of AGFI was 0.767, which was an acceptable level of >0.8, and the values of CFI, IFI, GFI,

and TLI were respectively 0.712, 0.714, 0.806, and 0.680, while the acceptable level of these four indicators was >0.9.

The model was adjusted by using modified indicators, with covariance between the residuals. The corrected model and the indicators were shown in Figure 4.4.

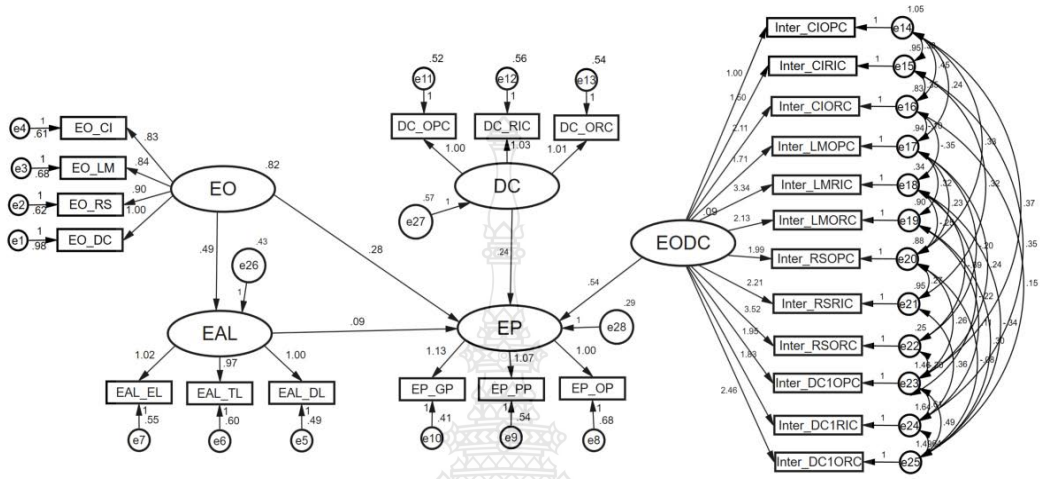


Figure 4.4 Structure Model 2 (with modification indices)

The corrected indicators were shown below: CMIN = 710.318, DF = 241, CNIN/DF = 2.947, p-value = .000, GFI = 0.920, AGFI = 0.893, RMR = 0.145, RMSEA = 0.056 (P = 0.024), NFI = 0.890, CFI = 0.924, the corrected indicators were shown in Table 4.22.

Table 4.22 Model 2 Fit Analysis for Structural Model (with modification indices)

Fit indexes	Fit Standards	Model 2
$\chi 2$		710.318
Df		241
$\chi 2$/Df	<5	2.947
RMSEA	<0.08	.056
CFI	>0.90	.924
IFI	>0.90	.924
GFI	>0.90	.920
AGFI	>0.80	.893
TLI	>0.90	.905
RMR	>0	.145

The analysis of structural Model 2 (with modification indices), the results showed in table 4.23. With good DC as a moderating variable, EO had an effect on the increase in EP. The results showed that there was a direct relationship between the effect of EO on EP at β (EO x DC) = 0.242 (p<0.001), which indicated that EO had a positive effect on the increase of EP in favor of DC.

Table 4.23 Hypothesis Testing for Model 2

Hypothesis	Estimate	*β*	S.E.	C.R.	*p*-value
H1：EO→EP	.283	.386	.050	5.633	***
H2：EO→EAL	.492	.563	.050	9.761	***
H3：EAL→EP	.090	.107	.055	1.638	.101
H4：EO→EAL→EP	—	.044	.029	1.517	.106
H5：EO×DC→EP	.544	.242	.108	5.017	***

****p-value < 0.001 (statistical significance at 0.001 level)*
*** p-value < 0.01 (statistical significance at 0.01 level)*
** p-value < 0.05 (statistical significance at 0.05 level)*

2.Test of the Moderating Effect of DC on the Relationship Between EAL and EP. Structural Model 3 examined the direct effect of EO on EAL and EP, the effect of EO on EP with EAL as the mediating variable, and the direct effect of EAL on EP with DC as the moderating variable, as shown in Figure 4.5.

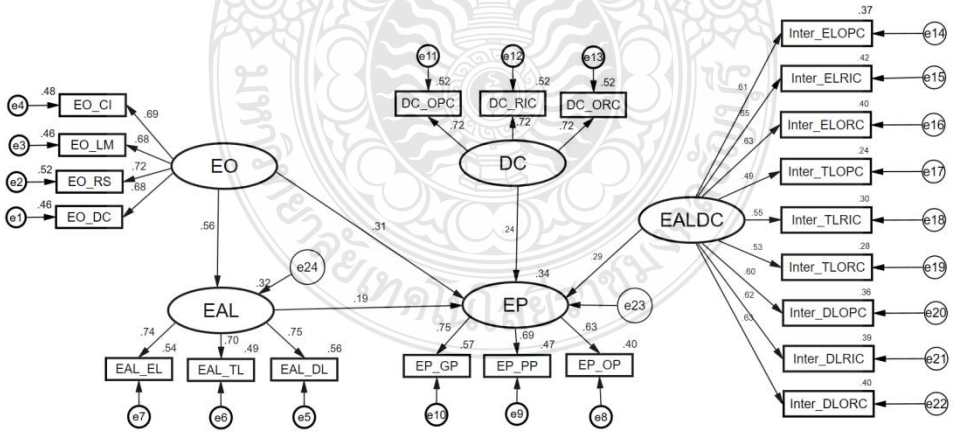


Figure 4.5 Structure Model 3

The fit indices of the model 3 were shown in Table 4.24.

Table 4.24 Model 3 Fit Analysis for Structural Model

Fit indexes	Fit Standards	Model
$\chi 2$		1678.276
Df		204
$\chi 2$/Df	<5	8.227
RMSEA	<0.08	.107
CFI	>0.90	.719
IFI	>0.90	.720
GFI	>0.90	.821
AGFI	>0.80	.778
TLI	>0.90	.681
RMR	>0	.156

The fit indices of the model were CMIN = 1678.276, DF = 204, CNIN/DF = 8.227, p-value = .000, GFI = 0.821, AGFI = 0.778, RMR = 0.156, RMSEA = 0.107 (P = 0.000), NFI = 0.693, CFI = 0.719. The results showed that the model did not meet the model fitting criteria and most of the indicators were outside the acceptable indicator range. For example, the acceptable level of $\chi 2$/Df was <5, while the value of $\chi 2$/Df of the model was 8.227, the value of RMSEA was 0.107, which was an acceptable level of <0.08. The value of AGFI was 0.778, which was an acceptable level of >0.8, and the values of CFI, IFI, GFI, and TLI were respectively 0.719, 0.720, 0.821, 0.681, while the acceptable level of these four indicators was >0.9.

The model was adjusted by using modified indicators, with covariance between the residuals. The corrected model and the indicators were shown in Figure 4.6.

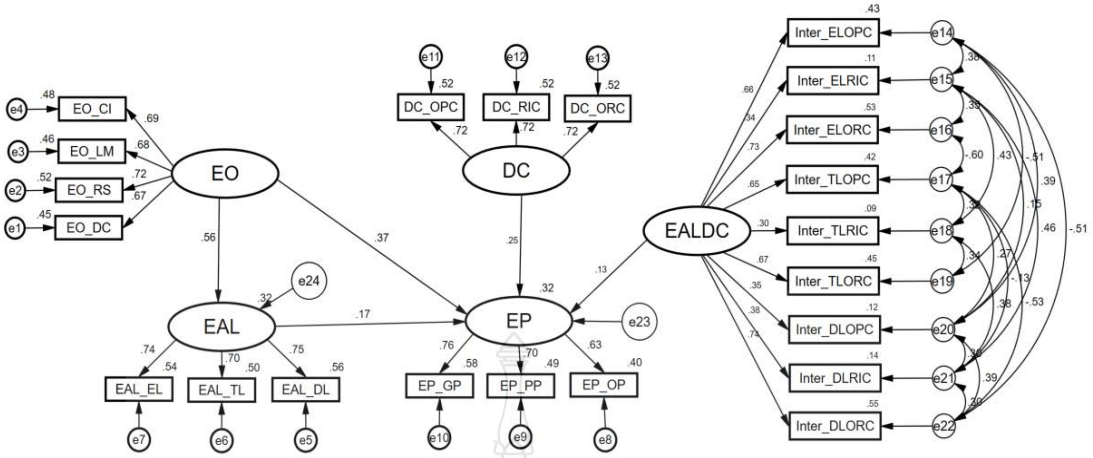


Figure 4.6 Structure Model 3 (with modification indices)

The corrected indicators were shown below: CMIN = 598.991, DF = 186, CNIN/DF = 3.220, p-value = .000, GFI = 0.922, AGFI = 0.894, RMR = 0.151, RMSEA = 0.059 (P = 0.000), NFI = 0.891, CFI = 0.921, the corrected indicators were shown in Table 4.25.

Table 4.25 Model 3 fit Analysis for Structural Model (with modification indices)

Fit indexes	Fit Standards	Model
$\chi 2$		598.991
Df		186
$\chi 2$/Df	<5	3.220
RMSEA	<0.08	.059
CFI	>0.90	.921
IFI	>0.90	.922
GFI	>0.90	.922
AGFI	>0.80	.894
TLI	>0.90	.902
RMR	>0	.151

Structural equation modeling 3 showed a direct relationship between EO and EP (β=0.373, p<0.001), between EO and EAL (β=0.563, p<0.001), and between EAL and EP (β=0.169, p=0.011). The results showed that EP was affected by both EO and EAL, while EAL had an indirect effect β=0.070 (p=0.014) between EO and EP, and the direct relationship between EO and EP was β=0.276 (p<0.001).

The analysis of structural Model 3 (with modification indices), the results showed in table 4.26.

Table 4.26 Hypothesis Testing for Model 3 (with modification indices)

Hypothesis	Estimate	*β*	S.E.	C.R.	*p*-value
H1：EO→EP	.276	.373	.052	5.328	***
H2：EO→EAL	.490	.563	.050	9.755	***
H3：EAL→EP	.143	.169	.057	2.533	*
H4：EO→EAL→EP	—	.070	.030	2.333	*
H6：EAL×DC→EP	.122	.130	.039	3.094	**

****p-value < 0.001 (statistical significance at 0.001 level)*
*** p-value < 0.01 (statistical significance at 0.01 level)*
** p-value < 0.05 (statistical significance at 0.05 level)*

With good DC as a moderating variable, EAL had an effect on the increase in EP. The results showed that there was a direct relationship between EO and EP at β (EAL×DC) =0.130 (p=0.002), which indicated that EAL had a positive effect on the increase of EP in favor of DC.

4.6 Summary of Structural Model Analysis

Without using DC as a moderating variable, Structural Model 1 (Direct Effects and Mediation Effects Model) was constructed. According to Preacher and Hayes (2008), if the indirect path was statistically significant while the direct path was not, a full mediation effect occurred in the model; if both the indirect and direct paths were statistically significant, a partial mediation effect occurred in the model. The results of Structural Model 1 showed a direct relationship between EO and EP (β=0.422, p<0.001), a direct relationship between EO and EAL (β=0.562, p<0.001), and a direct relationship between EO and EAL (β=0.235, p<0.001). The indirect path from EO to EP through EAL was statistically significant, with a path coefficient of β=0.127 (p<0.001). This indicated that EO affected EP, and EAL played a partial mediating role in this relationship.

Structural Model 2 (Direct Effects Model, Mediation Effects Model, and Moderation Effects Model) was constructed under the conditions of the direct influence of EO and EAL on EP, the influence of EO on EP through EAL as a mediating variable, and the

direct influence of EO (EO×DC) on EP under favorable DC as a moderating variable. The results showed a direct relationship between EO and EP (β=0.386, p<0.001) and between EO and EAL (β=0.563, p<0.001), but no direct relationship between EAL and EP (β=0.107, p=0.101). EP was influenced by EO, but EAL did not produce an indirect effect between EO and EP, with β=0.044 (p=0.106). Under favorable DC as a moderating variable, EO had an impact on the increase of EP. The results indicated that when β (EO×DC) = 0.242, there was a direct relationship between EO and EP (p<0.001), suggesting that EO (EO×DC) positively influenced EP under favorable DC conditions.

Structural Model 3 (Direct Effects Model, Mediation Effects Model, and Moderation Effects Model) was constructed under the conditions of the direct influence of EO and EAL on EP, the influence of EO on EP through EAL as a mediating variable, and the direct influence of EAL (EAL×DC) on EP under favorable DC as a moderating variable. The results showed a direct relationship between EO and EP (β=0.373, p<0.001) and between EO and EAL (β=0.563, p<0.001). Additionally, there was a direct relationship between EAL and EP (β=0.169, p=0.011). EP was influenced by both EO and EAL, with EAL producing an indirect effect between EO and EP, β=0.070 (p=0.014), while the direct relationship between EO and EP was β=0.276 (p<0.001). Under favorable DC as a moderating variable, EAL had an impact on the increase of EP. The results indicated that when β (EAL×DC) = 0.130, there was a direct relationship between EO and EP (p=0.002), suggesting that EAL (EAL×DC) positively influenced EP under favorable DC conditions.

The comparison of path coefficients for Model 1, Model 2, and Model 3 was shown in Table 4.27.

Table 4.27 Comparison of the Path Coefficients Between Model 1, Model 2, Model 3

Hypotheses	Structural relationship	Model 1 (β)	Model 2 (β)	Model 3 (β)
H1	EO→EP	.422***	.386***	.373***
H2	EO→EAL	.562***	.563***	.563***
H3	EAL→EP	.235***	.107	.169*
H4	EO→EAL→EP	.127***	.044	.070*
H5	EO×DC→EP	—	.242***	—
H6	EAL×DC→EP	—	—	.030**

Note: ****p-value < 0.001 (statistical significance at 0.001 level)*
*** p-value < 0.01 (statistical significance at 0.01 level)*
** p-value < 0.05 (statistical significance at 0.05 level*

4.7 Chapter Summary

Based on the quality inspection of the collected data, this chapter employed statistical analysis software SPSS 26.0 and AMOS 23.0 to validate theoretical hypotheses and models using 629 valid survey questionnaire responses. The results provided strong support for the theoretical hypotheses. The paths between the variables, as hypothesized, passed significant tests, confirming the validity of these assumptions within the scope of this study. The key points, theoretical hypotheses, and model proposed in this paper were validated. Entrepreneurial orientation had a positive impact on entrepreneurial performance, a positive influence on entrepreneurial action learning, and entrepreneurial action learning had a positive impact on entrepreneurial performance. Additionally, entrepreneurial action learning played a mediating role between entrepreneurial orientation and entrepreneurial performance. Dynamic capability moderated the relationship between entrepreneurial orientation and entrepreneurial performance, and it also moderated the relationship between entrepreneurial action learning and entrepreneurial performance. The summarized results of hypothesis testing were presented in Table 4.28.

Table 4.28 Overview of Research Questions, Hypotheses, and Results

Research Questions	Hypotheses	Model 1	Model 2	Model 3
RQ1：1. What was the relationship between entrepreneurial orientation, entrepreneurial action learning, and entrepreneurial performance?	H1: Entrepreneurial orientation has a positive effect on entrepreneurial performance.	Supported	Supported	Supported
	H2: Entrepreneurial orientation has a positive effect on entrepreneurial action learning.	Supported	Supported	Supported
	H3: Entrepreneurial action learning has a positive effect on entrepreneurial performance.	Supported	Not Supported	Supported
RQ2: How did entrepreneurial orientation affect entrepreneurial performance through entrepreneurial action learning?	H4：Entrepreneurial action learning plays a mediating role in the entrepreneurial orientation on entrepreneurial performance.	Supported	Not Supported	Supported

Table 4.28 Overview of Research Questions, Hypotheses, and Results (Cont.)

Research Questions	Hypotheses	Model 1	Model 2	Model 3
RQ3: How did entrepreneurial orientation and entrepreneurial action learning have a causal relationship to the entrepreneurial performance of SMEs in Sichuan Province through dynamic capability?	H5: The effect of the entrepreneurial orientation on entrepreneurial performance increases with favorable dynamic capability.	—	Supported	—
	H6: The effect of entrepreneurial action learning on entrepreneurial performance increases with favorable dynamic capability.	—	—	Supported

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

In this chapter, the conclusions drawn from the research results on the impact of entrepreneurial performance in SMEs in Sichuan Province are described. This included entrepreneurial orientation, entrepreneurial action learning, and dynamic capability. Based on the research objectives, research questions, and research findings, the main conclusions and theoretical contributions of this paper were summarized and refined. Relevant managerial insights and strategic recommendations were proposed in conjunction with practices in entrepreneurial management. The shortcomings of this study were analyzed, and areas that require further research were identified.

