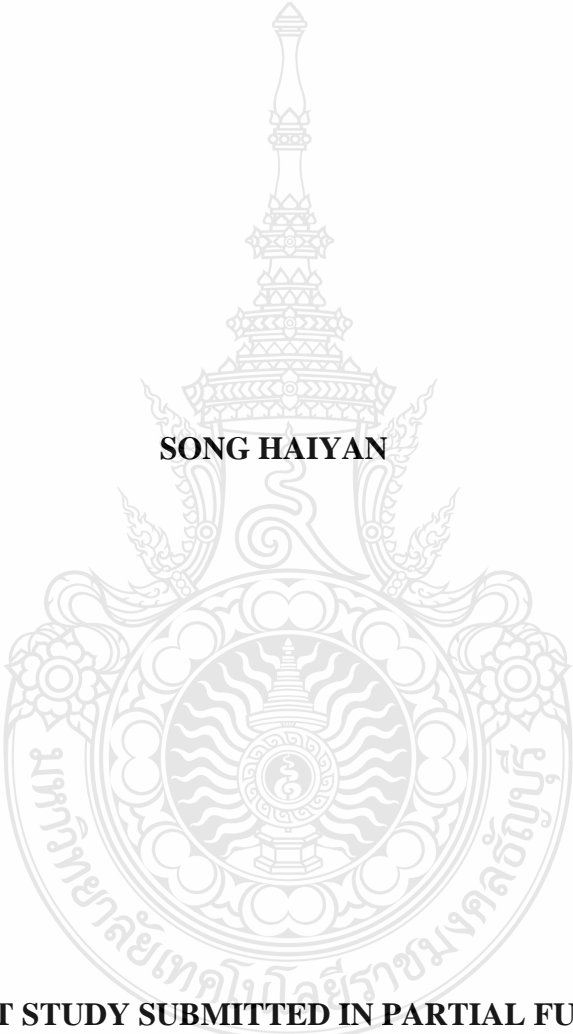


**INFLUENCE OF ENTREPRENEURIAL PASSION PERCEPTION ON  
EMPLOYEES' INNOVATIVE BEHAVIOR - THE INTERMEDIARY  
ROLE OF INNOVATIVE SELF-EFFICACY**

**SONG HAIYAN**



**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS  
ADMINISTRATION PROGRAM IN GENERAL MANAGEMENT  
FACULTY OF BUSINESS ADMINISTRATION  
RAJAMANGALA UNIVERSITY OF TECHNOLOGY THANYABURI  
ACADEMIC YEAR 2023  
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**Independent Study Title** Influence of Entrepreneurial Passion Perception on  
Employees' Innovative Behavior - The Intermediary  
Role of Innovative Self-efficacy

**Name - Surname** Ms.Song Haiyan

**Major Subject** General Management


**Independent Study Advisor** Assistant Professor Teetut Tresirichood, D.B.A.

**Academic Year** 2023

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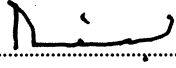
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Degree

  
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5 July 2023

<b>Independent Study Title</b>	Influence of Entrepreneurial Passion Perception on Employees' Innovative Behavior - The Intermediary Role of Innovative Self-efficacy
<b>Name - Surname</b>	Ms.Song Haiyan
<b>Major Subject</b>	General Management
<b>Independent Study Advisor</b>	Assistant Professor Teetut Tresirichood, Ph.D.
<b>Academic Year</b>	2023

### ABSTRACT

The objectives of this study were: 1) through the entrepreneurial passion perception, employee innovation behavior, and innovative self-efficacy related research, to build a model of employee perception of entrepreneurial passion and the relationship between employee innovation behavior and 2) based on the emotional infection and social cognition theories, to study the function path and effect of employees perceived entrepreneurial passion on employees' innovative behavior from a new perspective.

A total of 398 employees sampled mainly from new enterprises in Jiangxi province were surveyed by a questionnaire that was found acceptable, in terms of structure validity, pre-survey and after analysis, using SPSS 21.0 results analysis and Amos software. Data collected by the questionnaire were subjected to descriptive statistical analysis including t-test, and F-test to describe the basic situation of the three variables and difference analysis. According to the theoretical model proposed in this study, the relationship and action path of the three variables were tested through correlation analysis and Amos structural equation model, and finally, the mediation effect of the organizational atmosphere was analyzed.

The study results showed a positive correlation between entrepreneurial passion perception in its various dimensions and employees' innovation behavior; innovative self-efficacy directly affected employees' innovative behavior and employees were more likely to demonstrate innovative behavior when they think they have innovative ability and confidence. At the same time, innovation self-efficacy played a significant intermediary role between the perception of entrepreneurial passion and employees' innovation behavior.

**Keywords:** workplace fun, employee satisfaction, organizational atmosphere

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Song Haiyan

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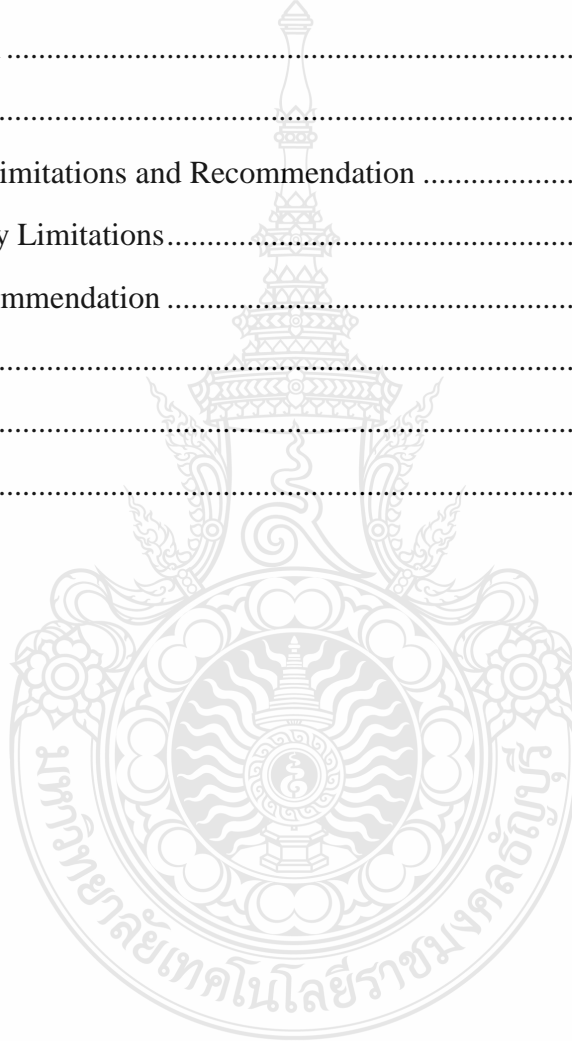
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# CHAPTER 1

## INTRODUCTION

### 1.1 Background and Problem statement

In the context of the increasing globalization of the global economy, innovation has become one of the main factors to promote the national economic development and international competitiveness. Governments also pay more and more attention to the importance of innovation and put forward a series of innovative development strategies and policies. In China, "innovation-driven development" has become a national strategy, and the government has introduced a series of incentives to encourage and support innovation. Exploring how to improve the innovation ability and innovation behavior has important practical significance for accelerating the national innovation development.