5.1 Conclusions

Using quantitative research methods, this study analyzed the positive effects of entrepreneurial orientation on entrepreneurial performance of SMEs in Sichuan Province, and the study examined the positive effects of entrepreneurial orientation on entrepreneurial action learning of SMEs in Sichuan Province, as well as the effects of entrepreneurial action learning on entrepreneurial performance of SMEs in Sichuan Province. In addition, the study examined the mediating effect of entrepreneurial action learning between entrepreneurial performance and entrepreneurial performance of SMEs in Sichuan Province. The study investigated the moderating effect of dynamic capability as a moderating variable between entrepreneurial orientation and entrepreneurial performance among SMEs in Sichuan Province. Previous studies had actively explored the relationship between entrepreneurial orientation and entrepreneurial performance; however, in the entrepreneurial context of mass entrepreneurship and innovation in China, there were especially limited studies on Chinese specific geographic regions, and there were relatively few studies on entrepreneurial action learning as a mediator between entrepreneurial orientation and entrepreneurial performance, and dynamic capability as a moderator variable in the relationship between entrepreneurial orientation, entrepreneurial performance and entrepreneurial performance of SMEs in Sichuan

Province. There were relatively few studies that use entrepreneurial action learning as a mediating variable between entrepreneurial orientation and entrepreneurial performance.

In the process of quantitative research, this study collected data from 629 samples through questionnaires and analyzed the structural equation model by using SPSS and AMOS software, including the fit testing of the model and hypothesis testing. In the process of fit testing of the models, descriptive statistical analysis, normal distribution analysis, reliability and validity test, and fit index analysis of the models were used; the results showed that model 1 had good measurement, model 2 and model 3 also had good measurement after index correction, and all three models were suitable for hypothesis testing.

The results of the hypothesis testing for model 1 validated the effects of the variables and supported four research hypotheses. Hypothesis 1: Entrepreneurial orientation has a positive effect on entrepreneurial performance. Hypothesis 2: Entrepreneurial orientation has a positive effect on entrepreneurial action learning. Hypothesis 3: Entrepreneurial action learning has a positive effect on entrepreneurial performance. Hypothesis 4: Entrepreneurial action learning plays a mediating role in the way entrepreneurial orientation affects entrepreneurial performance. These findings were consistent with the results of the existing literature. Another important finding was that the effect of entrepreneurial orientation on entrepreneurial performance through entrepreneurial action learning was greater than the direct effect of entrepreneurial orientation on entrepreneurial performance when entrepreneurial action learning was taken as a mediating variable in SMEs in Sichuan province; in other words, in SMEs in Sichuan province, entrepreneurial orientation firstly affected the performance of enterprises in exploratory learning, transformational learning, and developmental learning. It also affected the growth performance, profitability performance, and overall performance of the firm, which in turn drove the enterprise's innovative capacity and competitive advantage in the market.

Model 2 not only tested hypotheses 1 to 4 but also tested hypothesis 5, and its results supported the three research hypotheses. Hypothesis 1: Entrepreneurial orientation has a positive effect on entrepreneurial performance. Hypothesis 2: Entrepreneurial orientation has a positive effect on entrepreneurial action learning; Hypothesis 5: The

effect of the entrepreneurial orientation on entrepreneurial performance increases with favorable dynamic capability. Two research hypotheses were not supported. Hypothesis 3: Entrepreneurial action learning has a positive effect on entrepreneurial performance. Hypothesis 4: Entrepreneurial action learning plays a mediating role in the way entrepreneurial orientation affects entrepreneurial performance. These findings were inconsistent with the existing literature in that entrepreneurial action learning did not positively affect entrepreneurial performance after introducing dynamic capabilities as a moderating variable and entrepreneurial action learning did not mediate between entrepreneurial orientation and entrepreneurial performance, an important finding that suggested that it might be weakening entrepreneurial action learning in some cases. Specifically, when enterprises attempt to adjust their resources and structures to environmental changes, this might lead to over-adjustment or maladjustment, thus weakening the positive impact of entrepreneurial action learning on performance. Dynamic capability theory emphasizes that enterprises need to continuously update and restructure their resources to cope with changes in the external environment, but such dynamic adjustments may weaken enterprises' learning in certain contexts, resulting in entrepreneurial action learning failing to play the expected mediating role between entrepreneurial orientation and entrepreneurial performance. This suggests that in the context of SMEs in Sichuan Province, dynamic capability may have weakened or inhibited the effectiveness of entrepreneurial action learning, causing it to fail to play a mediating role between entrepreneurial orientation and entrepreneurial performance.

The results of the hypothesis testing for model 3 validated the effects between the variables and supported the five research hypotheses. Hypothesis 1: Entrepreneurial orientation has a positive effect on entrepreneurial performance. Hypothesis 2: Entrepreneurial orientation has a positive effect on entrepreneurial action learning; Hypothesis 3: Entrepreneurial action learning has a positive effect on entrepreneurial performance. Hypothesis 4: Entrepreneurial action learning plays a mediating role in the way entrepreneurial orientation affects entrepreneurial performance. Hypothesis 6: The effect of entrepreneurial action learning on entrepreneurial performance increases with favorable dynamic capability. After the introduction of dynamic capability as a moderating variable between entrepreneurial action learning and entrepreneurial

performance, entrepreneurial action learning had a significantly positive effect on entrepreneurial performance. Moreover, the mediating role of entrepreneurial action learning between entrepreneurial orientation and entrepreneurial performance remained. Specifically, resource integration capability enhances the ability of enterprises to effectively transform the results of entrepreneurial action learning into performance, so that they can better configure and utilize resources, thus improving their overall performance; opportunity sensing capability enables enterprises to capture market opportunities more keenly during entrepreneurial action learning, and apply the learning gains to practice in a timely manner, so as to promote the growth performance and profitability performance of enterprises; organizational reconfiguration capability helps enterprises to improve their entrepreneurial performance by adjusting and optimizing their entrepreneurship. Organizational restructuring capability helps enterprises to adjust and optimize their organizational structure to ensure that the results of entrepreneurial action learning can be implemented smoothly and produce positive performance impacts. Therefore, dynamic capability did not weaken the positive impact of entrepreneurial action learning on entrepreneurial performance, but also played an important role in this process, further consolidating the mediating role of entrepreneurial action learning between entrepreneurial orientation and entrepreneurial performance.

The above findings further strengthen the theoretical underpinning of this study: Resource-Based View suggests that the unique resources and capabilities within a firm are key factors in its sustained competitive advantage. In this study, entrepreneurial orientation further enhanced the growth performance, profitability performance and overall performance of the firm by promoting exploratory, transformational and developmental learning. In addition, the dynamic capability theory emphasizes that an enterprise's competitive advantage derives not only from the possession of resources, but also from its ability to continually adjust and reorganize its resources to adapt to changes in the environment. Dynamic capability enhances the positive impact of entrepreneurial action learning on entrepreneurial performance through the ability to integrate resources, perceive opportunities and reconfigure organizations, while consolidating the mediating role of entrepreneurial action learning between entrepreneurial orientation and entrepreneurial performance. Therefore, combining Resource-Based View and dynamic

capability theory shows that the combination of entrepreneurial orientation and dynamic capability enables enterprise to utilize internal resources more effectively and to maintain competitive advantage and achieve higher performance through continuous learning and innovation. This result not only validated the basic assumptions of resource management theory, but also demonstrated the key role of dynamic capability in resource management and performance improvement.

5.2 Discussion

The purpose of this study was to explore the relationship between entrepreneurial orientation, entrepreneurial action learning, and entrepreneurial performance in SMEs in Sichuan Province. This study had set three research questions:

Q1: What was the relationship between entrepreneurial orientation, entrepreneurial action learning, and entrepreneurial performance?

Q2: How did entrepreneurial orientation influence entrepreneurial performance through entrepreneurial action learning?

Q3: How did entrepreneurial orientation and entrepreneurial action learning causally affect the entrepreneurial performance of SMEs in Sichuan Province under favorable dynamic capability?

5.2.1 Discuss Question 1

What was the relationship between entrepreneurial orientation, entrepreneurial action learning, and entrepreneurial performance?

For the first research question, this study proposed Hypothesis 1, Hypothesis 2, and Hypothesis 3. The research on the entrepreneurial performance of SMEs indicated that studies from different countries had yielded similar results: there was a positive correlation between performance outcomes and both entrepreneurial orientation and learning orientation (Meekaewkunchorn, Szczepańska-Woszczyna, Muangmee, Kassakorn, & Khalid, 2021). Globally, SMEs are widely recognized as a vital pillar of any nation's economy (PratiktoWinarno & Restuningdiah, 2023). Given the significant role of SMEs in the economic development of Sichuan Province (Huang, 2023), the development of SMEs had received substantial attention and support from the provincial government in recent years (Wu & Zhao, 2018). Studies had found that entrepreneurial

orientation was a strong driver of organizational performance, and organizational learning capability positively impacts performance (Gomes, Seman, Berndt, & Bogoni, 2022). Other studies suggested that entrepreneurial orientation and entrepreneurial action learning were directly related to an enterprise's ability to cope with market risks and uncertainties, and could guide enterprises towards achieving their goals, success, and profitability (Fang, 2018).

The results from Model 1 indicated that entrepreneurial orientation had a positive correlation with entrepreneurial performance, which was consistent with the findings of SalihAlsalhi and Abou-Moghli (2024) that entrepreneurial orientation significantly affects performance. Recent studies had also shown that entrepreneurial orientation influences the performance of SMEs (Akomea, Agyapong, Ampah, & Osei, 2023). Lumpkin and Dess (1996) suggested that entrepreneurial orientation reflected a company's tendency to discover new opportunities, thereby improving performance. Based on these studies, it could be concluded that Hypothesis 1 was supported. The path coefficients and p-values indicated that entrepreneurial orientation had a positive effect on entrepreneurial action learning, thus supporting Hypothesis 2. Entrepreneurial action learning positively influenced entrepreneurial performance, confirming the conclusion that entrepreneurial learning had a significant impact on firm performance (Iyiola, Alzubi & Dappa, 2023; Martinette, Obenchain-Leeson, Gomez, & Webb, 2014) thus supporting Hypothesis 3. These findings validated the results of Wiklund and Shepherd (2003), which stated that knowledge-based resources were positively correlated with entrepreneurial performance and that entrepreneurial orientation could enhance entrepreneurial performance.

The results of Model 2 indicated that for SMEs in Sichuan Province, entrepreneurial orientation was positively correlated with both entrepreneurial action learning and entrepreneurial performance, confirming Hypothesis 1 and Hypothesis 2. However, there was no direct relationship between entrepreneurial action learning and entrepreneurial performance, so Hypothesis 3 was not supported. The results of Model 3 showed that in SMEs in Sichuan Province, entrepreneurial orientation was positively correlated with both entrepreneurial action learning and entrepreneurial performance, and there was a direct

relationship between entrepreneurial action learning and entrepreneurial performance, thus validating Hypothesis 1, Hypothesis 2, and Hypothesis 3.

Research showed that the four dimensions of entrepreneurial orientation, namely collaborative innovation, risk sharing, leading mobility and dynamic competition all played a positive role in enhancing entrepreneurial performance. This finding was consistent with previous studies (Baker & Sinkula, 2009; Fang, 2018), indicating that in new entrepreneurial contexts, entrepreneurial orientation was crucial for improving performance. Companies should actively identify and seize opportunities, creatively integrate resources, be the first to introduce new products and services to the market, take on certain risks, and adopt proactive measures to develop a dynamic competitive advantage, thereby improving performance. Furthermore, entrepreneurial action learning had a positive impact on organizational performance (Inthavong, Rehman, Masood, Shaukat, Hnydiuk-Stefan, & Ray, 2023). This was specifically reflected in the dimensions of exploratory learning, transformative learning, and exploitative learning. The knowledge entrepreneurs learn and master was the key to entrepreneurial success (Minniti & Bygrave, 2001; Santarelli & Tran, 2012). Learning was the process by which entrepreneurial experiences were transformed into entrepreneurial knowledge (Politis, 2005). This process not only determined the current performance of the enterprise but also laid a solid foundation for future innovation and sustained growth. Continuous learning and knowledge accumulation could help companies maintain a competitive edge in rapidly changing markets, thereby ensuring their long-term success.

5.2.2 Discuss Question 2

What was the relationship between entrepreneurial orientation, entrepreneurial action learning, and entrepreneurial performance?

For research question 2, Hypothesis 4 was proposed. The researcher tested this by establishing a mediation effect adaptation model and exploring the mediating effect of entrepreneurial action learning. The results of Model 1 and Model 3 indicated that entrepreneurial action learning played a mediating role between entrepreneurial orientation and entrepreneurial performance, thus confirming Hypothesis 4. The mediating role of entrepreneurial action learning had also been validated in related studies (Chen & Pan, 2019; Huang, 2019). However, in Model 2, the path coefficients and p-

values suggested that entrepreneurial action learning didn't have a mediating effect between entrepreneurial orientation and entrepreneurial performance, so Hypothesis 4 was not supported. Previous research had shown that transformative learning and exploitative learning mediated the relationship between entrepreneurial orientation and entrepreneurial performance, but exploratory learning did not (Fang, 2018). The findings in this study partially align with these results. The introduction of dynamic capability as a moderating variable might have somewhat weakened the impact of entrepreneurial action learning (particularly exploratory learning) on entrepreneurial performance. Dynamic capability emphasized the ability of enterprise to adjust and reconfigure resources in a constantly changing environment, which might lead companies to focus more on short-term market changes and opportunity capture during exploratory learning, thereby diminishing its role in long-term performance improvement.

In this study, entrepreneurial action learning as a mediating variable significantly influenced the effect of entrepreneurial orientation on entrepreneurial performance. Entrepreneurial orientation motivated enterprises to explore new markets and opportunities by enhancing their innovativeness, risk-taking, and proactiveness. However, the realization of these advantages depended on the support of effective learning mechanisms. The mediating role of entrepreneurial action learning was particularly critical in this process. First, entrepreneurial action learning enabled enterprise to learn from both successes and failures through reflection and learning in practice. This learning was not merely the accumulation of knowledge but also involved managing future uncertainties and optimizing decision-making (Kolb, 2014). Through entrepreneurial action learning, companies continuously adjust and optimize their strategies and operations, thereby improving market responsiveness and resource utilization efficiency (Sarasvathy, 2001). This learning process helped enterprises maintain competitiveness in dynamic environments, enabling them to swiftly capture new opportunities arising from market changes.

Moreover, entrepreneurial action learning helped enterprise reduce risks associated with innovation and risk-taking behaviors. Through continuous feedback and learning, companies could correct mistakes and improve strategies in practice, allowing them to maintain a leading position in a highly competitive market (Covin & Slevin,

1989). It was particularly important in the relationship between entrepreneurial orientation and entrepreneurial performance, as entrepreneurial action learning could transform the potential innovation and risk-taking advantages brought by entrepreneurial orientation into actual performance improvements (Lumpkin & Dess, 1996). Thus, entrepreneurial action learning was not only a reflection of a company's learning and adaptive capabilities but also a crucial means of enhancing entrepreneurial performance. The mediating role of entrepreneurial action learning indicated that the entrepreneurial orientation of SMEs in Sichuan Province had to be combined with continuous learning mechanisms to fully realize its potential in improving entrepreneurial performance (Zahra & George, 2002).

5.2.3 Discuss Question 3

How did entrepreneurial orientation and entrepreneurial action learning causally affect the entrepreneurial performance of SMEs in Sichuan Province under favorable dynamic capability?

For research question 3, Hypotheses 5 and Hypothesis 6 were proposed. Hypothesis 5 aimed to examine the direct relationship between entrepreneurial orientation (EO*DC) and the entrepreneurial performance of SMEs in Sichuan Province. To explore the impact of entrepreneurial orientation on the entrepreneurial performance of SMEs in Sichuan Province under the moderating effect of dynamic capability, this study established Structural Equation Model 2. The results of the path coefficients and p-values indicated that dynamic capability positively moderated the relationship between entrepreneurial orientation and entrepreneurial performance, which aligned with the findings of Robb et al. (2020). This demonstrated that under favorable dynamic capability adjustments, entrepreneurial orientation had a beneficial impact on entrepreneurial performance. It could also be expressed that in certain circumstances, dynamic capability enhanced the relationship between entrepreneurial orientation and entrepreneurial performance (Wei-Loon, 2013), thereby validating H5. H6 aimed to examine the direct relationship between entrepreneurial action learning (EAL*DC) and the entrepreneurial performance of SMEs in Sichuan Province. To explore the impact of entrepreneurial action learning on entrepreneurial performance under the moderating effect of dynamic capability, this study established Structural Equation Model 3. The results of the path

coefficients and p-values indicated that under favorable dynamic capability adjustments, entrepreneurial action learning positively impacted entrepreneurial performance, thus validating Hypothesis 6. The positive moderating effect of dynamic capability had also been validated in related studies (Abou-FoulRuiz-Alba & López-Tenorio, 2023; Pan, 2021). The study by Chien and Tsai (2021) showed that knowledge-based dynamic capability positively affected performance, which was similar to the findings of this study.

As a moderating variable in the conceptual model, dynamic capability was defined as an enterprise's ability to utilize its resources and capabilities to integrate, innovate, and adapt to change (Teece, Pisano & Shuen, 1997). These capabilities mainly included organizational restructuring capability, resource integration capability, and opportunity sensing capability. Amiryany et al. (2012) considered organizational reconfiguration to be one of the most important strategic characteristics of SMEs. Teece (2007) emphasized that resource integration capability enables entrepreneurs to coordinate, allocate, and combine various resources in a dynamic environment to support innovation, achieve strategic goals, and enhance competitiveness. Opportunity sensing capability helps enterprise identify and understand key information from the external environment, such as market changes, technological advancements, and competitor actions (Teece & Pisano, 2003).

In this study, dynamic capability, through their three dimensions—organizational restructuring capability, resource integration capability, and opportunity sensing capability positively moderated the impact of entrepreneurial orientation on the entrepreneurial performance of SMEs in Sichuan Province and the impact of entrepreneurial action learning on the entrepreneurial performance of these SMEs. In particular, the entrepreneurial orientation and entrepreneurial action learning of SMEs in Sichuan Province need the support of dynamic capability to be effectively transformed into actual improvements in entrepreneurial performance. The organizational restructuring capability within dynamic capability enabled enterprises to flexibly adjust their internal structures and processes to respond to changes and challenges in the external environment. This internal adjustment capability ensured that enterprises could quickly adapt to market changes, maintaining organizational flexibility and operational efficiency (TeecePisano & Shuen, 1997). Resource integration capability helped enterprises

optimize resource allocation by fully leveraging the combination of internal resources and external opportunities. This meant that when implementing innovative and risk-taking strategies, enterprises could quickly integrate the necessary resources, reduce resource wastage, and improve input-output efficiency (Eisenhardt & Martin, 2000). This resource integration not only enhanced the enterprise's innovation capability but also strengthened its competitiveness in the market. Opportunity sensing capability enabled enterprises to swiftly identify and seize new opportunities in the market. This capability was particularly critical as it determines whether a firm could enter new markets or develop new products ahead of its competitors. Enterprises with high opportunity sensing capability could anticipate market trends and changes early, take prompt action, and thereby maximize the strategic advantages brought by entrepreneurial orientation (Teece, 2007).

Therefore, in the context of SMEs in Sichuan Province, the synergistic effect of these three dimensions of dynamic capability significantly enhanced the positive impact of entrepreneurial orientation on entrepreneurial performance. Dynamic capability enabled enterprises to more flexibly and efficiently adapt to and leverage market changes when implementing entrepreneurial orientation strategies, leading to higher performance in a competitive environment. This indicated that dynamic capability was the key mechanism by which enterprises translate entrepreneurial orientation into actual performance.

5.3 Contributions of the Study

5.3.1 Theoretical Contributions

In response to the management environment shaped by economic globalization, technological changes, and intense competition, researchers had increasingly focused on the important impact mechanisms of entrepreneurial orientation and entrepreneurial action learning on entrepreneurial performance. While significant progress had been made in the study of entrepreneurial orientation, resulting in numerous research outcomes (Daradkeh & Mansoor, 2023; InceImamoglu & Karakose, 2023; Susanto, Hoque, Shah, Candra, Hashim, & Abdullah, 2023), the consistency between entrepreneurial action and entrepreneurial learning has not been effectively validated, and a relatively complete

theoretical framework has yet to be established. This study constructed a multi-dimensional structure involving entrepreneurial orientation, entrepreneurial action learning, dynamic capability, and entrepreneurial performance. It treated entrepreneurial orientation as a predictor variable for entrepreneurial performance, entrepreneurial performance as a result variable of entrepreneurial orientation, with entrepreneurial action learning as a mediator variable and dynamic capability as a moderating variable. By developing and validating the basic theoretical framework of the mechanisms affecting entrepreneurial performance and management strategies, the theoretical contributions of this study can be explained in the following aspects.

In this study, entrepreneurial orientation and entrepreneurial action learning were considered to have a significant impact on the entrepreneurial performance of SMEs in Sichuan Province. Combining this with resource management theory allowed for a deeper exploration of these relationships. Resource management theory emphasizes that enterprises need effective resource allocation and management to gain a competitive advantage (Barney, 1991; Wernerfelt, 1984). This aligned with the study's hypothesis that entrepreneurial orientation and entrepreneurial action learning could enhance firm performance through optimized resource allocation and management. Firstly, based on resource management theory, the focus was on how to leverage existing resources and capability, highlighting the necessity of considering the combination of resource capability. Resources that might not be inherently rare or valuable on their own, when combined in an enterprise’s strategy or business model, could become rare and more valuable (Miller, 2003). These resources and capability form the foundation for an enterprise’s competitive advantage.

In this study, entrepreneurial orientation could be viewed as a process by which enterprises innovatively allocate resources, guiding entrepreneurs in strategic decisions related to risk sharing, collaborative innovation, dynamic competition, and proactive actions to optimize resource utilization efficiency. Additionally, entrepreneurial action learning facilitates dynamic management and the application of resources through three aspects: exploratory learning, transformative learning, and developmental learning. Exploratory learning helps entrepreneurs identify and acquire new knowledge and skills, thereby uncovering potential market opportunities. Transformative learning focuses on

how to apply new knowledge and skills to actual business processes to enhance operational efficiency and innovation capability. Developmental learning emphasizes the continuous improvement and optimization of business processes in practice, aiming for sustained innovation and performance enhancement.

Finally, Resource-Based View also emphasizes the importance of resource protection to prevent depletion, substitution, or loss of resources (Barney, 1991). In this study, dynamic capability, as a moderating variable, further enhanced the impact of entrepreneurial orientation and entrepreneurial action learning on firm performance by strengthening the enterprise's organizational restructuring capability, resource integration capability, and opportunity sensing capability. Organizational restructuring capability allowed enterprises to flexibly adjust their internal structures and processes according to market changes. Resource integration capability ensured that enterprises efficiently utilize both internal and external resources, while opportunity sensing capability helped enterprises quickly capture market opportunities, thereby maintaining a competitive edge.

In terms of dynamic capability theory, this study explored the impact of entrepreneurial orientation and entrepreneurial action learning on the entrepreneurial performance of SMEs in Sichuan Province from the perspective of dynamic capability. The focus was on how enterprises could enhance their competitive advantage and entrepreneurial performance through organizational restructuring capability, resource integration capability, and opportunity sensing capability.

Organizational restructuring capability refers to an enterprise's ability to flexibly adjust its internal structure and processes in a dynamic environment to adapt to changes in the external market. This capability enables the enterprise to quickly respond to shifts in market demand, optimize resource allocation, and improve operational efficiency. Research showed that enterprises with strong organizational restructuring capability could better leverage the risk-sharing and dynamic competition aspects of entrepreneurial orientation to achieve business innovation and market expansion. Resource integration capability emphasizes effective integration between internal and external resources to maximize resource utilization. This capability allows enterprises to combine dispersed resources and knowledge through collaborative innovation and proactive actions, driving technological, product, and process innovations. According to

dynamic capability theory, resource integration capability is one of the key factors for maintaining a competitive advantage, as it helps enterprises rapidly respond to market changes and secure advantageous positions. Opportunity sensing capability refers to an enterprise's ability to keenly identify and capture market opportunities and convert them into actual business growth. This capability is particularly crucial for enterprises engaged in international entrepreneurship, as opportunities in international markets often come with higher levels of uncertainty and risk. Dynamic capability theory suggests that opportunity sensing capability helps enterprises find new growth points in the market, especially in rapidly changing international environments, enabling timely seizing of opportunities and achieving sustainable development.

5.3.2 Practical Contributions

This study demonstrated the roles or functions of entrepreneurial orientation, entrepreneurial action learning, and dynamic capability in enhancing the entrepreneurial performance of SMEs in Sichuan Province. The successful operation of SMEs in Sichuan could be achieved by developing entrepreneurial orientation characteristics and integrating these with traditional local management practices. By incorporating entrepreneurial orientation, entrepreneurial action learning, and dynamic capability strategies into general and business management, SMEs in Sichuan Province could become more competitive.

The study revealed the relationship between entrepreneurial orientation and entrepreneurial action learning and the entrepreneurial performance of SMEs in Sichuan Province. It indicated that for the development of SMEs in Sichuan, entrepreneurs could manage their businesses by enhancing entrepreneurial orientation and entrepreneurial action learning, which would directly impact the outcomes of entrepreneurial performance in the province. From the literature review, the researcher aimed to study entrepreneurial orientation from four aspects: collaborative innovation, risk-sharing, proactive action, and dynamic competition.

Collaborative innovation refers to the willingness of entrepreneurs to utilize organizational resources to achieve innovation through cooperation and synergy. When companies innovated, they were proactive and willing to take risks, which increased market share and led to a competitive advantage and improved performance (Akomea, Agyapong, Ampah, & Osei, 2023). In this regard, such actions were expected to promote resource

integration, knowledge sharing, and technological advancement, thereby gaining a competitive edge and high returns in the market. Therefore, SMEs in Sichuan Province need to establish collaborative networks both internally and externally, actively seeking opportunities for collaborative innovation with other businesses, research institutions, and government organizations, especially when facing and bearing the risks associated with the innovation process. Regarding risk-sharing, operators of SMEs in Sichuan Province had to possess risk-sharing characteristics, meaning they were willing to share business risks with partners. By sharing risks and benefits with suppliers, customers, and other stakeholders, companies could more effectively distribute risks and enhance market adaptability, thereby achieving sustainable competitive advantage and long-term development. In terms of proactive action, operators of SMEs in Sichuan Province should learn to take the initiative in market competition and actively lead industry changes. By seizing market opportunities, developing innovative products and services, businesses could establish unique competitive advantages, enhance their market position, and ensure they stand out in intense competition, thereby achieving sustained business growth. Dynamic competition enabled SMEs in Sichuan Province to quickly adapt to market changes and adjust strategies flexibly. By continuously monitoring the competitive environment, identifying emerging opportunities and potential threats, entrepreneurs could dynamically allocate resources and optimize operational processes, thus maintaining a competitive edge and achieving sustainable development in an ever-changing market.

Entrepreneurial action learning is a crucial aspect of entrepreneurial activities (Petkova & Springel, 2009) . Learning is essential for the sustainable development of performance (Inthavong, Rehman, Masood, Shaukat, Hnydiuk-Stefan, & Ray, 2023). Successful entrepreneurs not only need to identify valuable opportunities through learning but must also effectively transform these opportunities into competitive advantages for their businesses. In this study, the researcher identified the critical role of EAL in the sustainable development of entrepreneurial performance and categorized EAL into three types: exploratory learning, transformative learning, and developmental learning. Firstly, exploratory learning enabled entrepreneurs to discover and seize new market opportunities by exploring unknown areas, experimenting with new methods, and continuously acquiring new knowledge, thereby enhancing business competitiveness. Exploratory learning helped

businesses maintain innovation and agility in rapidly changing environments, as it involved comprehensive and diverse exploration to acquire the knowledge and skills needed for entrepreneurship, reflecting the potential process of entrepreneurial action learning. Research on transformative learning indicated that businesses effectively translated new knowledge and methods into their existing business processes and product development, thereby improving operational efficiency and market responsiveness. Transformative learning emphasized the practical application of theoretical knowledge to business practices to achieve innovation and growth. For developmental learning, it was required that entrepreneurs build on existing knowledge and experience to further develop new products, services, and business processes, thereby bringing continuous economic benefits to the business. Developmental learning focused on the deep utilization and innovation of existing resources, enabling businesses to continually enhance their core competencies and market position through ongoing learning and development.

Moreover, research indicated that entrepreneurial orientation, mediated by entrepreneurial action learning, could indirectly enhance the entrepreneurial performance of SMEs in Sichuan Province. For SMEs in Sichuan Province, it was essential to comprehensively apply various aspects of entrepreneurial orientation and entrepreneurial action learning. Companies should invest resources in collaborative innovation, explore market opportunities and technological trends through exploratory learning, and establish risk management systems to diversify and control risks through risk-sharing mechanisms. Creating an environment that encourages both experimentation and innovation would foster transformative learning, translating new knowledge and innovative outcomes into practical applications and optimizing business processes. Additionally, entrepreneurs should possess forward-looking vision and actively seek opportunities arising from market changes through proactive actions. By implementing these strategies, SMEs in Sichuan Province could effectively improve entrepreneurial performance, maintain a competitive edge, and achieve long-term development.

Another finding of this study was that the positive relationship between entrepreneurial orientation and entrepreneurial action learning on the entrepreneurial performance of SMEs in Sichuan Province could be influenced by dynamic capability as a moderating variable. Currently, businesses were seeking sustainable and successful

competitive advantages, including improving internal operational efficiency, responding quickly to market changes, and meeting customer needs through innovation. By flexibly adjusting strategies and enhancing organizational dynamic capability, companies could maintain their advantage in a competitive market. Applying dynamic capability theory was also crucial for entrepreneurs. Thus, it was essential to consider factors that increase dynamic capability and enable survival in a constantly changing environment. Organizational restructuring capability required companies to effectively adjust their organizational structure and operational processes based on market changes and internal needs. This capability ensured that companies could rapidly adapt to external changes, optimize resource allocation, and improve operational efficiency, thereby maintaining competitiveness in the market. Resource integration capability refers to a company's ability to integrate and utilize both internal and external resources. By effectively integrating resources, companies could maximize resource efficiency, drive innovation, and business development. Resource integration capability helped businesses maintain flexibility and adaptability in dynamic environments, ensuring they could quickly respond to market demands and challenges.

5.4 Research Limitations and Suggestions for Future Research

This paper examined the interactions between entrepreneurial orientation, entrepreneurial action learning, and entrepreneurial performance among SMEs in Sichuan Province. It investigated the mediating role of entrepreneurial action learning between entrepreneurial orientation and entrepreneurial performance, the moderating effect of dynamic capability on the relationship between entrepreneurial orientation and entrepreneurial performance, and the moderating role of dynamic capability in the relationship between entrepreneurial action learning and entrepreneurial performance. The research utilized a survey method to obtain measurements for entrepreneurial orientation, entrepreneurial action learning, dynamic capability, and entrepreneurial performance. Based on data analysis, the study tested the relevant research hypotheses. However, it is necessary to point out certain limitations of this study that could be addressed by future research. The study requires improvements in the following areas.

(1) The Scope of the Sample Required Further Improvement.

Firstly, data collection for this study was conducted via a survey, with respondents drawn from various types of SMEs in Sichuan Province. The sample represented five different industries: wholesale and retail, rental and business services, agriculture, forestry, animal husbandry, fishery, public administration, social security, social organizations, and manufacturing. However, the survey was not proportionally distributed according to specific industries, and the number of responses from the rental and business services sectors was relatively low. This might be due to these industries often dealing with trade secrets and sensitive information, making companies cautious about external surveys and concerned about disclosing business secrets or having reservations about external inquiries. To address this issue in future data collection, diverse survey methods such as face-to-face interviews and telephone surveys could be employed to better accommodate different types of businesses and respondents. Additionally, due to constraints in time and space, the study did not cover other provinces and industries, which may result in a lack of consideration for regional and industry-specific differences. Thus, the external validity of the findings needs further verification.