Innovation is one of the key factors for enterprises to achieve competitive advantage and growth (Wang, C. L., Tsai, C. H., & Tsai, J. C. (2016). Facing the increasingly fierce market competition, enterprises need to constantly innovate to maintain their core competitiveness. However, entrepreneurial enterprises have a more special position in the whole market competition, and the importance of their innovation behavior is more prominent. Entrepreneurs are increasingly becoming the main force of economic development, promoting the continuous emergence of new products and new services. In the process of entrepreneurship, entrepreneurs play an important role. They often have a strong sense of mission, passion and motivation, which are considered to be one of the key factors in entrepreneurial success.

Hervas-Oliver et al. (2018) found that start-ups that engage in open innovation are more likely to achieve success in terms of growth and profitability. However, innovation requires collective wisdom and cooperation. Therefore, the importance of innovation behavior in entrepreneurial enterprises is self-evident. In this

context, how to use the passion of entrepreneurs to promote the innovative behavior of employees has become a new research trend.

The essence of entrepreneurship lies in innovation. Innovation is not only the strategy of building an innovative country, but also the core source for new enterprises to acquire competitive advantages. Lee et al. (2019) found that employee innovation behavior positively affects organizational innovation performance by stimulating the creation and implementation of new ideas. In the era of the Internet, cloud computing and big data, the market is changing rapidly, the production cycle of products is greatly shortened, and the personalized, differentiated, diversified and high-end consumer demand is increasing. The new consumption model calls for a new supply model, thus highlighting the importance of innovation and development. For start-ups, in order to remain invincible in the fierce market competition, strong innovation and adaptability are indispensable. The innovation of organizations is expressed by the organization, team and individual level. Chen et al. (2018) found that individual creativity and proactivity, which are components of employee innovation behavior, are positively associated with organizational innovation. Zhou and George (2003) suggests that creating a supportive organizational culture and climate can foster employee innovation behavior by encouraging risk-taking, experimentation, and idea generation. The innovation behavior of employees constitutes the micro foundation of organizational innovation and internal entrepreneurship, which can bring new ideas, new culture, new products and new technologies to enterprises, and is an important source of competitive advantages of enterprises. Therefore, it is essential for the survival and development of new enterprises to promote employees to take the initiative to innovate and cultivate employees who are good at innovation. So how to stimulate employee innovation in start-ups?

Many successful entrepreneurs, such as Steve Jobs and Steve Musk, have repeatedly stressed in their speeches that entrepreneurs do not have enough passion to

overcome the obstacles in the entrepreneurial process."A short passion is worthless, only a lasting passion is profitable."Jack Ma's classic quote emphasizes the importance of passion for entrepreneurs. In entrepreneurial activities, entrepreneurial passion provides a key, spiritual driving force for entrepreneurs. Dong Mingzhu is a typical entrepreneur with rich entrepreneurial passion. If we explore further, we will find that Gree's entrepreneurial team has more or less shown a certain entrepreneurial passion. Many successful start-ups show that entrepreneurial passion is crucial to the success and development of enterprises, and many employees of entrepreneurial companies will show many fruitful innovative behaviors due to the passion of entrepreneurs. So why entrepreneurs the entrepreneurial passion fall? Furthermore, how can entrepreneurial passion be transformed into innovative employee behavior beneficial to promoting the growth of start-up enterprises?

## **1.2 Study Purpose**

This study aimed to explore how employees 'perceived entrepreneurial passion affects employees' innovation behavior and introduce innovation self-efficacy as a mediating variable to explore the mechanism of action. Through this research, it is possible to provide reference and reference for enterprises, and help enterprises to improve their innovation ability and innovation behavior.

This study will explore the influence of employees 'perceived entrepreneurial passion on employees' innovative behavior and its intermediary mechanism in the following ways:

1. Discuss the relationship between employees 'perceived entrepreneurial passion and employees' innovative behavior, and determine how to use passion perception to improve employees' innovative behavior;
2. Explore the intermediary mechanism of innovation self-efficiency between entrepreneurs 'passion and employees' innovation behavior; and provide certain practical guidance for entrepreneurial enterprises.

### 1.3 Study Hypothesis

The main study assumptions of this study are as follows:

H<sub>1</sub> Employees' perceived passion of entrepreneurs positively affects employees' innovation behavior

H<sub>2</sub> Employees' perception of entrepreneurial passion positively affects employees' innovative self-efficacy

H<sub>3</sub> The self-efficacy of employee innovation positively affects the employee innovation behavior

H<sub>4</sub> Employees' innovation self-efficacy plays an intermediary role between employees' perceived entrepreneurial passion and employees' innovation behavior

### 1.4 Study Scope

This study will focus on the employee innovation behavior of start-up enterprises, explore the relationship between the entrepreneurial passion of employees and the employee innovation behavior, introduce the intermediary variable of innovation self-efficacy, and study its influence mechanism from the mechanistic level. Specifically, this study uses the literature research method, questionnaire survey method and empirical research methods, with the employees in the entrepreneurial enterprise.

### 1.5 Definition

**Entrepreneurial passion:** Entrepreneurial passion refers to the intense positive emotions and identity that entrepreneurs display when discovering, creating, and developing a new business opportunity. Although new businesses may lack the advantages of established platforms and capital, charismatic and visionary entrepreneurs can attract employees to join their startup teams. To foster the growth of a new enterprise, entrepreneurs pay special attention to new employees, selecting, appointing,

and guiding them towards success. Entrepreneurs motivate their employees to work together by describing the future of the organization using various means of communication, such as words, language, and choices. When it comes to developing new products, external publicity, and attracting investors, entrepreneurs often take the lead. According to the theory of emotional contagion, the daily interactions between new enterprise employees and entrepreneurs, as well as how they promote their business to others, can influence the emotional experience of their employees, who may mimic the positive emotions of their entrepreneurs. This can encourage new employees to invest in innovative activities, thus adding value to the organization.