(2) There was Still Room for Improvement in Some of the Scales used

Firstly, the measurement tools for entrepreneurial orientation, dynamic capability, and entrepreneurial performance used in this study were well-developed and based on the work of numerous scholars, making them relatively mature and comprehensive. However, empirical research on entrepreneurial action learning was relatively limited, particularly in the field of entrepreneurship, and there was a scarcity of research on relevant measurement tools for entrepreneurial action learning. Therefore, there was a need to continually supplement and refine measurement tools for entrepreneurial action learning in practice. Additionally, this study used subjective scoring methods, which might introduce bias in respondents' understanding and potentially affect the reliability and validity of the scales. Future research should design more objective and credible evaluation indicators to ensure that research conclusions are more scientifically robust.

List of Bibliography

Abou-Foul M, Ruiz-Alba J L, & López-Tenorio P J. (2023). The impact of artificial intelligence capabilities on servitization: The moderating role of absorptive capacity-A dynamic capabilities perspective. ***Journal of Business Research, 157***, 113609, https://doi.org/10.1016/j.jbusres.2022.113609

Agle B R, Nagarajan N J, Sonnenfeld J A, & Srinivasan D. (2006). Does CEO charisma matter? An empirical analysis of the relationships among organizational performance, environmental uncertainty, and top management team perceptions of CEO charisma. ***Academy of management Journal, 49***(1), 161-174.

Agranoff R, & McGuire M. (1998). The intergovernmental context of local economic development. ***State Local Government Review, 30***(3), 150-164.

Ahuja G L C M. (2001). Entrepreneurship in the large corporation: a longitudinal study of how established firms create breakthrough inventions. ***Strategic Management Journal, 22***(6-7), 521-543.

Akomea S Y, Agyapong A, Ampah G, & Osei H V. (2023). Entrepreneurial orientation, sustainability practices and performance of small and medium enterprises: evidence from an emerging economy. ***International Journal of Productivity Performance Management, 72***(9), 2629-2653.

Al Mamun A, Kumar N, Ibrahim M D, & Bin M N H. (2017). Validating the measurement of entrepreneurial orientation. ***Economics Sociology, 10***(4), 51-66.

Alsuwaidi A K M S, Alshami S A, & Akmal S. (2021). The Impact of Entrepreneurship Towards Innovation in Airport Industry: The Double Mediation Framework of Strategic Alignment and Learning Orientation. ***Academy of Strategic Management Journal, 20***, 1-19.

Amara N, & Landry R. (2005). Sources of information as determinants of novelty of innovation in manufacturing firms: evidence from the 1999 statistics Canada innovation survey. ***Technovation, 25***(3), 245-259.

Ambrosini V, & Bowman C. (2009). What are dynamic capabilities and are they a useful construct in strategic management. ***International journal of management reviews, 11***(1), 29-49.

Amiryany N, Huysman M, de Man A P, & Cloodt M. (2012). Acquisition reconfiguration capability. ***European Journal of Innovation Management, 15***(2), 177-191.

Andrews G, & Ingham R J. (1972). Stuttering: An evaluation of follow-up procedures for syllable-timed speech/token system therapy. ***Journal of Management, 5***(4), 307-319.

Antoncic B, & Hisrich R D. (2001). An integrative conceptual model. ***Journal of Euromarketing, 9***(2), 17-35.

Antonites A J. (2005). ***An action learning approach to entrepreneurial creativity, innovation and opportunity finding***. University of Pretoria,

Armstrong G, Adam S, Denize S, & Kotler P. (2014). ***Principles of marketing*: Pearson Australia**.

Armstrong M, & Taylor S. (2020). ***Armstrong's handbook of human resource management practice***: Kogan Page Publishers.

Arun K, & Yildirim Ozmutlu S. (2022). Narratives of environmental munificence of 3PL firms on the relationship between dynamic capabilities, strategic management and organizational performance. ***Journal of Strategy Management, 15***(1), 96-118.

Avlonitis G J, & Salavou H E. (2007). Entrepreneurial orientation of SMEs, product innovativeness, and performance. ***Entrepreneurship theory practice, 60***(5), 566-575.

Bake, & Sinkula. (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small businesses. ***Journal of small business management, 47***(4), 443-464.

Baker M. (2009). Capital market-driven corporate finance. ***Annu. Rev. Financ. Econ., 1***(1), 181-205.

Baker W, & Sinkula J. (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small businesses. ***Journal of small business management, 47***(4), 443-464.

Baker W E, & Sinkula J M. (2002). Market orientation, learning orientation and product innovation: delving into the organization's black box. ***Journal of market-focused management, 5***, 5-23.

Bandura. (1989). Human agency in social cognitive theory. **American psychologist, 44**(9), 1175. https://psycnet.apa.org/doi/10.1037/0003-066X.44.9.1175

Bandura. (1977). Self-efficacy: toward a unifying theory of behavioral change. ***Psychological Review, 84***(2), 191. https://psycnet.apa.org/doi/10.1037/0033-295X.84.2.191

Barney. (1991). Firm resources and sustained competitive advantage. ***Journal of Management, 17***(1), 99-120. https://doi.org/10.1177/014920639101700108

Barney. (1986). Organizational culture: can it be a source of sustained competitive advantage. ***Academy of Management Review, 11***(3), 656-665. https://doi.org/10.5465/amr.1986.4306261

Baron R A, & Ensley M D. (2006). Opportunity recognition as the detection of meaningful patterns: Evidence from comparisons of novice and experienced entrepreneurs. ***Management science, 52***(9), 1331-1344.

Barreto I. (2010). Dynamic capabilities: A review of past research and an agenda for the future. ***Journal of Management, 36***(1), 256-280.

Beattie V, & Smith S J. (2010). Human capital, value creation and disclosure. ***Journal of Human Resource Costing Accounting, 14***(4), 262-285. https://doi.org/10.1108/14013381011105957

Begley T M, & Boyd D P. (1987). Psychological characteristics associated with performence in entrepreneurial firms and smaller businesses. ***Journal of Business Venturing, 2***(1), 79-93. https://doi.org/10.1016/0883-9026(87)90020-6

Bennis W G, & Goldsmith J. (2010). ***Learning to lead: A workbook on becoming a leader***: Basic Books.

Bentler P M, & Chou C-P. (1987). Practical issues in structural modeling. ***Sociological methods research, 16***(1), 78-117.

Berger A N, & Udell G F. (2006). A more complete conceptual framework for SME finance. ***Journal of Banking Finance, 30***(11), 2945-2966.

Berwer K, Rozum B, & Shpode F. (2004). ***Developing a database for e-journals that improves both access and management.*** Paper presented at the E-serials collection management: Transitions, trends, and technicalities.

Biggadike R. (1989). ***The risky business of diversification***: Springer.

Bitzenis A, & Nito E. (2005). Obstacles to entrepreneurship in a transition business environment: the case of Albania. ***Journal of small business enterprise development, 12***(4), 564-578. https://doi.org/10.1108/14626000510628234

Bonfanti A, Castellani P, Giaretta E, & Brunetti F. (2019). Developing entrepreneurial learning triggered by factory tours. ***The learning organization, 26***(6), 574-587. https://doi.org/10.1108/TLO-08-2018-0133

Borch O J, & Madsen E L. (2007). Dynamic capabilities facilitating innovative strategies in SMEs. ***International Journal of Technoentrepreneurship, 1***(1), 109-125.

Burgers H, Jansen, J. J., van den Bosch, F. A., & Volberda, H. W. (2017). Action learning in emerging markets: Exploring the role of experiential learning approaches in enhancing entrepreneurial capabilities. ***Journal of Business Venturing, 32***(3), 260-279.

Busenitz L W, West III G P, Shepherd D, Nelson T, Chandler G N, & Zacharakis A. (2003). Entrepreneurship research in emergence: Past trends and future directions. ***Journal of Management, 29***(3), 285-308. https://doi.org/10.1016/S0149-2063_03_00013-8

Cai L, Dysprosium Z, & Zhu X. (2005). Study on the characteristics of female entrepreneurship. ***Science and Science and Technology Management, 9***, 43-47.

Campbell A. (1999). Patching: Restitching business portfolios in dynamic markets. ***Harvard Business Review, 77***(5), 172-172.

Campbell J P, McCloy R A, Oppler S H, & Sager C E. (1993). A theory of performance. ***Personnel selection in organizations, 3570***, 35-70.

Carayannis E G, & Campbell D F. (2010). Triple Helix, Quadruple Helix and Quintuple Helix and how do knowledge, innovation and the environment relate to each other?: a proposed framework for a trans-disciplinary analysis of sustainable development and social ecology. ***International Journal of Social Ecology Sustainable Development, 1***(1), 41-69.

Carpenter M A, & Westphal J D. (2001). The strategic context of external network ties: Examining the impact of director appointments on board involvement in strategic decision making. *A**cademy of management Journal, 44***(4), 639-660. https://doi.org/10.5465/3069408

Castrogiovanni G J. (1991). Environmental munihcence; a theoretical assessment. ***Academy of Management Review, 16***(3), 542-565. https://doi.org/10.5465/amr.1991.4279475

Chakravarthy B S. (1982). Adaptation: A promising metaphor for strategic management. ***Academy of Management Review, 7***(1), 35-44. https://doi.org/10.5465/amr.1982.4285438

Chandler A D. (1962). Gantt on Management: Guidelines for Today's Executives. Edited by Alex W. Rathe. New York, American Management Association and the American Association of Mechanical Engineers. ***Business History Review, 36***(4), 479-480.

Chen, & Liu Y. (2019). Research on the development of entrepreneurship education in universities under the background of innovation and entrepreneurship education in Sichuan Province. ***Vocational and technical education in China, 30***, 100-102.

Chen J, & Yang Y. (2012). Theoretical basis and connotation of collaborative innovation. ***Scientific research, 30***(2), 161-164

Chen J, Zhu Z, & Zhang Y. (2017). A study of factors influencing disruptive innovation in Chinese SMEs. ***Asian Journal of Technology Innovation, 25***(1), 140-157

Chen M, & Hambrick D C. (1995). Speed, stealth, and selective attack: How small firms differ from large firms in competitive behavior. ***Academy of management Journal, 38***(2), 453-482.

Chen W, & Li X. (2010). Entrepreneurial Learning in Chinese Firms: Dimensions and Tests. ***Economic Management, 8***, 71-80.

Chen Y, & Pan J. (2019). Do entrepreneurs' developmental job challenges enhance venture performance in emerging industries? A mediated moderation model of entrepreneurial action learning and entrepreneurial experience. ***Frontiers in Psychology, 10***, 1371.

Chien S-Y, & Tsai C-H. (2021). Entrepreneurial orientation, learning, and store performance of restaurant: The role of knowledge-based dynamic capabilities. ***Journal of Hospitality Tourism Management, 46***, 384-392.

Cho Y H, & Lee J-H. (2018). Entrepreneurial orientation, entrepreneurial education and performance. ***Asia Pacific Journal of Innovation Entrepreneurship 12***(2), 124-134.

Chung L H, & Gibbons P T. (1997). Corporate entrepreneurship: The roles of ideology and social capital. ***Group Organization Management, 22***(1), 10-30.

Cope J. (2011). Entrepreneurial learning from failure: An interpretative phenomenological analysis. ***Journal of Business Venturing, 26***(6), 604-623.

Cope J. (2005). Toward a dynamic learning perspective of entrepreneurship. ***Entrepreneurship theory practice, 29***(4), 373-397.

Covin, & Wales. (2012). The measurement of entrepreneurial orientation. ***Entrepreneurship Theory and Practice, 36***(4), 677-702.

Covin J G, & Miles M P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. ***Entrepreneurship theory practice, 23***(3), 47-63.

Covin J G, & Slevin D P. (1991). A conceptual model of entrepreneurship as firm behavior. ***Entrepreneurship Theory and Practice, 16***(1), 7-26. https://doi.org/10.1177/104225879101600102

Covin J G, & Slevin D P. (1989). Strategic management of small firms in hostile and benign environments. ***Strategic Management Journal, 10***(1), 75-87. https://doi.org/10.1002/smj.4250100107

Covin J G, & Wales W J. (2012). The measurement of entrepreneurial orientation. ***Entrepreneurship theory practice, 36***(4), 677-702.

Creswell J W. (2014). ***A concise introduction to mixed methods research***: SAGE publications.

Creswell J W, & Poth C N. (2016). ***Qualitative inquiry and research design: Choosing among five approaches***: Sage publications.

Dai Y, Roundy P T, Chok J I, Ding F, & Byun G. (2016). 'Who knows what?'In new venture teams: Transactive memory systems as a micro-foundation of entrepreneurial orientation. ***Journal of Management Studies, 53***(8), 1320-1347.

Daradkeh M, & Mansoor W. (2023). The impact of network orientation and entrepreneurial orientation on startup innovation and performance in emerging economies: The moderating role of strategic flexibility. ***Journal of Open Innovation: Technology, Market, Complexity, 9***(1), 100004. https://doi.org/10.1016/j.joitmc.2023.02.001

Davis D, Morris M, & Allen J. (1991). Perceived environmental turbulence and its effect on selected entrepreneurship, marketing, and organizational characteristics in industrial firms. ***Journal of the academy of marketing science, 19***, 43-51. https://doi.org/10.1007/BF02723423

DeHoog R H. (1990). Competition, negotiation, or cooperation: Three models for service contracting. ***Administration society, 22***(3), 317-340.

Deng S, & Dart J. (1994). Measuring market orientation: a multi-factor, multi-item approach. ***Journal of marketing management, 10***(8), 725-742. https://doi.org/10.1080/0267257X.1994.9964318

Denison D R, & Mishra A K. (1995). Toward a theory of organizational culture and effectiveness. ***Organization science, 6***(2), 204-223. https://doi.org/10.1287/orsc.6.2.204

Deshpandé R, Grinstein A, Kim S-H, & Ofek E. (2013). Achievement motivation, strategic orientations and business performance in entrepreneurial firms: How different are Japanese and American founders? ***International marketing review, 30***(3), 231-252. https://doi.org/10.1108/02651331311321981

Dess G G, & Beard D W. (1984). Dimensions of organizational task environments. ***Administrative Science Quarterly***, 52-73. https://doi.org/10.2307/2393080

Dess G G, & Lumpkin G T. (2005). The role of entrepreneurial orientation in stimulating effective corporate entrepreneurship. ***Academy of Management Perspectives, 19***(1), 147-156.

Diamantopoulos A, & Siguaw J A. (2000). ***Introducing LISREL: A guide for the uninitiated***: Sage.

Dickfos J, Cameron C, & Hodgson C. (2014). Blended learning: making an impact on assessment and self-reflection in accounting education. ***Education+ training, 56***(2/3), 190-207. https://doi.org/10.1108/ET-09-2012-0087

Diermeier D, & Stevenson R T. (1999). Cabinet survival and competing risks. ***American Journal of Political Science***, 1051-1068.

DOC88.com. (2021). Target consistency index.

Donahue M. (2009). Athletic trainers' perceptions of the importance, preparation and time spent in the athletic training content areas. *Athletic* ***Training Education Journal, 4***(3), 88-97.

Drucker P F. (2002). The discipline of innovation. ***Harvard Business Review, 80***(8), 95-102.

Drucker P F. (1985). Entrepreneurial strategies. *California Management Review, 27*(2).

Eisenhardt K M. (1989). Making fast strategic decisions in high-velocity environments. ***Academy of management Journal, 32***(3), 543-576.

Eisenhardt K M, & Martin J A. (2000). Dynamic capabilities: what are they. ***Strategic Management Journal, 21***(10-11), 1105-1121.

Entrialgo M, Fernández E, & Vázquez C J. (2000). Characteristics of managers as determinants of entrepreneurial orientation: some Spanish evidence. ***Enterprise innovation management studies, 1***(2), 187-205.

Fan L. (2021). ***A study of the relationship between entrepreneurial orientation, dynamic capabilities and firm performance.*** Xiamen University,

Feng, Patel P C, & Xiang K. (2020). The well-trodden path: Complementing market and entrepreneurial orientation with a strategic emphasis to influence IPO survival in the United States. ***Journal of Business Research, 110***, 370-385.

Feng J. (2012). ***A study of the role of environmental volatility and dynamic capabilities in influencing discontinuous innovation in firms***. Zhejiang University

Feng L. (2022). ***A Study of the Effect of Informal Entrepreneurial Orientation on Entrepreneurial Performance***. Dalian University of Technology

Fernhaber S A, Mcdougall-Covin P P, & Shepherd D A. (2009). International entrepreneurship: leveraging internal and external knowledge sources. ***Strategic Entrepreneurship Journal, 3***(4), 297-320. https://doi.org/10.1002/sej.76

Fiaz M. (2013). An empirical study of university–industry R&D collaboration in China: Implications for technology in society. ***Technology in Society, 35***(3), 191-202.

Fornell C, & Larcker D F. (1981). ***Structural equation models with unobservable variables and measurement error***: Algebra and statistics. Publications Sage.

Frese M, & Gielnik M M. (2014). The psychology of entrepreneurship. ***Annu. Rev. Organ. Psychol. Organ. Behav., 1***(1), 413-438.

Gai M, Chen Z, & Wang L. (2022). Research on Strategic Change of IT Enterprises under Entrepreneurial Orientation--Taking Wave Group as an Example. ***Management Journal, 19***(11), 1598-1607.

Gartner W B. (1985). A conceptual framework for describing the phenomenon of new venture creation. ***Academy of Management Review, 10***(4), 696-706.

Geng X. (2008). ***A study on customer engagement measurement dimensions, drivers and their influence mechanism on customer satisfaction***. (Doctoral dissertation), Zhejiang University,

Gibson H J, Walker M, Thapa B, Kaplanidou K, Geldenhuys S, & Coetzee W. (2014). Psychic income and social capital among host nation residents: A pre–post analysis of the 2010 FIFA World Cup in South Africa. ***Tourism Management, 44***, 113-122. https://doi.org/10.1016/j.tourman.2013.12.013

Gölgeci I, Assadinia S, Kuivalainen O, & Larimo J. (2019). Emerging-market firms' dynamic capabilities and international performance: The moderating role of institutional development and distance. ***International Business Review, 28***(6), 101593. https://doi.org/10.1016/j.ibusrev.2019.101593

Gomes G, Seman L O, Berndt A C, & Bogoni N. (2022). The role of entrepreneurial orientation, organizational learning capability and service innovation in organizational performance. ***Revista de Gestão, 29***(1), 39-54.

Greene P G, Brush C G, & Hart M M. (1999). The corporate venture champion: A resource-based approach to role and process. ***Entrepreneurship theory practice, 23***(3), 103-122.

Gruber M, MacMillan I C, & Thompson J D. (2012). From minds to markets: How human capital endowments shape market opportunity identification of technology start-ups. ***Journal of Management, 38***(5), 1421-1449.

Gruen T W, Osmonbekov T, & Czaplewski A J. (2007). Customer-to-customer exchange: Its MOA antecedents and its impact on value creation and loyalty. ***Journal of the academy of marketing science, 35***, 537-549.

Gruen T W, Osmonbekov T, & Czaplewski A J. (2006). eWOM: The impact of customer-to-customer online know-how exchange on customer value and loyalty. ***Journal of Business Research, 59***(4), 449-456.

Hague P N, Hague N, & Morgan C-A. (2004). ***Market research in practice: a guide to the basics***: Kogan Page Publishers.

Hair J, Black W, Babin B, & Anderson R. (2010). ***Multivariate data analysis Upper Saddle River***: Pearson Prentice Hall.

Hair J F. (2009). ***Multivariate data analysis***: Prentice Hall.

Hall B H, & Lerner J. (2009). The financing of R&D and Innovation. Handbook of the Economics of Innovation. ***Elsevier-North Holland, 12***, 2016.

Hargrove R A, & Senge P M. (1998). ***Mastering the art of creative collaboration***: McGraw-Hill New York.

Hayes A F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. ***Communication monographs, 76***(4), 408-420.

Hayton J C. (2002). ***The effect of intellectual capital on entrepreneurial orientation in high-technology new ventures***: Georgia State University.

He X. (2023). Research on the Influence of Entrepreneurial Learning Perspective on Students' Entrepreneurial Willingness--Taking Hubei Higher Vocational Colleges as an Example. ***Journal of Ezhou University, 30***(03), 80-82

Helfat C E, & Peteraf M A. (2003). The dynamic resource-based view: Capability lifecycles. ***Strategic Management Journal, 24***(10), 997-1010.

Henderson R, & Cockburn I. (1994). Measuring competence? Exploring firm effects in pharmaceutical research. ***Strategic Management Journal, 15***(S1), 63-84.

Henson R K. (2001). Understanding internal consistency reliability estimates: A conceptual primer on coefficient alpha. ***Measurement evaluation in counseling development, 34***(3), 177-189. https://doi.org/10.1080/07481756.2002.12069034

Hermano V, Martin-Cruz N, & Pajares J. (2022). The effect of project management dynamic capabilities on firm performance. ***Baltic Journal of Management, 17***(2), 266-284. https://doi.org/10.1108/BJM-06-2021-0218

Hitt M A, Ireland R D, & Sirmon D G. (2001). Strategic entrepreneurship: Creating value for individuals, organizations, and society. ***Academy of Management Perspectives, 25***(2), 57-75.

Hitt M A, Ireland R D, Sirmon D G, & Trahms C A. (2011). Strategic entrepreneurship: creating value for individuals, organizations, and society. ***Academy of Management Perspectives, 25***(2), 57-75.

Hossain M U, & Al Asheq A. (2019). The role of entrepreneurial orientation to SME performance in Bangladesh. ***International Journal of Entrepreneurship, 23***(1), 1-6.

Huang R, & Sarigöllü E. (2012). How brand awareness relates to market outcome, brand equity, and the marketing mix. ***Journal of Business Research, 65***(1), 92-99

Huang S, Fu J, & Lin X. (2022). How Network Relationships Affect SME Internationalization Performance - Based on the Mediating Role of International Entrepreneurial Orientation and the Moderating Role of International Opportunity Identification. ***Journal of South China University of Technology (Social Science Edition), 24***(04), 29-43

Huang Y. (2019). ***A Study of the Relationship between Dual Market Orientation, Entrepreneurial Action Learning and New Venture Growth***. (Doctor), Jilin University, CNKI.

Hughes M, & Morgan R E. (2007). Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. ***Industrial marketing management, 36***(5), 651-661.

Hungund S, & Mani V. (2019). Benchmarking of factors influencing adoption of innovation in software product SMEs: an empirical evidence from India. *Benchmarking: **An International Journal, 26***(5), 1451-1468

Ibidunni A S, Atolagbe T, Obi J, Olokundun M, Oke O, Amaihian A, Borishade T, & Obaoye D. (2018). Moderating effect of entrepreneurial orientation on entrepreneurial competencies and performance of agrobased SMEs. ***International Journal of Entrepreneurship, 22***(1), 1-9.

Igwe P A, Amaugo A N, Ogundana O M, Egere O M, & Anigbo J A. (2019). Factors affecting the investment climate, SMEs productivity and entrepreneurship in Nigeria. ***European Journal of Sustainable Development, 7***(1), 182-200

Ince H, Imamoglu S Z, & Karakose M A. (2023). Entrepreneurial orientation, social capital, and firm performance: The mediating role of innovation performance. ***The International Journal of Entrepreneurship Innovation, 24***(1), 32-43. https://doi.org/10.1177/14657503211055297

Ireland R D, Hitt M A, & Sirmon D G. (2003). A model of strategic entrepreneurship: The construct and its dimensions. ***Journal of Management, 29***(6), 963-989.

Iyiola K, Alzubi A, & Dappa K. (2023). The influence of learning orientation on entrepreneurial performance: The role of business model innovation and risk-taking propensity. ***Journal of Open Innovation: Technology, Market, Complexity, 9***(3), 100133. https://doi.org/10.1016/j.joitmc.2023.100133

Jambulingam T, Kathuria R, & Doucette W R. (2005). Entrepreneurial orientation as a basis for classification within a service industry: the case of retail pharmacy industry. ***Journal of operations management, 23***(1), 23-42. https://doi.org/10.1016/j.jom.2004.09.003

Jantunen A, Tarkiainen A, Chari S, & Oghazi P. (2018). Dynamic capabilities, operational changes, and performance outcomes in the media industry. ***Journal of Business Research, 89***, 251-257.

Jaworski B J, & Kohli A K. (1993). Market orientation: antecedents and consequences. ***Journal of marketing, 57***(3), 53-70. https://doi.org/10.1177/002224299305700304

Johnson M D, Morgeson F P, Ilgen D R, Meyer C J, & Lloyd J W. (2006). Multiple professional identities: examining differences in identification across work-related targets. ***Journal of Applied Psychology, 91***(2), 498.

Kahn M J. (1996). Five years gone: A case study of education policy implementation in the transition to democracy in South Africa. ***International Journal of Educational Development, 16***(3), 281-289.

Kapferer, & Jean-Noël. (2012). ***The new strategic brand management: Advanced insights and strategic thinking***: Kogan page publishers.

Kathleen M E. (1989). Making fast strategic decisions in high-velocity environments. ***Academy of management Journal, 32***(3), 543-576.

KB N. (1986). Antecedents of cerebral palsy, Multivariate analysis of risk. *New Engl J* ***Med, 315***, 81-86.

Keller K L, Parameswaran M, & Jacob I. (2011). ***Strategic brand management: Building, measuring, and managing brand equity***: Pearson Education India.

Kerlinger F N, Lee H B, & Bhanthumnavin D. (2000). Foundations of behavioral research: The most sustainable popular textbook by Kerlinger & Lee (2000). ***Journal of Social Development, 13***, 131-144.

Kharabsheh R, Ensour W, & Bogolybov P. (2017). Learning orientation, market orientation and organizational performance: The mediating effect of absorptive capacity. ***Business Economic Research, 7***(1), 114-127. https://doi.org/10.5296/ber.v7i1.10294

Kline R B. (2023). ***Principles and practice of structural equation modeling***: Guilford publications.

Knight F H. (1921). ***Risk, uncertainty and profit (Vol. 31)***: Houghton Mifflin.

Knight K E. (1967). A descriptive model of the intra-firm innovation process. ***The journal of business, 40***(4), 478-496.

Kolb D A. (2014). ***Experiential learning: Experience as the source of learning and development***: FT press.

Konlechner S, Müller B, & Güttel W H. (2018). A dynamic capabilities perspective on managing technological change: A review, framework and research agenda. ***International Journal of Technology Management, 76***(3-4), 188-213.

Kraus S, Rigtering, J. C., Hughes, M., & Hosman, V. (2015). Entrepreneurial orientation and the business performance of SMEs: A quantitative study from the Netherlands. ***Review of Managerial Science, 9***(2), 225-255.

Kreiser P M, Marino L D, Dickson P, & Weaver K M. (2010). Cultural influences on entrepreneurial orientation: The impact of national culture on risk taking and proactiveness in SMEs. ***Entrepreneurship theory practice, 34***(5), 959-984.

Kreiser P M, Marino L D, Kuratko D F, & Weaver K M. (2013). Disaggregating entrepreneurial orientation: the non-linear impact of innovativeness, proactiveness and risk-taking on SME performance. ***Proactiveness, 40***, 273-291.

Kuratko D F, Ireland R D, & Hornsby J S. (2001). Improving firm performance through entrepreneurial actions: Acordia's corporate entrepreneurship strategy. ***Academy of Management Perspectives, 15***(4), 60-71.

Lan F, Zhang Z, & Miao J. (2023). The relationship between entrepreneurial orientation and firm performance in a multidimensional perspective: a meta-analysis. ***Innovation and entrepreneurship education, 14***(02), 10-20.

Lee W-b. (2012). ***China's Industrial Policy: Focusing on the< 12.5 Plan>***. Paper presented at the Computer Science and Convergence: CSA 2011 & WCC 2011 Proceedings.

Lévesque M, Stephan, U., & Zhou, C. (2013). Entrepreneurial actions and optimistic overconfidence: The role of motivated reasoning in new product introductions. ***Journal of Business Venturing, 28***(2), 291-309.

Li H, Zhu J, & Li X. (2018). A study on the effect of entrepreneurial learning on college students' entrepreneurial intentions - based on the mediating role of entrepreneurial self-efficacy. ***Modern Management Science, 300***(3), 97-99

Li M. (2022). A Study on Entrepreneurial Behavior of College Students Based on Entrepreneurial Learning Perspective. ***college education, 145***(7), 223-225

Li X, Qiang Q, Huang L, & Huang C. (2022). How knowledge sharing affects business model innovation: an empirical study from the perspective of ambidextrous organizational learning. ***Sustainability, 14***(10), 6157.

Liden R C, Stilwell D, & Ferris G R. (1996). The effects of supervisor and subordinate age on objective performance and subjective performance ratings. ***Human Relations, 49***(3), 327-347.

Lieberman M B, & Montgomery D B. (1988). First-mover advantages. ***Strategic Management Journal, 9***(S1), 41-58.

Lin H. (2021). ***China SME Development Report 2020***. University of International Business and Economics Press.

Ling Y, Simsek Z, Lubatkin M H, & Veiga J F. (2008). Transformational leadership's role in promoting corporate entrepreneurship: Examining the CEO-TMT interface. ***Academy of management Journal, 51***(3), 557-576. https://doi.org/10.5465/amj.2008.32626023

Liu Hongyan C L. (2018). Research on evaluation and policy optimization of entrepreneurship environment of small and medium-sized enterprises in Sichuan Province. ***business economics and management, 10***, 95-103.

Liu Q. (2022). ***The Impact of Entrepreneurial Capability on Entrepreneurial Performance in Technology-based Startups***. Dalian University of Technology

Liu X, Yuan Y, Sun R, Zhao C, & Zhao D. (2023). Influence of entrepreneurial team knowledge conflict on ambidextrous entrepreneurial learning a dual-path perspective of entrepreneurial resilience and fear of failure. ***Journal of Innovation Knowledge, 8***(3), 100389.

Lu S, Shan B, & Fei Y. (2022). Exploring an inverted U-shaped relationship between entrepreneurial experience and Chinese new venture performance: the moderating role of environmental uncertainty. ***Asia Pacific Business Review, 28***(4), 518-535.

Lumpkin, & Dess. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. ***Academy of Management Review, 21***(1), 135-172.

Lumpkin G, & Dess G G. (1995). Simplicity as a strategy-making process: The effects of stage of organizational development and environment on performance. ***Academy of management Journal, 38***(5), 1386-1407.

Lussier R N, & Pfeifer S. (2001). A crossnational prediction model for business success. ***Academy of Management Review, 39***(3), 228-239. https://doi.org/10.1111/0447-2778.00021

Ma H. (2008). ***A study of the impact of entrepreneurial environment, resource integration capabilities and processes on the performance of start-ups***. Jilin University,

Ma H, & Tan J. (2006). Key components and implications of entrepreneurship: A 4-P framework. ***Journal of Business Venturing, 21***(5), 704-725.

Ma m. (2014). ***An Empirical Study on the Relationship between Leadership Style, Entrepreneurial Orientation and Entrepreneurial Performance***. Jilin University

March J G. (1991). Exploration and exploitation in organizational learning. ***Organization science, 2***(1), 71-87.

Marei, Abou-Moghli, Shehadeh, Salhab, & Othman. (2023). Entrepreneurial competence and information technology capability as indicators of business success. ***Uncertain Supply Chain Management, 11***(1), 339-350.

Marques C S, Marques C P, Nogueira F, Gerry C, & Andrade S. (2015). Facets and outcomes of healthcare service innovation: a study of catholic service providers in Northern Portugal. ***International Journal of Innovation Learning, 18***(1), 23-44.

Martinette L, Obenchain-Leeson A, Gomez G, & Webb J. (2014). Relationship between learning orientation and business performance and the moderating effect of competitive advantage: An accounting services firms perspective. ***International Business Economics Research Journal, 13***(4), 779-792.

Maslow A H. (1943). A theory of human motivation. ***Psychological Review, 50***(4), 370-396.

McClelland D C. (1961). ***The achieving society***: Van Nostrand.

Meekaewkunchorn N, Szczepańska-Woszczyna K, Muangmee C, Kassakorn N, & Khalid B. (2021). Entrepreneurial orientation and SME performance: The mediating role of learning orientation. ***Economics Sociology, 14***(2), 294-312.