**Employee innovation behavior** is a series of processes, such as employees spontaneously identify problems, solve problems, create innovative ideas, actively seek resources, and promote the implementation and promotion of innovative ideas. Scott and Bruce (1994) found that the organizational atmosphere and behavior of employees are important to their creation and new sexual activities. Most management scientists define individual innovation from a process perspective. Scott and Bruce divide individual innovation into three stages: (1) the establishment of problems and the creation of ideas or solutions; (2) the support for their ideas; (3) by the standards or models that produce innovation, they can be spread, manufactured, and used to complete their innovative ideas.

**Innovation self-efficacy** is the concrete manifestation of self-efficacy in the field of innovation. Specifically, self-efficacy is an individual's belief in whether he can create, show sexual performance, and obtain innovative results in his work, which is embodied in the courage to accept challenges and overcome difficulties in innovative work, complete innovative work tasks with confidence and achieve work goals (Tierney & Farmer, 2002). A creative individual has a set of self-core profiles that contribute to creative efforts. Although innovative self-efficacy now belongs to the scope of self-image that defines the creative individual (Mumford & Gustafson, 1988), this

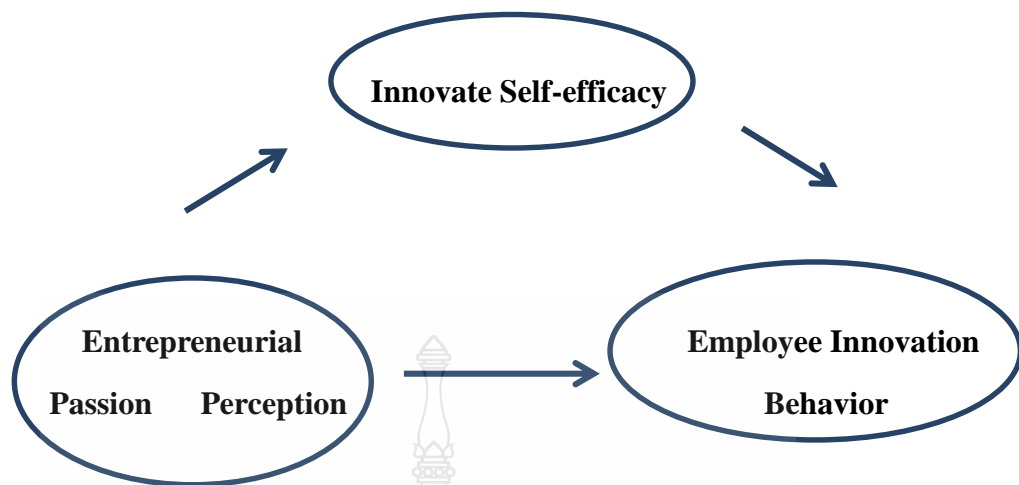


construct is not different from other self-knowledge. Self-assessment and confidence are broad. Self-efficacy is a judgment of competence within a specific domain (Bandura, 1977). Because innovative self-efficacy is directed at creativity, it is different from the general self-efficacy that shows the overall perception of multi-domain competence (Chen, Gully, & Eden, 2001). As an important form of social cognitive theory, innovation self-efficacy is the confidence that can and produce innovation results, which reflects the personal self-belief in innovation activities and the goal expectation of their own innovation performance.

### **1.6 The Conceptual Framework**

This study will explore the relationship between entrepreneurs passion perception and innovation behavior, introducing innovation self-efficacy to employee perception of entrepreneurs passion and the relationship between innovation behavior, build and test "employee perception of entrepreneurs passion innovation self-efficacy employees innovation behavior" mechanism model.

This study uses the following conceptual framework to explore the effects and mechanisms of employees' perceived entrepreneurial passion on employee innovation behavior:



**Figure 1.1** A conceptual framework

### 1.7 Research Contributions

Through this study, it is possible to provide the following research contributions for entrepreneurial enterprises:

1. Explore the relationship mechanism between employees' perceived entrepreneurial passion, self-efficacy of innovation and employees' innovative behavior, to provide certain practical guidance for enterprise management.
2. Put forward methods to improve the passion of entrepreneurs and employees' innovative behavior, to provide reference for enterprises to improve their innovation ability and competitiveness;

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Summary of Research on Entrepreneurial Passion and Entrepreneurial Passion Perception**

Scholars have been researching passion since the 1920s, and it is widely believed that passion is a strong emotion that can stimulate creativity and improve abilities. Social psychology researchers began focusing on passion in the 1990s, concluding that it is a conscious experience that can increase engagement in relevant activities. In the 21st century, scholars have shifted their attention to entrepreneurial passion. While few studies have been conducted on this topic in China, research in foreign countries includes the definition of entrepreneurial passion and how it affects entrepreneurial activities. Despite gaining more attention, research on entrepreneurial passion is still in its early stages.

##### **2.1.1 The connotation of Entrepreneurial Passion**

This study explores the definition of entrepreneurial passion by examining various sources that focus on individual traits, emotions, and motivations. There is currently no widely accepted understanding of what entrepreneurial passion entails, but this review aims to shed light on the topic by analyzing relevant literature.

First, the individual trait perspective. Some scholars study entrepreneurial passion from the perspective of individual characteristics, and they believe that entrepreneurial passion is just like the character of an entrepreneur. The personality traits of entrepreneurs consist of entrepreneurial passion, persistence, and initiative (Baum et al, 2001). Chu Yuxia (2011) believes that individual traits are stable and accompanied by a person, and can make individuals make the same response no matter what circumstances. According to the trait theory, entrepreneurial passion is a stable personality trait, however, the reality is not necessarily the case. In the early stage

of the establishment of start-up enterprises, entrepreneurs often have a very strong entrepreneurial passion, but with the development of start-up enterprises, entrepreneurs are slowly losing their entrepreneurial passion. This situation cannot be explained by the trait theory, because according to the trait theory, entrepreneurial passion, like a person's character, should not disappear over time.

Second, the emotional perspective. More scholars hold a negative attitude towards the trait theory, and they believe that entrepreneurial passion is an emotional expression in the process of entrepreneurship. Emotion is the response of individual psychology to external stimuli, and the influence of people's entrepreneurial passion perception on employees' emotional identity. Mediation effect of positive emotions 11 the comprehensive state of feeling, thinking mode and behavior (Qiao Jianzhong, 2003). Entrepreneurial passion is different from other emotions: entrepreneurial passion is a continuous, positive, and very strong emotion (Cardon et al.2009), and passionate entrepreneurs are usually able to have a clearer understanding of their entrepreneurial identity, and then take a more reasonable behavior.