Miller. (1983). The correlates of entrepreneurship in three types of firms. ***Management science, 29***(7), 770-781. https://doi.org/10.1287/mnsc.29.7.770

Miller D. (2003). An asymmetry-based view of advantage: towards an attainable sustainability. ***Strategic Management Journal, 24***(10), 961-976.

Miller D. (1983). The correlates of entrepreneurship in three types of firms. ***Management science, 29***(7), 770-791.

Miller D, & Friesen P H. (1983). Strategy-making and environment: the third link. ***Strategic Management Journal, 4***(3), 221-235.

Minniti M, & Bygrave W. (2001). A dynamic model of entrepreneurial learning. ***Entrepreneurship theory practice, 25***(3), 5-16.

Mitchell R K, Busenitz L, Lant T, McDougall P P, Morse E A, & Smith J B. (2002). Toward a theory of entrepreneurial cognition: Rethinking the people side of entrepreneurship research. ***Entrepreneurship theory practice, 27***(2), 93-104.

Morris M H, & Sexton D L. (1996). The concept of entrepreneurial intensity: Implications for company performance. ***Journal of Business Research, 36***(1), 5-13. https://doi.org/10.1016/0148-2963(95)00158-1

Murnieks C Y, Mosakowski, E., & Cardon, M. S. (2014). Pathways of passion: Identity centrality, passion, and behavior among entrepreneurs. ***Journal of Management, 40***(6), 1583-1606.

Murphy G B, Trailer J W, & Hill R C. (1996). Measuring performance in entrepreneurship research. ***Journal of Business Research, 36***(1), 15-23

Najib M, Dewi F R, & Widyastuti H. (2014). Collaborative networks as a source of innovation and sustainable competitiveness for small and medium food processing enterprises in Indonesia. ***International Journal of Business Management, 9***(9), 147-160.

Nedzinskas Š, Pundzienė A, Buožiūtė-Rafanavičienė S, & Pilkienė M. (2013). The impact of dynamic capabilities on SME performance in a volatile environment as moderated by organizational inertia. ***Baltic Journal of Management, 8***(4), 376-396.

Nonaka I, Toyama R, & Nagata A. (2000). A firm as a knowledge-creating entity: a new perspective on the theory of the firm. ***Industrial corporate change, 9***(1), 1-20. https://doi.org/10.1093/icc/9.1.1

Nunnally J C. (1967). Assessment of reliability. ***Psychometric theory***, 206-235.

O'reilly Iii C A, & Tushman M L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. ***Research in organizational behavior, 28***, 185-206.

Okamuro H, Kato M, & Honjo Y. (2011). Determinants of R&D cooperation in Japanese start-ups. ***Research Policy, 40***(5), 728-738.

Osterwalder A, Pigneur Y, & Tucci C. (2005). Clarifying business models: Origins, present, and future of the concept. ***Communications of the Association for Information Systems, 16***(1), 1-25.

Oviatt, & McDougall. (1994). Toward a theory of international new ventures. ***Journal of International Business Studies, 25***(1), 45-64.

Oviatt B M, & McDougall P P. (2018). Toward a theory of international new ventures. ***International Entrepreneurship: The Pursuit of Opportunities across National Borders***, 31-57.

Padmore T, & Gibson H. (1998). Modelling systems of innovation:: II. A framework for industrial cluster analysis in regions. ***Research Policy, 26***(6), 625-641.

Palmer D L. (1973). Evaluation of Automatic Transmissions for Use in Military Wheeled Vehicles (Decision Risk Analysis). ***ARMY TANK-AUTOMOTIVE CENTER WARREN MI***.

Pan X. (2021). ***Research on the Mechanism of Environmental Governance's Impact on Enterprises' Green Innovation***. (doctoral), Dalian University of Technology, CNKI.

Petkova M, & Springel V. (2009). An implementation of radiative transfer in the cosmological simulation code GADGET. ***Monthly Notices of the Royal Astronomical Society, 396***(3), 1383-1403. https://doi.org/10.1111/j.1365-2966.2009.14843.x

Pfeffer J, & Salancik G R. (1978). ***The External Control of Organizations: A Resource Dependence Perspective***: Harper & Row.

Pittaway L, Missing C, Hudson N, & Maragh D. (2009). Entrepreneurial learning through action: a case study of the Six-Squared program. ***Action Learning: Research Practice, 6***(3), 265-288.

Politis D. (2005). The process of entrepreneurial learning: A conceptual framework. ***Entrepreneurship theory practice, 29***(4), 399-424.

Porter, & Michael. (1985). Technology and competitive advantage. ***Journal of business strategy, 5***(3), 60-78.

Porter M. (1991). Toward a Dynamic Theory of Strategy Strategic Management Journal. ***Учебное издание***.

Porter M, Argyres N, & McGahan A M. (2002). An Interview with Michael Porter. *The **Academy of Management Executive***, 43-52.

Porter M E, & Millar V E. (1985). ***How information gives you competitive advantage. In***: Harvard Business Review Reprint Service.

Prajogo D I, & Ahmed P K. (2006). Relationships between innovation stimulus, innovation capacity, and innovation performance. ***Rd Management, 36***(5), 499-515. https://doi.org/10.1111/j.1467-9310.2006.00450.x

Pratikto H, Winarno A, & Restuningdiah N. (2023). The role of entrepreneurial competencies: successful key SMEs a literature review. ***International Journal of Professional Business Review, 8***(7), e01955-e01955.

Purnomo B R. (2019). Artistic orientation, financial literacy and entrepreneurial performance. ***Journal of Enterprising Communities: People Places in the Global Economy, 13***(1/2), 105-128.

Qian Y. (2022). A Study on the Relationship between Entrepreneurial Orientation, Strategic Human Resource Management and Firm Performance. ***Modern Businesses, 657***(32), 63-66

Rae D. (2012). Action learning in new creative ventures. ***International journal of entrepreneurial behavior Research, 18***(5), 603-623. https://doi.org/10.1108/13552551211253955

Rae D. (2005). Entrepreneurial learning: a narrative-based conceptual model. ***Journal of small business enterprise development, 12***(3), 323-335.

Rae D. (2003). Opportunity centred learning: an innovation in enterprise education? ***Education+ training, 45***(8/9), 542-549.

Rae D, & Carswell M. (2001). Towards a conceptual understanding of entrepreneurial learning. ***Journal of small business enterprise development, 8***(2), 150-158.

Rauch A, Wiklund J, Lumpkin G T, & Frese M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. ***Entrepreneurship theory practice, 33***(3), 761-787.

Rauch A, Wiklund, J., Lumpkin, G. T., & Frese. (2009). Entrepreneurial orientation and business performance: Cumulative empirical evidence. ***Entrepreneurship Theory and Practice, 33***(3), 761-788.

Rauch J E, & Watson J. (2004). Network intermediaries in international trade. ***Journal of Economics Management Strategy, 13***(1), 69-93. https://doi.org/10.1111/j.1430-9134.2004.00004.x

Rehman S U, Bhatti A, & Chaudhry N I. (2019). Mediating effect of innovative culture and organizational learning between leadership styles at third-order and organizational performance in Malaysian SMEs. ***Journal of Global Entrepreneurship Research, 9***(1), 1-24.

Ren Y. (2021). A Study on the Impact of Entrepreneurial Orientation on Innovation Performance - Based on Survey Data from SMEs. ***International Business Accounting, 386***(2), 64-68

Reuber A R, & Fischer E. (1997). The influence of the management team's international experience on the internationalization behaviors of SMEs. ***Journal of International Business Studies, 28***, 807-825. https://doi.org/10.1057/palgrave.jibs.8490120

Rieckhoff B S, & Larsen C. (2012). The Impact of a Professional Development Network on Leadership Development and School Improvement Goals. ***School-University Partnerships, 5***(1), 57-73.

Ries E. (2011). ***The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses***: Currency.

Ries E. (2011). The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses. ***Crown Business***.

Robb C, KIM E-M, & LEE J-W. (2020). Entrepreneurial Orientation and Export Performance of Emerging Market SMEs: The Moderating Role of Dynamic Capabilities in South Africa. ***Journal of Distribution Science, 18***(12), 15-29. https://doi.org/10.15722/jds.18.12.202012.15

Robinson C, & Schumacker R E. (2009). Interaction effects: centering, variance inflation factor, and interpretation issues. ***Multiple linear regression viewpoints, 35***(1), 6-11.

Rothschild M L. (1999). Carrots, sticks, and promises: A conceptual framework for the management of public health and social issue behaviors. ***Journal of marketing, 63***(4), 24-37. https://doi.org/10.1177/002224299906300404

Ruefli T W, & Wiggins R R. (2003). Industry, corporate, and segment effects and business performance: A non-parametric approach. ***Strategic Management Journal, 24***(9), 861-879.

Salih A, Alsalhi L, & Abou-Moghli A. (2024). Entrepreneurial orientation and digital transformation as drivers of high organizational performance: Evidence from Iraqi private bank. ***Uncertain Supply Chain Management, 12***(1), 9-18. http://dx.doi.org/10.5267/j.uscm.2023.10.022

Santarelli E, & Tran H T. (2012). Growth of Incumbent Firms and Entrepreneurship in V ietnam. ***Growth Change, 43***(4), 638-666.

Santoso R T P B, Priyanto S H, Junaedi I W R, Santoso D S S, & Sunaryanto L T. (2023). Project-based entrepreneurial learning (PBEL): a blended model for startup creations at higher education institutions. ***Journal of Innovation Entrepreneurship, 12***(1), 18. https://doi.org/10.1186/s13731-023-00276-1

Sarasvathy S D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. ***Academy of Management Review, 26***(2), 243-263.

Sarasvathy S D. (2009). ***Effectuation: Elements of entrepreneurial expertise***: Edward Elgar Publishing.

Schumpeter J A. (1947). The creative response in economic history. ***The journal of economic history, 7***(2), 149-159. https://doi.org/10.1017/S0022050700054279

Shah S Z A, & Ahmad M. (2019). Entrepreneurial orientation and performance of small and medium-sized enterprises: Mediating effects of differentiation strategy. ***Competitiveness Review: An International Business Journal, 29***(5), 551-572.

Shane S, & Venkataraman S. (2000). The promise of entrepreneurship as a field of research. ***Academy of Management Review, 25***(1), 217-226.

Shao T. (2022). ***A study of the relationship between entrepreneurial learning, entrepreneurial self-efficacy, and opportunity confidence***. Jilin University,

Shi X, Wang H-J, & Xing C. (2015). The role of life insurance in an emerging economy: Human capital protection, assets allocation and social interaction. ***Journal of Banking Finance, 50***, 19-33. https://doi.org/10.1016/j.jbankfin.2014.08.028

Shin K, Singh N K, & Pérez-Nordtvedt L. (2020). Learning, Dynamic Capabilities, and Firm Performance: The Case of Entrepreneurial Firms in the South Korean Fashion Industry. ***Entrepreneurship Research Journal, 13***(1), 99-130. https://doi.org/10.1515/erj-2020-0098

Simsek Z, Heavey C, Veiga J F, & Souder D. (2009). A typology for aligning organizational ambidexterity's conceptualizations, antecedents, and outcomes. ***Journal of Management Studies, 46***(5), 864-894. https://doi.org/10.1111/j.1467-6486.2009.00841.x

Sirmon D G, & Hitt M A. (2009). Contingencies within dynamic managerial capabilities: Interdependent effects of resource investment and deployment on firm performance. ***Strategic Management Journal, 30***(13), 1375-1394. https://doi.org/10.1002/smj.791

SONG M-x, & Morgan X Y. (2019). Leveraging core capabilities and environmental dynamism for food traceability and firm performance in a food supply chain: A moderated mediation model. ***Journal of Integrative Agriculture, 18***(8), 1820-1837. https://doi.org/10.1016/S2095-3119(19)62590-6

Statistics S p B o. (2020). *2019* ***Statistical Bulletin of Sichuan National Economic and Social Development***. Sichuan provincial Bureau of Statistics

Straub D, Boudreau M-C, & Gefen D. (2004). Validation guidelines for IS positivist research. ***Communications of the Association for Information Systems, 13***(1), 24.

Su D, & Du Q. (2022). A Study of the Relationship between Entrepreneurial Orientation, Improvisation Skills and International Entrepreneurial Performance. ***Journal of Nanjing Audit University, 19***(05), 43-52

Susanto P, Hoque M E, Shah N U, Candra A H, Hashim N M H N, & Abdullah N L. (2023). Entrepreneurial orientation and performance of SMEs: the roles of marketing capabilities and social media usage. ***Journal of Entrepreneurship in Emerging Economies, 15***(2), 379-403.

Takahashi A R W, Bulgacov S, Semprebon E, & Giacomini M M. (2017). Dynamic capabilities, marketing capability and organizational performance. ***BBR. Brazilian Business Review, 14***, 466-478.

Tang J. (2006). Competition and innovation behaviour. ***Research Policy, 35***(1), 68-82. https://doi.org/10.1016/j.respol.2005.08.004

Tang J, Tang Z, Marino L D, Zhang Y, & Li Q. (2008). Exploring an inverted U–shape relationship between entrepreneurial orientation and performance in Chinese ventures. ***Entrepreneurship theory practice, 32***(1), 219-239. https://doi.org/10.1111/j.1540-6520.2007.00223.x

Tang Z, & Hull C. (2012). An investigation of entrepreneurial orientation, perceived environmental hostility, and strategy application among Chinese SMEs. ***Journal of small business management, 50***(1), 132-158. https://doi.org/10.1111/j.1540-627X.2011.00347.x

Teece. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. ***Strategic Management Journal, 28***(13), 1319-1350. https://doi.org/10.1002/smj.640

Teece. (2014). The foundations of enterprise performance: Dynamic and ordinary capabilities in an (economic) theory of firms. ***Academy of Management Perspectives, 28***(4), 328-352.

Teece, Pisano, & Shuen. (1997). Dynamic capabilities and strategic management. ***Strategic Management Journal, 18***(7), 509-533.

Teece, & Shuen A. (1997). Dynamic capabilities and strategic management. ***Strategic Management Journal, 18***(7), 509-533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z

Teece D, Peteraf M, & Leih S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. ***California Management Review, 58***(4), 13-35.

Teece D, & Pisano G. (2003). ***The dynamic capabilities of firms***: Springer.

Teece D J. (2010). Business models, business strategy and innovation. ***Long Range Planning, 43***(2-3), 172-194.

Timmons. (1994). ***New Venture Creation: Entrepreneurship for the 21st Century***: Irwin Professional Publishing.

Timmons, Spinelli S, & Tan Y. (2004). ***New venture creation: Entrepreneurship for the 21st century (Vol. 6)***: McGraw-Hill/Irwin New York.

Van Doorn S, Heyden M, Tröster C, & Volberda H. (2015). ***Entrepreneurial orientation and performance: Investigating local requirements for entrepreneurial decision-making***. In Cognition and strategy (Vol. 32, pp. 211-239): Emerald Group Publishing Limited.

Van Geenhuizen M. (2007). Modelling dynamics of knowledge networks and local connectedness: a case study of urban high-tech companies in The Netherlands. ***The Annals of Regional Science, 41***(4), 813-833.

Venkataraman S, MacMillan I C, & McGrath R G. (1990). ***Progress in research on corporate venturing***: Wharton School of the University of Pennsylvania, Snider Entrepreneurial Center.

Venkatraman N. (1989). Strategic orientation of business enterprises: The construct, dimensionality, and measurement. ***Management science, 35***(8), 942-962.

Venkatraman N, & Ramanujam V. (1986). Measurement of business performance in strategy research: A comparison of approaches. ***Academy of Management Review, 11***(4), 801-814.

Verona G, & Ravasi D. (2003). Unbundling dynamic capabilities: an exploratory study of continuous product innovation. ***Industrial corporate change, 12***(3), 577-606. https://doi.org/10.1093/icc/12.3.577

Vickery S K. (1991). A theory of production competence revisited. ***Decision sciences, 22***(3), 635-643.

Vogt W, & Williams M. (2011). The SAGE handbook of innovation in social research methods. ***The SAGE Handbook of Innovation in Social Research Methods***, 1-664.

Wang. (2023). Population Change and China's Economic Growth Policy Thinking. ***Cohesion, 3***, 38-42

Wang, L C, Ahmed, & K P. (2007). Dynamic capabilities: A review and research agenda. ***International journal of management reviews, 9***(1), 31-51.