Third, the motivational perspective. Scholars who study entrepreneurial passion from the perspective of motivation believe that entrepreneurial passion can stimulate entrepreneurs to become more thoughtful, ambitious, and better execution. For entrepreneurs, entrepreneurial passion is a kind of motivation resources, constantly stimulate entrepreneurs, so that they dare not have the slightest slack off. Entrepreneurial passion is an important part of entrepreneurial motivation (Smilor, 1997). Chen et al. (2009) also believe that entrepreneurial passion constantly stimulates the brain and behavior of entrepreneurs, and it is a motivation structure of some specific range.

From the existing research, there is far from a consensus on the definition of the connotation of entrepreneurial passion. Different research perspectives have achieved certain research results, but a scientific theoretical system has not been formed.

The trait theory holds that entrepreneurial passion is as stable as the individual character; but the sentiment theory regards entrepreneurial passion as the emotional experience when entrepreneurs participate in the motivation theory regards entrepreneurial passion as the motivation of entrepreneurs. The definition of entrepreneurial passion from the perspective of emotion is widely accepted in these three perspectives.

### **2.1.2 Entrepreneurial Passion Perception**

In most start-ups, entrepreneurs are frequent and are in direct contact with employees, so in essence, entrepreneurs are likely to affect the motivation and behavior of employees (Ensley et al, 2006). In addition, the development of start-up enterprises has only just started, and all aspects of the enterprise are not particularly stable, so the performance of entrepreneurs on the enterprise has become a greater and more direct impact. For entrepreneurs, entrepreneurs need to create a good vision for their business, and to attract the employees and the resources necessary for the business, they must influence others to enter the vision they have created (Baum et al, 1998).

When entrepreneurs participate in their favorite activities, strong positive emotions will be expressed through body movements, and then perceived by people around them (Chen, 2009), which has a certain impact on them. At present, the research on the perception of entrepreneurial passion is mainly discussed from the perspectives of investors and employees of start-up enterprises (Xie Yaping, 2014).

Entrepreneurial Passion may include harmonious passion, obsessive passion, and dualistic passion. Harmonious passion is characterized by a strong interest and engagement with an entrepreneurial activity, but the activity remains harmonious with other aspects of an entrepreneur's life. Obsessive passion, on the other hand, is characterized by a constant preoccupation with the entrepreneurial activity that becomes all-consuming and detrimental to other aspects of the entrepreneur's life. Dualistic passion involves both harmonious and obsessive passion for the entrepreneurial activity.

Vallerand, R. J. et al. (2003) first to identify the different types of passion, including

harmonious and obsessive passion, they argue that these two forms of passion are distinct and have different outcomes, with harmonious passion being associated more with positive outcomes and obsessive passion with negative outcomes. Gorgievski, M. J. et al. (2017) examines how different types of passion may be related to success criteria among small business owners and find that both harmonious and obsessive passion can be positively related to achievement-oriented success criteria, but that obsessive passion may be more strongly related to non-achievement-oriented success criteria.

To study how entrepreneurial passion affects employees, Cardon (2008) established a theoretical model examining the possibility of others perceiving entrepreneurs' entrepreneurial passion. In this theoretical model, he believes that in their daily work, entrepreneurs can transfer their entrepreneurial passion to their employees through their emotional performance and leadership skills, and then influence them. Only by working harder can entrepreneurs fill their entrepreneurial passion, and this positive emotional performance reduces the possibility of transmitting negative emotions to employees.

According to the scale developed by Cardon et al. (2009), the perception of entrepreneurial passion is divided into three dimensions: innovation passion perception, passion creation perception and passion development perception. In this regard, the relevant literature results are as follows:

1. Creation passion perception: This dimension of EPP refers to an individual's passion for generating creative and novel ideas for a business venture. It involves the ability to identify new opportunities and to be willing to take risks to pursue them. Researchers have found that creation passion is positively related to entrepreneurial intention and venture creation. For example, Al-Jubari and Hussin (2020) found that creation passion had a significant influence on undergraduates' entrepreneurial intention in Iraq.

2. Development passion perception: This dimension of EPP refers to an individual's passion for developing and growing a business, taking it from an idea to a viable and profitable venture. It involves being willing to put in time, effort, and resources to create a well-functioning organization. Research has found that development passion is positively related to the success of a business venture. For instance, Stam and Elfring (2013) found that entrepreneurs who were more passionate about growing their business were more likely to persist in their ventures and achieve greater success.

3. Innovation passion perception: This dimension of EPP refers to an individual's passion for innovation and technological advancement. It involves using new technologies and processes to create new products or services, developing new business models or strategies, and staying ahead of the competition. Research has found that innovation passion is positively related to innovation performance and can help entrepreneurs gain a competitive advantage. For example, Fliess and Guenther (2018) found that passion for innovation among entrepreneurs was positively related to innovation performance.

Overall, research suggests that the three dimensions of EPP - creation passion, development passion, and innovation passion - can play important roles in driving entrepreneurial intention, success, and innovation.

## **2.2 Related Research on Innovative Self-efficacy**

### **2.2.1 Definition of Innovative Self-efficacy**

Bandura In 1977, he proposed the concept of self-efficacy, which refers to the individual's judgment or belief in his ability to complete the task, and some scholars interpreted it as the individual's confidence in completing the task. Innovation self-efficacy is the extension of self-efficacy in the field of innovation. Lu Jingdan (2014) determines innovation self-efficacy and judges their ability to organize and

perform certain innovative behavior; Luo Xi (2015) believes that innovation self-efficacy is the expectation that employees can complete a task creatively. Although scholars have different definitions of innovative self-efficacy, they are all extensions of the concept of self-efficacy, reflecting the individual's judgment or belief about their ability to complete the innovation task.

### **2.2.2 Influential Factors of Innovation**

Self-efficacy Innovation self-efficacy is an extension of the concept of self-efficacy proposed by Bandura in the field of innovation. Bandura's theory holds that success and failure experience, substitution experience, verbal persuasion and other factors will affect self-efficacy. Success or failure experience is the most important factor affecting self-efficacy. Successful experience can improve self-evaluation, while failure experience will reduce self-evaluation. Success or failure experience of self-efficacy will also be affected by the task difficulty, effort and attribution, the more difficult the task, the less effort, more, tend to attribute failure to controllable factors, the stronger the achievement of success, the lower the frustration of task failure, the less the negative impact on self efficacy. Furthermore, alternative experience and verbal persuasion can also affect individual self-efficacy. The alternative experience is the supplement of individual direct experience, and the consequences of others and is one of the main sources of individual experience; verbal persuasion will strengthen or weaken people's belief in their ability.

### **2.2.3 The Impact of Innovative Self-efficacy on Employees' Psychology and Behavior**

The self-efficacy of innovation reflects the individual innovation confidence, and is the attitude and motivation basis of the individual to complete the innovation task. According to social cognition theory (Gu Yuandong, 2010), only when individuals believe that their actions can produce desired effects. Employees with high innovation self-efficacy are more likely to have endogenous innovation motivation (Gao



Peng, 2016). Yang Fu (2012) proposed that employees with higher innovation self-efficacy, the more innovation requirements as a challenge, and the more likely to regard it as an obstacle. In addition to motivation, innovation self-efficacy also completely mediates the influence of supportive human resources practice (Li Ying, 2009) and uncertainty avoidance (Liu Chase, 2016) on employees' innovative behavior, and partly mediates the influence of insider identity perception on employees' innovative behavior. According to the above literature, it can be seen that innovation self-efficacy reflects employees' confidence in their ability to complete innovation needs. The stronger the innovation self-efficacy, the better the employees can generate innovation motivation, and the more likely they are to have higher innovation willingness and innovation behavior level.

#### **2.2.4 Measures of Innovative Self-efficacy**

Measurement tools for innovative self-efficacy, a class of the general self-efficacy scale according to the characteristics of the innovation task. For example, Carmeli and Schaubroeck (2007) adapted Chen's general self-efficacy scale to obtain the innovative self-efficacy scale ( $\alpha = 0.92$ ). Malik (2013) selected some questions from the general self-efficacy scale compiled by Schwarzer, and obtained an innovative self-efficacy scale with five questions. The internal consistency coefficient of the scale was 0.75. The second type is the direct preparation of innovative self-efficacy scales. For example, Tierney and Farner (2002) developed an innovative self-efficacy scale with three topics ( $\alpha = 0.83$ ), focusing on the level of innovative approaches at work. Karwowski (2013) has developed the SSCS scale, and six questions were used to measure innovation self-efficacy ( $\alpha = 0.8$ ).

## **2.3 Overview of Employee Innovation Behavior Research**

### **2.3.1 Concept of Employee Innovation Behavior**

The innovation activities of enterprises cannot be separated from the participation of employees. Therefore, the key to improve the core competitiveness of enterprises is to promote the emergence of employees' innovation behavior. Since the end of the 20th century, with the advent of the information age, scholars began to focus their research on employees and explore how to stimulate their innovative behavior. In recent years, China has paid more and more importance to innovation, and the national strategy is to build an innovative country. Under this international and domestic background, Chinese scholars have gradually begun to pay attention to the research of employees' innovation behavior. In this paper, the relevant research results of some representative domestic and foreign scholars are summarized, as shown in Table 2-1, and summarizes the definition of employees' innovation behavior.

As can be seen from Table 2-1, although scholars at home and abroad have different descriptions of the connotation of employee innovation behavior, most of them are defined from the perspective of process or results, believing that employee innovation behavior is a process or a result. Because this paper regards the employee innovation behavior as a result, so referring to the research of domestic and foreign scholars on its connotation, this paper thinks from the perspective of results, the employee innovation behavior is the employees put the innovation ideas into practice, and finally produce meaningful innovation results for the enterprise.

**Table 2.1** Concept definition of employee innovation behavior

<b>Scholar</b>	<b>concept definition</b>
Scott (1994)	Employees generate ideas and make behaviors that benefit individual, group, and organizational performance, including Ideas.The generation, promotion, and practice of the three stages.
Amabile (1996)	The process of employees producing novel and beneficial ideas and putting them into practice.
Kleysen (2001)	can be conceptualized as a personal trait, namely, generating, introducing, or applying beneficial innovations at all organizational levels, including improving working relationships, improving work productivity, and generating new product technologies
Wu Zhiguo (2007)	Employees use organizational resources to put forward valuable new ideas or create valuable products with their own knowledge and ability.
Liu Yun et al. (2009)	employees produce, introduce, and apply beneficial novel ideas or things in the process of organizing activities. Including self-development or the introduction of new ideas or technologies to change existing management procedures and improve work efficiency.
Lian Xin et al. (2013)	Individual innovation behavior is a continuous process involving multiple steps, which is a personal action that is generated, introduced and applied to innovation at any level of the enterprise.

### **2.3.2 Dimension of Employee Innovation Behavior**

Scholars have their own explanations for the concept of employees' innovative behavior, which is fully reflected in the dimensional division. In general, scholars divide employee innovation behavior into two structures: single-dimensional and multi-dimensional. The research of the former regards it as the result, while the latter takes the innovation process as the essence, and several dimensions represent several stages in the process. Scott and Bruce (1994) viewed employee innovation behavior as a single-dimensional structure and compiled the measurement scale. Chinese scholars Lu Xiaojun and Zhang Guoliang (2007), based on the Chinese situation, determined the two dimensions of the innovative behavior of Chinese employees by the conception and implementation through the method of questionnaire survey. Kleysen And Street (2001) that single dimension structure cannot fully embody the full connotation of innovation behavior, in order to the main dimension of employee innovation behavior segmentation and expand, they associated with the theme correlation degree of 28 articles for the system research, thus the employee innovation behavior into opportunity to seek, conception, evaluation, support, conception application five dimensions of . The above results show that domestic and foreign scholars have not reached a consensus on the dimension classification of employees' innovation behavior. As explained above, the innovation behavior of employees is that employees put innovative ideas into practice and finally produce meaningful innovation results for the enterprise. Therefore, in terms of dimension division, Kleysen and Street innovative behavior scales revised by Huang Zhikai (2004) are adopted, which are divided into two dimensions: the behavior of generating innovative ideas and the behavior of implementing innovative ideas. Huang Zhikai (2004) piont that the scale can be useful for assessing innovative behavior in the context of Chinese organizations and for identifying factors that promote or inhibit innovation.

### **2.3.3 Related Research on Employees' Innovation Behavior**

This paper divides the factors affecting employee innovation behavior into individual and organizational layers.

1) Individual factors Scholars in the early psychological field focus the research on the influencing factors of employees' innovation behavior on employees with innovative characteristics, believing that the innovation ability of employees depends on relatively stable individual characteristics such as personality and cognitive style. Scholars have put forward the "Big Five Personality Theory", which can roughly describe individual personality, believing that in the "Great Five Personality", individuals with other four personality traits tend to show high innovative behavior. In addition, Zhang Zhengang et al. (2016) believe that individuals with active personality can be less restricted by the environment, and prefer to find ways to solve problems through active behavior, and this personality trait can have a significant impact on innovative behavior. Cognitive style refers to the thinking mode that individuals show when treating and dealing with problems. Scott and Bruce (1994) believe that employees with innovative cognitive style can not be affected by the inherent thinking habits when dealing with problems, so they will also have a stronger sense of innovation.