Wang C, Liu H, & Guo Q. (2017). Entrepreneurial learning, entrepreneurial self-efficacy and venture performance: The mediating role of opportunity recognition. ***International Entrepreneurship and Management Journal, 13***(3), 829-849.

Wang C L. (2008). Entrepreneurial orientation, learning orientation, and firm performance. ***Entrepreneurship theory practice, 32***(4), 635-657.

Wang E, Klein G, & Jiang J J. (2007). IT support in manufacturing firms for a knowledge management dynamic capability link to performance. ***International journal of production research, 45***(11), 2419-2434. https://doi.org/10.1080/00207540601020437

Wang Qiang L J. (2017). Research on entrepreneurial strategy of small and medium-sized enterprises in Sichuan Province. ***Western science and technology, 7***, 40-43.

Wang X. (2021). ***Research on Loyalty Enhancement Strategy of E-commerce Platform of Company W***. Zhejiang University of Science and Technology %9 Master,

Weerawardena J, Mort G S, Salunke S, Knight G, & Liesch P W. (2015). The role of the market sub-system and the socio-technical sub-system in innovation and firm performance: a dynamic capabilities approach. ***Journal of the academy of marketing science, 43***, 221-239. https://doi.org/10.1007/s11747-014-0382-9

Wei-Loon K. (2013). Entrepreneurial orientation (EO) and performance of government-linked companies (GLCs). ***Journal of Entrepreneurship Management Innovation, 9***(3), 21-41.

Weick K E. (2015). The social psychology of organizing. *M@ n@ gement, 18*(2), 189.

Wernerfelt B. (1984). A resource-based view of the firm. ***Strategic Management Journal, 5***(2), 171-180. https://doi.org/10.1002/smj.4250050207

Wiklund J, Davidsson P, Audretsch D B, & Karlsson C. (2011). The future of entrepreneurship research. ***Entrepreneurship theory practice, 35***(1), 1-9.

Wiklund J, & Shepherd D. (2005). Entrepreneurial orientation and small business performance: a configurational approach. ***Journal of Business Venturing, 20***(1), 71-91. https://doi.org/10.1016/j.jbusvent.2004.01.001

Wiklund J, & Shepherd D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. ***Strategic Management Journal, 24***(13), 1307-1314. https://doi.org/10.1002/smj.360

Wilden R, Gudergan S P, Nielsen B B, & Lings I. (2013). Dynamic capabilities and performance: strategy, structure and environment. ***Long Range Planning, 46***(1-2), 72-96. https://doi.org/10.1016/j.lrp.2012.12.001

Williams J, & MacKinnon D P. (2008). Resampling and distribution of the product methods for testing indirect effects in complex models. ***Structural equation modeling: a multidisciplinary journal, 15***(1), 23-51.

Winter S G. (2003). Understanding dynamic capabilities. ***Strategic Management Journal, 24***(10), 991-995.

Wu, & Zhao C. (2018). Research on policy support and innovation ability of micro, small and medium-sized enterprises in Sichuan Province. ***Business economics and management, 9***, 89-98.

Wu T, & Wang C. (2016). Entrepreneurial Action, Information Access, and New Venture Performance in an Internet Context - Evidence from the Apple App Store. ***Scientific research, 34***(02), 260-267

Wu X, & Geng S. (2003). Analysis of the causes of self-importance risk in regional clusters. **economic geography, 6**, 726-730.

Xi J. (2020). Research on the relationship between entrepreneurial orientation and performance: an empirical analysis based on Hangzhou SMEs. ***Age of Wealth, 179***(04), 231-233

XI Y, & Shang Y. (2001). Harmonious Management Thought and Contemporary Harmonious Management Theory. ***Journal of Xi'an Jiaotong University (Social Science Edition), 3***, 23-26

Xia Y. (2016). Characteristics and formation mechanisms of cross-border integration in services industries. ***Journal of Nantong University (Social Science Edition), 32***(05), 123-128.

Xie Z, Wang J, & Miao L. (2021). Big data and emerging market firms' innovation in an open economy: The diversification strategy perspective. ***Technological Forecasting Social Change, 173***, 121091. https://doi.org/10.1016/j.techfore.2021.121091

Xu Z, & Qu T. (2022). Entrepreneurial learning and entrepreneurial growth among college students: mediation based on entrepreneurial self-efficacy. ***economists, 397***(03), 151-153

Yang M, Wang J, & Zhang X. (2021). Boundary-spanning search and sustainable competitive advantage: The mediating roles of exploratory and exploitative innovations. ***Journal of Business Research, 127***, 290-299.

Yi Z. (2010). A Study on the Relationship between Resource Integration Ability, Entrepreneurial Orientation and Entrepreneurial Performance. ***Scientific research, 28***(5), 757-762.

Yuan K-H, & Bentler P M. (2000). 5. Three likelihood-based methods for mean and covariance structure analysis with nonnormal missing data. ***Sociological methodology, 30***(1), 165-200.

Yuan Y. (2021). ***A study of the relationship between entrepreneurial orientation and firm performance***. South China University of Technology

Yusuf, & Attahir. (2002). Environmental uncertainty, the entrepreneurial orientation of business ventures and performance. ***International journal of commerce and management, 12***(3/4), 83-103. https://doi.org/10.1108/eb047454

Zahra S A, & Covin J G. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. ***Journal of Business Venturing, 10***(1), 43-58.

Zahra S A, & George G. (2002). Absorptive capacity: A review, reconceptualization, and extension. ***Academy of Management Review, 27***(2), 185-203. https://doi.org/10.5465/amr.2002.6587995

Zahra S A, & George G. (2017). International entrepreneurship: The current status of the field and future research agenda. ***Strategic entrepreneurship: Creating a new mindset***, 253-288.

Zahra S A, Jennings D F, & Kuratko D F. (1999). The antecedents and consequences of firm-level entrepreneurship: The state of the field. ***Entrepreneurship theory practice, 24***(2), 45-65. https://doi.org/10.1177/104225879902400205

Zahra S A, Sapienza H J, & Davidsson P. (2009). Entrepreneurship and dynamic capabilities: A review, model and research agenda. ***Journal of Management Studies, 46***(6), 1-34.

Zahra S A, Sapienza H J, & Davidsson P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. ***Journal of Management Studies, 43***(4), 917-955. https://doi.org/10.1111/j.1467-6486.2006.00616.x

Zhang Q, Wu X, & Ma H. (2022). How Three-Dimensional Capital Enhances Farmer Entrepreneurial Performance - The Chain Mediating Role of Entrepreneurial Learning and Entrepreneurial Opportunity Identification. ***Agricultural Economy and Management, 3***, 28-41

Zhang X, Gao C, & Zhang S. (2022). The niche evolution of cross-boundary innovation for Chinese SMEs in the context of digital transformation: Case study based on dynamic capability. ***Technology in Society, 68***, 101870.

Zhang X h. (2023). ***Research on the Influence Mechanism of Green Entrepreneurial Orientation on the Performance of Manufacturing Start-ups***. Jilin University

Zhang Y, Li Q, & Li J. (2006). A review of new perspectives in entrepreneurship management research. ***Foreign Economics and Management, 5***, 1-7

Zhao, Wen J, Zou X, Wang Q, & Chang C. (2023). Strategies for the sustainable development of China in the post-epidemic era. ***Sustainable Development, 31***(1), 426-438.

Zhao Y, Li Y, Lee S H, & Bo Chen L. (2011). Entrepreneurial orientation, organizational learning, and performance: Evidence from China. ***Entrepreneurship theory practice, 35***(2), 293-317. https://doi.org/10.1111/j.1540-6520.2009.00359.x

Zhou S S, Zhou A J, Feng J, & Jiang S. (2019). Dynamic capabilities and organizational performance: The mediating role of innovation. ***Journal of Management Organization, 25***(5), 731-747.

Zhou W, & Li W. (2021). Research on O2O Business Model Transformation of Service E-commerce Platform from the Perspective of Entrepreneurial Learning--Taking Piggyback as an Example. ***modernization of management, 41***(02), 49-52

Zhu Z, & Zhu B. (2003). Fuzzy comprehensive evaluation of enterprise technology innovation effect based on BP neural network. ***Systems Engineering Theory and Practice, 9***, 16-21

Zollo M, & Winter S G. (2002). Deliberate learning and the evolution of dynamic capabilities. ***Organization science, 13***(3), 339-351.

Zott C, Amit R, & Massa L. (2011). The business model: Recent developments and future research. ***Journal of Management, 37***(4), 1019-1042.

APPENDICES

APPENDIX A

Questionnaire

Questionnaire

Dear Sir/Madam,

Greetings!

This survey aims to delve into the impact of "entrepreneurial orientation and entrepreneurial action learning on entrepreneurial performance of SMEs in Sichuan Province." Seeking insights from accomplished individuals in the business community is an integral part of this study. We emphasize that this questionnaire is exclusively designed for academic research. Please rest assured and answer the questions based on objective facts. Kindly ensure you complete each question comprehensively, as omissions could affect the research value of the survey. Once again, we sincerely appreciate your participation!

Wishing you every success and a brilliant career! Best regards！

Research Team, August 2023

PART ONE: Personal and Company Information (Mark "√" next to the selected options, and provide relevant information on the blank lines).

1.Gender:

① Male ( )

② Female ( )

2.Age:

① Under 20 years old ( )

② 20-30 years old ( )

③ 31-40 years old ( )

④ 41-50 years old ( )

⑤ 51 years old and above ( )

3. Education Level：

① Associate degree or below ( )

② Bachelor's degree ( )

③ Master's degree ( )

④ Doctoral degree ( )

4.Position：

① Frontline managers ( )

② Middle managers ( )

③ Senior managers ( )

④ Company founders ( )

5.Company Name:_____(Please fill in)

6.The company is located in_____ Province

_____ City (District, County)

(Please fill in).

7. Type of Enterprise：

① State-Owned ( )

② Private ( )

③ Foreign-funded ( )

④ Joint Venture ( )

⑤ Other

8. The industry category to which the company belongs;

① Wholesale and Retail Trade ( )

② Leasing and Business Services ( )

③ Agriculture, forestry, animal husbandry and fisheries ( )

④ Public administration, social security and social organizations ( )

⑤ Manufacturing industry ( )

9. Number of Employees：

① 10-30 people ( )

② 31-50 people ( );

③ 51-100 people ( );

④ 101～150people ( )

⑤ 151-200 people ( )

10.Years in Operation:

① Less than 3 years ( )

② 4-10 years ( )

③ 11-15 years ( )

④ 16-20 years ( )

⑤ Over 20 years ( )

11.Annual Sales of the Company:

① 100-500 million Yuan ( )

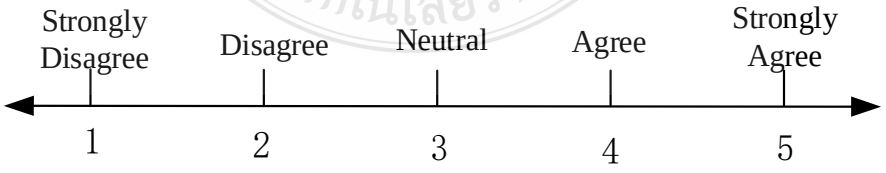
② 500-1000 million Yuan ( )

③ 1000-2000 million Yuan ( )

④ 2000-2500 million Yuan ( )

⑤ 2500-3000 million Yuan ( )

PART TWO: Main Content (Please mark "√" on the corresponding numbers based on your company's actual situation).



Note:Please mark your business in the truest option. 1=Disagree completely, 2=Disagree. 3=General. 4=Agree, 5=Agree completely						
Serial Number	Question	Rating Level				
		1	2	3	4	5
Entrepreneurial Orientation						
Collaborative Innovation		Strongly disagree ⇔ Strongly agree				
1	Since its establishment, the company has launched numerous new products or services in response to changing environments.	1	2	3	4	5
2	Since its inception, the company has made significant changes to its product or service portfolio	1	2	3	4	5
3	The entrepreneur places great emphasis on research and development and technological innovation.	1	2	3	4	5
Leading Mobility		Strongly disagree ⇔ Strongly agree				
4	Entrepreneurs attach great importance to research and development, striving for technological and service leadership and innovation	1	2	3	4	5
5	In the industry, entrepreneurs are able to take the lead in introducing new products, services, management ideas, production techniques, etc.	1	2	3	4	5
6	Company start-ups and managers put a lot of emphasis on introducing new products or ideas ahead of competitors	1	2	3	4	5
Risk Sharing		Strongly disagree ⇔ Strongly agree				
7	Entrepreneurs tend to prefer projects with potential returns but lower risks.	1	2	3	4	5
8	Entrepreneurs lean towards projects that offer potential returns but lower risks.	1	2	3	4	5
9	To achieve entrepreneurial performance, entrepreneurs are inclined towards adopting relatively swift actions.	1	2	3	4	5
Dynamic Competition		Strongly disagree ⇔ Strongly agree				
10	Entrepreneurs adopt an assertive competitive stance and challenge competitors actively	1	2	3	4	5
11	Entrepreneurial enterprises are highly competitive and aggressive.	1	2	3	4	5
12	Entrepreneurs exhibit a strong inclination to surpass competitors in order to enhance their competitive position.	1	2	3	4	5
Entrepreneurial action learning						
Exploratory learning		Strongly disagree ⇔ Strongly agree				
13	Enterprises excel in comprehensive and multi-system exploratory thinking, thereby mastering entrepreneurial knowledge and abilities.	1	2	3	4	5
14	Entrepreneurial enterprises are adept at referencing, imitating, and learning from the accomplishments of larger companies or foreign pioneers.	1	2	3	4	5

Note:Please mark your business in the truest option. 1=Disagree completely, 2=Disagree. 3=General. 4=Agree, 5=Agree completely						
Serial Number	Question	Rating Level				
		1	2	3	4	5
15	Entrepreneurial enterprises are adept at engaging in communication activities with customers to understand their needs.	1	2	3	4	5
16	Entrepreneurial enterprises are skilled at gathering relevant information about competitors to understand their business strategies.	1	2	3	4	5

Note:Please mark your business in the truest option.
1=Disagree completely, 2=Disagree. 3=General. 4=Agree, 5=Agree completely

Serial Number	Question	Rating Level				
		1	2	3	4	5
Entrepreneurial Orientation						
Collaborative Innovation		Strongly disagree ⇔ Strongly agree				
1	Since its establishment, the company has launched numerous new products or services in response to changing environments.	1	2	3	4	5
2	Since its inception, the company has made significant changes to its product or service portfolio	1	2	3	4	5
3	The entrepreneur places great emphasis on research and development and technological innovation.	1	2	3	4	5
Leading Mobility		Strongly disagree ⇔ Strongly agree				
4	Entrepreneurs attach great importance to research and development, striving for technological and service leadership and innovation	1	2	3	4	5
5	In the industry, entrepreneurs are able to take the lead in introducing new products, services, management ideas, production techniques, etc.	1	2	3	4	5
6	Company start-ups and managers put a lot of emphasis on introducing new products or ideas ahead of competitors	1	2	3	4	5
Risk Sharing		Strongly disagree ⇔ Strongly agree				
7	Entrepreneurs tend to prefer projects with potential returns but lower risks.	1	2	3	4	5
8	Entrepreneurs lean towards projects that offer potential returns but lower risks.	1	2	3	4	5
9	To achieve entrepreneurial performance, entrepreneurs are inclined towards adopting relatively swift actions.	1	2	3	4	5
Dynamic Competition		Strongly disagree ⇔Strongly agree				
10	Entrepreneurs adopt an assertive competitive stance and challenge competitors actively	1	2	3	4	5
11	Entrepreneurial enterprises are highly competitive and aggressive.	1	2	3	4	5
12	Entrepreneurs exhibit a strong inclination to surpass competitors in order to enhance their competitive position.	1	2	3	4	5
Entrepreneurial action learning						
Exploratory learning		Strongly disagree ⇔ Strongly agree				
13	Enterprises excel in comprehensive and multi-system exploratory thinking, thereby mastering entrepreneurial knowledge and abilities.	1	2	3	4	5
14	Entrepreneurial enterprises are adept at referencing, imitating, and learning from the accomplishments of larger companies or foreign pioneers.	1	2	3	4	5
15	Entrepreneurial enterprises are adept at engaging in communication activities with customers to understand their needs.	1	2	3	4	5
16	Entrepreneurial enterprises are skilled at gathering relevant information about competitors to understand their business strategies.	1	2	3	4	5