With the diversification of research progress, many scholars believe that stable individual characteristics are difficult to change, and do not necessarily have a direct and significant relationship with innovation behavior, so they begin to shift their research focus to psychological factors that are easy to be influenced by the outside world, such as individual work motivation, psychological capital, innovation self-efficacy, etc. Amabile et al. (1996) scholars pointed out that internal and external motives have different effects on employees' innovative behavior. Liu Yaozhong (2008) divided employee psychological authorization into four dimensions: self-decision-making, work value, self-efficacy and goal internalization, and proposed

that psychological authorization has a positive impact on personal innovation behavior. Wang Yanfei et al. (2019) also pointed out that psychological capital, as a psychological resource of individuals, can promote employees to invest resources into activities that can generate returns and stimulate innovative behaviors. Innovative self-efficacy is the spiritual driving force to promote employees to implement innovative ideas into production. Jia Jinan et al. (2020) take the new generation of employees of the enterprise as the research object, explore the formation and function mechanism of innovative self-efficiency, and put forward innovative self-efficiency. Employees with high efficiency will actively complete their tasks, and put forward innovative ideas in key processes to show innovative behavior.

2) Organizational factors Scholars at home and abroad believe that in addition to individual personality traits and psychological factors will affect employees' innovative behavior, work characteristics will also have an important impact on them. Work characteristics refer to the characteristics that this work is different from other work. Enterprises should do a good job in the optimization design of the work, because the characteristics of the work itself will affect the innovation performance of employees. Challenge, complex and independent tasks can produce unique pressure on employees and make them show higher innovation behavior. Some scholars believe that the establishment of higher work standards does not mean that employees must have more innovation achievements. The relationship between work requirements and innovation behavior is inverted U-shaped behavior, and the innovation output will be reduced beyond a certain limit. Xu Hong et al. (2021) investigated the employees of service enterprises and found that challenging work pressure is beneficial to employees' innovation behavior, while the effect of blocking work pressure is just opposite.

As a member of the enterprise, the enterprise environment itself can influence the innovation behavior of employees. On this basis, Ma Zhanjie (2020) points out that cognitive diversity can also affect employees' innovative behavior.

Specifically, employees in a diverse atmosphere will try different ways to solve problems, and communicate and share information with other colleagues, so as to improve their own innovation ability. Bo-lin wang (2021) that enterprises increasing innovation resources, such as increasing research and development costs, provide employees with training opportunities, etc., help to create a positive organization atmosphere, and form an innovative organization culture, when employees feel the enterprise so attaches great importance to and support innovation, will be encouraged, active innovation.

In addition, scholars believe that leaders are also closely linked to employees' innovative behavior. Su Yi and Liang Dezhi (2021) believe that inclusive leaders tend to trust employees, pay attention to two-way interaction with employees, be good at listening to their innovative ideas, and encourage them to turn their ideas into reality, so as to promote the output of their innovative results. Li Wei and Mei Jixia (2018), based on the sample analysis of Chinese state-owned enterprises, pointed out that the empowerment behavior of leaders can positively predict the innovation behavior of employees. Yang Changjin et al. (2021) believe that the abusive management of leaders will make subordinates feel that they are not valued, weaken the sense of belonging of employees, thus reduce the active behaviors that attract the attention of the organization, do not do things conducive to the organization, and have a negative impact on the innovative behavior of employees. Feng Jiao (2019) based on Chinese situation, through qualitative research found that there are trust support, rational contract and passive execution three different types of leadership-employee relations, and through empirical research found that the first two types of leadership members have positive impact on employee innovation behavior, and passive execution relationship has a negative impact on employee innovation behavior.

## **CHAPTER 3**

### **RESEARCH METHODS**

#### **3.1 Study Subjects**

In this study, the employees of new enterprises in Jiangxi province were taken as the subjects, and their evaluation of entrepreneurial passion perception, self-efficiency of innovation and employees' innovation behavior were investigated, and the questionnaire was distributed and returned. The demographic data are shown in the figure below, which is in line with the actual situation.

#### **3.2 Research Design**

35 measurement items were set in this study, Corresponding to the 3 variables and 6 dimensions, Among them, entrepreneurial passion perception includes three dimensions, Its Cronbach's Alpha of 0.893, The Cronbach's Alpha of creating passion perception is 0.877, the Cronbach's Alpha of developing passion perception is 0.89, and the Cronbach's Alpha of developing innovative passion perception is 0.846; The single dimension of innovation and self-efficacy, Its Cronbach's Alpha is 0.926; Innovation behavior contains 2 dimensions, Its Cronbach's Alpha of 0.898, The Cronbach's Alpha is 0.909, the Cronbach's Alpha for executing the innovative idea behavior is 0.833, The Cronbach's Alpha coefficients of each latent variable met the basic criterion of greater than 0.7. The questionnaire used in this study had good reliability.

##### **1. The Entrepreneurial Passion Perception scale**

Using Cardon (2009) development of scale, divided into innovative passion perception, create passion perception and development passion perception three dimensions, 15 topics, 5 scoring system, 1-5 respectively said from "completely inconsistent" to "completely meet" the different degrees of options, the higher the score shows that the higher the employees perceived entrepreneurial passion.



**Table 3.1** The Entrepreneurial Passion Perception scale

order number	title	Full Uncompliant				
		Full compliant				
1	Entrepreneurs are happy to look for new ways to commercialize the unsaturated market demand	1	2	3	4	5
2	Entrepreneurs enjoy exploring new development ideas for their products or services	1	2	3	4	5
3	Entrepreneurs feel energetic when developing prototype products	1	2	3	4	5
4	Entrepreneurs are very actively thinking about how to make existing products or services better	1	2	3	4	5
5	Entrepreneurs are very excited to look for new development opportunities	1	2	3	4	5
6	Entrepreneurs are very excited to create a new company	1	2	3	4	5
7	Entrepreneurs feel energetic to owning a new company	1	2	3	4	5
8	Entrepreneurs are very happy to create new companies	1	2	3	4	5
9	Entrepreneurs are very excited to create something of value	1	2	3	4	5
10	Entrepreneurs enjoy creating new businesses through the success of new businesses	1	2	3	4	5
11	Entrepreneurs are very active in persuading others to invest in their businesses	1	2	3	4	5
12	Entrepreneurs like to find the right people to market their products or services	1	2	3	4	5
13	Entrepreneurs are happy to gather great people to work for them	1	2	3	4	5
14	Entrepreneurs enjoy commercializing new products or services	1	2	3	4	5
15	Entrepreneurs are very active in urging themselves and their employees to work hard to make the company better	1	2	3	4	5

## 2. Innovate the self-efficacy scale

The innovative self-efficacy scale compiled by Carmeli and Schaubroeck (2007) is adopted, with 8 questions in a single dimension and a 5-level scoring system. 1-5 respectively indicate the different options from "completely inconformity" to "fully conforming". The higher the score, the higher or stronger the belief in innovation efficiency.

**Table 1.2** Innovate the self-efficacy scale

order number	title	Full Uncompliant				
		Full compliant				
1	I can creatively accomplish most of the goals I set for myself	1	2	3	4	5
2	When faced with a difficult task, I am sure that I can do it creatively	1	2	3	4	5
3	Usually, I think I can be creative with results that are important to me	1	2	3	4	5
4	I believe that as long as I make up my mind to make innovative efforts, the vast majority will succeed	1	2	3	4	5
5	I can overcome many challenges creatively	1	2	3	4	5
6	I am confident that I can creatively many different tasks	1	2	3	4	5
7	I can do most tasks creatively compared to others	1	2	3	4	5
8	Even if the task is difficult, I will do it creatively	1	2	3	4	5

### 3. Innovative Behavior Scale

Adopted by huang (2004) revised Kleysen and Street innovation behavior scale, divided into innovative idea of behavior and perform the innovation idea of two dimensions, 12 topics, 5 scoring system, 1-5, respectively from the "completely inconsistent" to "fully meet" different degree of options, the higher the score shows that the higher the employee innovation behavior.

**Table 3.2** Innovative Behavior Scale

order number	title	Full Uncompliant				
		Full compliant				
1	I will explore opportunities to improve the organization, department, workflow, or service	1	2	3	4	5
2	I will pay attention to non-routine issues in the work, department, organization, or market	1	2	3	4	5
3	I will propose ideas or solutions to the problem	1	2	3	4	5
4	I will look at things from different angles to get more insight	1	2	3	4	5
5	I will test out the new ideas or problem-solving methods to understand the unmet needs	1	2	3	4	5
6	I will evaluate the pros and cons of the new idea	1	2	3	4	5
7	I will try to convince others of the importance of new ideas or solutions	1	2	3	4	5

**Table 3.3** Innovative Behavior Scale

order number	title	Full Uncompliant Full compliant				
		1	2	3	4	5
8	I will take the initiative to promote the idea and give it a chance to be implemented	1	2	3	4	5
9	I would risk myself to support the new idea	1	2	3	4	5
10	I will engage in changes that may produce benefits	1	2	3	4	5
11	When applying the new operation form to the workflow, technology, product or service, I will try to correct the problems of the new method	1	2	3	4	5
12	I will implement new ideas to improve workflow, technology, products or services in a daily routine	1	2	3	4	5

### 3.3 Sample and Data Acquisition

To ensure the reliability of data collection and improve the reliability and validity of the designed questionnaire in the institute, after the preliminary questionnaire design, a pre-survey was conducted, problems were found in time, and a formal questionnaire was formed after improvement and revision.

1. In the first step, the author invited tutors and students to evaluate the designed questionnaire, carefully think about their questions, and revised the unreasonable indicators in the questionnaire;

2. In the second step, the author visited the new enterprises in the local city incubators, invited the employees to participate in the questionnaire survey, and modified some obscure words and unreasonable expressions. A formal questionnaire

was conducted on February 9, 2023, and an electronic questionnaire was used in this study. The author randomly selected qualified start-up enterprises in the enterprise directory in Jiangxi Province. After contacting their enterprise leaders, they sent electronic questionnaire to collect data through WeChat QR code; followed up during the survey and communicated with the investigated employees to ensure the smooth filling of the questionnaire.

For the questionnaire that does not meet the requirements, the principles are as follows: first, if the employee not the start-up enterprise is found, the questionnaire will be abandoned; second, the questionnaire has a large range of omission and blank, and excessive missing values; third, the staff filling in the questionnaire has incorrect attitude, and even the whole questionnaire is the same option. The data collected by these questionnaires are unreliable and may lead to errors in the analysis results, and therefore they will be eliminated.

Finally, a total of 450 questionnaires were distributed, 405 were recovered, and 388 were valid questionnaires

### **3.4 Analysis Methods**

The data analysis of this study will use SPSS21.0 and AMOS17.0 as statistical analysis tools. After completing the data collection, the samples collected by the formal investigation will be analyzed by descriptive analysis, reliability and validity test, correlation analysis, SEM test and other methods to test the accuracy of the research hypothesis and theoretical model. The specific analysis methods are provided as follows:

1) Descriptive statistical analysis. Descriptive analysis is to describe the data of relevant variables in the sample, such as the distribution and characteristics of collected data, discrete and central trend of the distribution table of frequencies. This paper mainly understands the basic situation of the survey sample through the frequency number distribution analysis.

2) Reliability analysis. Scale reliability has internal reliability and external reliability, and reliability analysis is an effective analysis method to test whether the comprehensive evaluation system has deviation, reliability and stability. We mainly used the (Cronbach's  $\alpha$ ) coefficient to test the reliability of the scale, and most researchers chose to use the Cronbach's Alpha coefficient. Therefore, this study used SPSS21.0 statistical software and used Cronbach's  $\alpha$  coefficient to reflect the reliability of each scale, and the higher the coefficient, the better the reliability of the scale.

3) Validity analysis. In order to ensure the scientific nature of the scale, a pre-survey was also conducted on a small range of samples, adjusting the obscure words in the questionnaire and the sentences that were easy to make the respondents confused. For testing of scale validity, confirmatory factor analysis of AMOS17.0 was chosen for this study.

4) Correlation analysis. Correlation analysis is mainly designed to determine whether there is some dependence between the study variables and the degree of correlation and the direction of correlation, which is the basis of regression analysis. This study mainly uses Pearson correlation analysis to test the correlation between variables such as entrepreneurial passion perception, innovation self-efficacy, and employee innovation behavior.

5) Structural equation model analysis. Although the correlation analysis can test whether there is a correlation between the study variables, the causal relationship of the study variables cannot be explored in depth. The Amos structure equation can make up for this deficiency, which is conducive to further indicating the direction of the relationship between variables and sorting out the causal logical relationship between variables. Therefore, in order to test the accuracy of the research hypothesis and model, This paper mainly uses the structural equation model analysis to establish the structural equation model for the intermediary utility of entrepreneurial passion perception, employee innovative behavior and innovative self-efficacy, and uses Amos17.0 software.