Note:Please mark your business in the truest option. 1=Disagree completely, 2=Disagree. 3=General. 4=Agree, 5=Agree completely						
Serial Number	Question	Rating Level				
		1	2	3	4	5
Transformative learning		Strongly disagree ⇔ Strongly agree				
17	Entrepreneurial enterprises foster an atmosphere that encourages the sharing of experiences and lessons learned.	1	2	3	4	5
18	Entrepreneurial enterprises promote a culture of sharing experiences and lessons learned.	1	2	3	4	5
19	Entrepreneurial enterprises have formal rules for identifying misconceptions or erroneous notions in their operations.	1	2	3	4	5
Developmental learning		Strongly disagree ⇔ Strongly agree				
20	Entrepreneurial enterprises excel at transforming technical knowledge into new products.	1	2	3	4	5
21	Entrepreneurial enterprises frequently align new technologies with new products.	1	2	3	4	5
22	Entrepreneurial enterprises can swiftly identify how new technical knowledge complements existing knowledge.	1	2	3	4	5
23	Entrepreneurs in the company are aware of who the adept developers of new technologies are within the organization.	1	2	3	4	5
Dynamic capability						
Opportunity perception capability		Strongly disagree ⇔ Strongly agree				
24	Substantial investments have been made in research and development to explore various technological possibilities.	1	2	3	4	5
25	Considerable investments have been made in research and development to explore various technological possibilities.	1	2	3	4	5
26	Closely monitor the innovative activities of suppliers and competitors.	1	2	3	4	5
27	Keep a close watch on the latest research achievements in scientific or technological fields.	1	2	3	4	5
28	Regularly gather insights into the current status and trends of the industry through various channels.	1	2	3	4	5
Note:Please mark your business in the truest option. 1=Disagree completely, 2=Disagree. 3=General. 4=Agree, 5=Agree completely						
Serial Number	Question	Rating Level				
		1	2	3	4	5
Resource integration capability		Strongly disagree ⇔ Strongly agree				
29	Effective utilization of knowledge from diverse technologies or application domains.	1	2	3	4	5
30	New knowledge acquired from external sources can be extensively shared within the company.	1	2	3	4	5
31	Successful implementation of new strategies or significant alterations to existing strategies based on changing circumstances.	1	2	3	4	5
32	Efficiently restructure and integrate existing resources.	1	2	3	4	5

Note:Please mark your business in the truest option. 1=Disagree completely, 2=Disagree. 3=General. 4=Agree, 5=Agree completely						
Serial Number	Question	Rating Level				
		1	2	3	4	5
Organizational restructuring capability		Strongly disagree↔Strongly agree				
33	Ability to flexibly adjust the company's organizational structure.	1	2	3	4	5
34	The company delegates significant decision-making authority to different departments.	1	2	3	4	5
35	The company can timely redesign existing workflows and procedures.	1	2	3	4	5
36	The company can timely redesign departmental tasks and functions.	1	2	3	4	5
Entrepreneurial Performance						
Growth performance		Strongly disagree↔Strongly agree				
37	Rapid growth in the number of employees.	1	2	3	4	5
38	Rapid development pace of new products or services.	1	2	3	4	5
39	Fast growth in market share.	1	2	3	4	5
40	Large proportion of total sales revenue from sales of new products or services.	1	2	3	4	5
Profitability performance		Strongly disagree↔Strongly agree				
41	High net profit margin of entrepreneurial enterprises (Net profit / Total sales revenue).	1	2	3	4	5
42	High return on investment of entrepreneurial enterprises	1	2	3	4	5
43	Fast growth rate of net profits for entrepreneurial enterprises.	1	2	3	4	5
44	Rapid growth in total sales revenue of entrepreneurial enterprises.	1	2	3	4	5
Overall performance		Strongly disagree↔Strongly agree				
45	Formulating products or services that can be sold.	1	2	3	4	5
46	The technologically developed products or services that have already been sold.	1	2	3	4	5
47	Attaining profit margins exceeding the industry average.	1	2	3	4	5

Wishing you a pleasant work and all the best in everything!

Questionnaire

尊敬的先生/女士：

您好！本调查旨在深入探讨“创业倾向、创业行动学习对四川省中小企业创业绩效的影响”，向商业界成功人士问询经验是本研究的重要组成部分。我们郑重强调，此问卷完全为学术研究而设计，敬请您放心，按照客观事实回答问题。请您务必全面填写每一道问题，因为遗漏可能会影响问卷的研究价值。再次对您的参与表示衷心感谢！

祝您一切顺利、事业辉煌！

课题组 2023 年 10 月

一、个人和公司情况(在所选项的后面打“√”，在横线的位置请填写相关信息)

1、性别：①男( ) ②女( )

2、年龄：①20 岁以下( ) ②20～30 岁( ) ③31～40 岁( )

④41～50 岁( ) ⑤51 岁以上( )

3、文化程度：①专科及以下( ) ②本科( ) ③硕士研究生( ) ④博士研究生( )

4、级别：①普通员工( ) ②基础管理人员( )③中层管理人员 ④高层管理人员( )

5、公司名称是_____(请填写)

6、公司在_____省(直辖市)_____市(区、县)_____ (请填写)

7、企业性质：①国有( ) ②民营( ) ③外资( ) ④合资( ) ⑤其他

8、员工人数：①1～50 人( ) ②51～300 人( ) ③301～1000 人( )

④1001～2000 人( ) ⑤2000 人以上( )

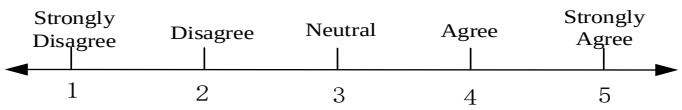
9、成立年数：①3 年以下( ) ②4～10 年( ) ③11～15 年( )

④15～20 年( ) ⑤20 年以上( )

10、公司年销售额：①小于 500 万元( ) ②500～2000 万元以下( )

③2000 万～1 亿元( )④1 亿～3 亿元以下( ) ⑤3 亿元以上( )

二、主体内容(请您根据贵公司的实际情况，在对应的数字上打“√”)



注：请在最真实的选项中标注您的选项
1=完全不同意，2=不同意。3=一般。4=同意，5=完全同意

序号	问题	评价级别				
		1	2	3	4	5
		Strongly disagree ⇔ Strongly agree				
	创业导向					
	协同创新性	Strongly disagree ⇔ Strongly agree				
1	企业自成立以来，适应环境的变化上马了很多新产品或新服务	1	2	3	4	5
2	企业自成立以来，对产品或服务组合进行了大幅变更	1	2	3	4	5
3	创业者非常注重研发与技术创新	1	2	3	4	5
	领先行动性	Strongly disagree ⇔ Strongly agree				
4	创业者高度重视研究开发，努力追求技术、服务的领先与创新;	1	2	3	4	5
5	在行业内，创业者能率先引入新产品、新服务、管理思想和生产技术等	1	2	3	4	5
6	公司创业和管理者非常强调先于竞争者引入新产品或创意	1	2	3	4	5
	风险承担性	Strongly disagree ⇔ Strongly agree				
7	创业者更偏好可能获得回报但风险低的项目	1	2	3	4	5
8	在面对动态复杂环境时，创业者易于采取积极行动来抓住机会而非守旧	1	2	3	4	5
9	为了达成创业绩效，创业者更倾向于采取较为快速的行动	1	2	3	4	5
	动态竞争性	Strongly disagree ⇔ Strongly agree				
10	创业者采取积极竞争的态度向竞争者发起挑战	1	2	3	4	5
11	创业企业非常具有竞争性和侵略性	1	2	3	4	5
12	创业者具有强烈的超越竞争者以提升竞争地位的态势.	1	2	3	4	5
	创业行动学习					
	探索性学习	Strongly disagree ⇔ Strongly agree				
13	企业善于进行全方位、多体系地探索思考，从而掌握创业的知识能力	1	2	3	4	5
14	创业企业善于借鉴、模仿、学习大企业或国外先进的成果	1	2	3	4	5
15	创业企业善于开展与客户的交流活动以了解需求	1	2	3	4	5
16	创业企业善于收集竞争对手相关信息，了解竞争者经营策略	1	2	3	4	5
	转化性学习	Strongly disagree ⇔ Strongly agree				
17	创业企业有鼓励分享经验教训的氛围	1	2	3	4	5
18	创业企业能经常检讨、分享和总结不成功的原因	1	2	3	4	5
19	创业企业有发现经营中错误想法或错误观念的正式规则	1	2	3	4	5
	开发性学习	Strongly disagree ⇔ Strongly agree				
20	创业企业善于将技术知识转化为新产品	1	2	3	4	5
21	创业企业经常将新技术与新产品进行匹配	1	2	3	4	5
22	创业企业能迅速识别新技术知识对旧知识的补充	1	2	3	4	5
23	创业者能公司知道本企业谁是新技术开发能手	1	2	3	4	5
	动态能力					
	机会感知能力	Strongly disagree ⇔ Strongly agree				
24	在研发方面进行了大量的投资以探索各种技术可能性	1	2	3	4	5
25	经常探索和再探索顾客需求或潜在的顾客需求	1	2	3	4	5
26	密切监控供应商、竞争对手的创新行为	1	2	3	4	5
27	密切跟踪科学或技术领域的最新研究成果	1	2	3	4	5
28	经常通过各种途径了解行业的发展现状和趋势	1	2	3	4	5
	资源整合能力	Strongly disagree ⇔ Strongly agree				
29	能够有效地利用不同技术或应用领域的知识	1	2	3	4	5
30	从外部获得的新知识能够在企业内部充分地共享	1	2	3	4	5
31	能够根据形势变化成功地应用新战略或对原有战略进行重大改变	1	2	3	4	5
32	能够有效地将现有的资源进行整合重组					
	组织重构能力	Strongly disagree ⇔ Strongly agree				
33	能够灵活地调整企业的组织结构	1	2	3	4	5
34	企业赋予了不同部门很大的自主决定权	1	2	3	4	5
35	企业能够适时地对已有的工作流程和程序进行再设计	1	2	3	4	5
36	企业能够适时地对部门的工作任务和职能进行再设计	1	2	3	4	5

注：请在最真实的选项中标注您的选项
1=完全不同意，2=不同意。3=一般。4=同意，5=完全同意

序号	问题	评价级别				
		1	2	3	4	5
		Strongly disagree ⇔ Strongly agree				
创业绩效						
成长性绩效		Strongly disagree ⇔ Strongly agree				
37	员工数量快速增长。	1	2	3	4	5
38	新产品或新服务发展速度快	1	2	3	4	5
39	市场份额快速增长。	1	2	3	4	5
40	新产品或服务的销售收入在总销售收入中占很大比例。					
获利性绩效		Strongly disagree ⇔ Strongly agree				
41	创业型企业的净利润率高（净利润/总销售收入）。	1	2	3	4	5
42	创业企业投资回报率高	1	2	3	4	5
43	创业型企业净利润增长率快。	1	2	3	4	5
44	创业型企业的总销售收入快速增长。					
总体绩效		Strongly disagree ⇔ Strongly agree				
45	形成可以销售的产品或者服务	1	2	3	4	5
46	已销售出所开发的科技型产品或者服务	1	2	3	4	5
47	获得高于行业平均水平的利润率	1	2	3	4	5

APPENDIX B

The Symbols used in Data Analysis

The Symbols used in Data Analysis

Symbol	Explanation
N	Sample Size
$\bar{X}$	Mean
S.D.	Standard Deviation
r	Pearson Product Moment Correlation Coefficient
$\chi 2$	Chi-square
Df	Degree of Freedom
$\chi 2$ /df	Relative Chi-Square
GFI	Goodness of Fit
AGFI	Adjust Goodness of Fit Index
NFI	Normal Fit Index
CFI	Comparative Fit Index
RMSEA	Root Mean Square Error of Approximation
S.E.	Standard Error
R	Multiple Correlation
R^2	Square Multiple Correlation
P	P-value
C.R.	Critical Ratio
β	Beta

APPENDIX C

Variable Abbreviations

Variable Abbreviations

Construct	Observed variable	Type of variable
Entrepreneurial Orientation (EO)	Collaborative Innovation (EO_CI)	Independent Variables
	Leading Mobility (EO_LM)	
	Risk Sharing (EO_RS)	
	Dynamic Competition (EO_DC)	
Entrepreneurial Action learning (EAL)	Exploring Learning (EAL_EL)	Mediating Variables
	Transformative Learning (EAL_TL)	
	Developmental Learing (EAL_DL)	
Dynamic Capability (DC)	Opportunity Perception Capability (DC_OPC)	Moderator Variables
	Resource Integration Capability(DC_RIC)	
	Organizational restructuring capability (DC_ORC)	
Entrepreneurial Performance (EP)	Growth Performance (EP_GP)	Dependent Variables
	Profitability Performance (EP_PP)	
	Overall Performance (EP_OP)	

APPENDIX D

Content Validity

Table Index of Item-Objective Congruence (IOC).

Variable	Latent	Experts' Responses			Total	Average
		1	2	3		
Entrepreneurial Orientation (EO)						0.95
-Collaborative Innovation	EO_CI_1	1	1	1	1	
-	EO_CI_2	1	1	1	1	
	EO_CI_3	1	1	1	1	
-Leading Mobility	EO_LM_1	1	1	1	1	
	EO_LM_2	1	1	1	1	
	EO_LM_3	1	1	1	1	
- Risk Sharing	EO_RS_1	1	1	0	0.67	
	EO_RS_2	1	1	0	0.67	
	EO_RS_3	1	1	1	1	
-Dynamic Competition	EO_DC_1	1	1	1	1	
	EO_DC_2	1	1	1	1	
	EO_DC_3	1	1	1	1	
Entrepreneurial action learning (EAL)						1
- Exploratory learning	EAL_EL_1	1	1	1	1	
	EAL_EL_2	1	1	1	1	
	EAL_EL_3	1	1	1	1	
	EAL_EL_4	1	1	1	1	
-Transformative learning	EAL_TL_1	1	1	1	1	
	EAL_TL_2	1	1	1	1	
	EAL_TL_3	1	1	1	1	
-Developmental learning	EAL_DL_1	1	1	1	1	
	EAL_DL_2	1	1	1	1	
	EAL_DL_3	1	1	1	1	
	EAL_DL_4	1	1	1	1	
Dynamic capability (DC)						1
-Opportunity perception capability	DC_OPC_1	1	1	1	1	
	DC_OPC_2	1	1	1	1	
	DC_OPC_3	1	1	1	1	
	DC_OPC_4	1	1	1	1	

Variable	Latent	Experts' Responses			Total	Average
		1	2	3		
	DC_OPC_5	1	1	1	1	
-Resource integration capability	DC_RIC_1	1	1	1		
	DC_RIC_2	1	1	1	1	
	DC_RIC_3	1	1	1	1	
	DC_RIC_4	1	1	1	1	
-Organizational restructuring capability	DC_ORC_1	1	1	1	1	
	DC_ORC_2	1	1	1	1	
	DC_ORC_3	1	1	1	1	
	DC_ORC_4	1	1	1	1	
Entrepreneurial Performance (EP)						1
-Growth performance	EP_GP_1	1	1	1	1	
	EP_GP_2	1	1	1	1	
	EP_GP_3	1	1	1	1	
	EP_GP_4	1	1	1	1	
-Profitability performance	EP_PP_1	1	1	1	1	
	EP_PP_2	1	1	1	1	
	EP_PP_3	1	1	1	1	
	EP_PP_4	1	1	1	1	
- Overall performance	EP_GP_1	1	1	1	1	
	EP_GP_2	1	1	1	1	
	EP_GP_3	1	1	1	1	
Total IOC Average						0.99

Biography

Name – Surname	Mrs. Fen He
Date of Birth	February 23, 1988
Address	Room 3, 24th Floor, Unit 1, Building 6, No. 137, Second Section of Daxuecheng Road, Cuiping District, Yibin City, Sichuan Province, China
Education	Master Degree in Chemical Processing, Sichuan University of Science and Engineering, China
Experiences Work	Work Teacher at Sichuan University of Science & Engineering(2018-Present)
Telephone Number	(+86) 19881352881
Email Address	906237939@qq.com