**CHAPTER 4**  
**RESEARCH RESULTS**

**4.1 Analysis of the Pre-survey Results**

**4.1.1 Reliability Analysis**

This article uses the SPSS.21 The reliability coefficient, CIC values and the reliability coefficient after the deletion of each dimension are calculated to determine whether the empirical data of each latent variable meets the requirements of internal consistency.

**Table 4.1** Reliability analysis of the table variables

variable	dimension	Measure the item	CITC	Delete the Cronbach's Alpha value for the item	Cronbach's Alpha
Entrepreneurs hip passion perception $\alpha=0.887$	Create passion perception	A1	0.852	0.934	0.946
		A3	0.813	0.938	
		A6	0.83	0.936	
		A8	0.887	0.929	
		A11	0.804	0.939	
		A14	0.824	0.937	
	Develop passion perception	A2	0.755	0.906	0.919
		A4	0.737	0.909	
		A7	0.775	0.904	
		A10	0.759	0.905	
		A12	0.747	0.907	
		A15	0.856	0.892	

**Table 4.1** Reliability analysis of the table variables

variable	dimension	Measure the item	CITC	Delete the Cronbach's Alpha value for the item	Cronbach's Alpha			
	Innovative passion perception	A5	0.764	0.837	0.881			
		A9	0.822	0.785				
		A13	0.725	0.872				
Innovative self-efficacy		B1	0.868	0.939	0.95			
		B2	0.823	0.942				
		B3	0.742	0.947				
		B4	0.774	0.945				
		B5	0.854	0.94				
		B6	0.744	0.947				
		B7	0.827	0.942				
		B8	0.883	0.938				
Innovative behavior $\alpha=0.924$	Execute innovative conceived behavior	C1	0.666	0.928	0.932			
		C2	0.687	0.927				
		C5	0.785	0.921				
		C6	0.733	0.925				
		C7	0.785	0.921				
		C8	0.75	0.923				
		C9	0.75	0.923				
		C11	0.723	0.925				
		C12	0.837	0.918				
		Generduce innovative conceived behavior		C3		0.795	0.824	0.886
				C4		0.761	0.854	
				C10		0.783	0.833	

According to the reliability analysis above, 35 measurement items were set in this study, Corresponding to the 3 variables and 6 dimensions, Among them, entrepreneurial passion perception includes three dimensions, Its Cronbach's Alpha of 0.887, The Cronbach's Alpha of creating passion perception is 0.946, the Cronbach's



Alpha of developing passion perception is 0.919, and the Cronbach's Alpha of developing innovative passion perception is 0.881; One-dimension of innovation and self-efficacy, Its Cronbach's Alpha is 0.950; Innovation behavior contains 2 dimensions, Its Cronbach's Alpha of 0.924, The Cronbach's Alpha executing the innovative idea behavior is 0.932, the Cronbach's Alpha producing the innovative idea behavior is 0.886, The Cronbach's Alpha coefficients of each latent variable met the basic criterion of greater than 0.7.

It is clear that the questionnaire used in this study had good reliability. In addition, the CIT(corrected item total correlation) between the observed variables and their latent variables meets the requirement of greater than 0.5, indicating that the item setting of each latent variable is good and the reliability of the questionnaire is good. The results in the above table show that the overall Cronbach's Alpha coefficient of each item is not improved, so it shows that each item is set well.

#### 4.1.2 Validity Analysis

This article applies the spss.21 Software, to test the composition of each dimension.

**Table 4.2** KMO and Bartlett's tests

KMO		0.796
	Approximate chi square	2858.157
The sphericity test of the Bartlett	df	595
	Sig.	0.000

The test results showed that the KMO test value of the survey data was 0.796, greater than 0.70, and the questionnaire is suitable for factor analysis. The results of Bartlett sphericity test show that the approximate chi-square value is 2858.157 and the probability of significance is 0.000 ( $P < 0.01$ ), so the null hypothesis of Bartlett sphericity test is rejected and the scale is suitable for factor analysis, so the validity structure is good.

**Table 4.3** Total variance explained

element	Initial eigenvalue			Extract the squared sum and load			Rotary square sum loading		
	amount	% Of the variance	accumulate %	amount	% Of the variance	accumulate %	amount to	% Of the variance	accumulate %
1	11.365	32.472	32.472	11.365	32.472	32.472	6.21	17.743	17.743
2	6.062	17.319	49.791	6.062	17.319	49.791	5.939	16.97	34.713
3	3.212	9.177	58.968	3.212	9.177	58.968	4.864	13.896	48.609
4	2.453	7.008	65.976	2.453	7.008	65.976	4.386	12.532	61.142
5	2.112	6.034	72.009	2.112	6.034	72.009	2.552	7.291	68.432
6	1.173	3.35	75.36	1.173	3.35	75.36	2.425	6.927	75.36
7	0.963	2.753	78.112						
8	0.721	2.061	80.173						
9	0.651	1.861	82.034						
10	0.586	1.675	83.71						
11	0.572	1.635	85.345						
12	0.529	1.512	86.857						

**Table 4.3** Total variance explained

element	Initial eigenvalue			Extract the squared sum and load			Rotary square sum loading		
	amount	% Of the variance	accumulate %	amount	% Of the variance	accumulate %	amount to	% Of the variance	accumulate%
13	0.481	1.376	88.233						
14	0.406	1.159	89.391						
15	0.379	1.084	90.475						
16	0.362	1.034	91.509						
17	0.333	0.952	92.461						
18	0.307	0.877	93.338						
19	0.291	0.833	94.17						
20	0.231	0.66	94.83						
21	0.226	0.647	95.477						
22	0.203	0.581	96.058						
23	0.195	0.558	96.616						
24	0.168	0.481	97.097						



**Table 4.3** Total variance explained

element	Initial eigenvalue			Extract the squared sum and load			Rotary square sum loading		
	amount	% Of the variance	accumulate%	amount	% Of the variance	accumulate%	amount	% Of the variance	accumulate%
25	0.162	0.463	97.56						
26	0.142	0.406	97.967						
27	0.131	0.376	98.342						
28	0.117	0.333	98.676						
29	0.11	0.314	98.99						
30	0.099	0.284	99.273						
31	0.084	0.24	99.513						
32	0.063	0.18	99.693						
33	0.052	0.148	99.841						
34	0.038	0.107	99.948						
35	0.018	0.052	100						

During the factor analysis, principal component analysis (Principal Factor Analysis) was used to extract 6 common factors with eigenvalue greater than 1. It was found that the total variance interpretation rate of the 6 factors was 75.36%, greater than 60%, proving the good validity of the scale.

**Table 4.4** Factor analysis results

Measure the item	element					
	1	2	3	4	5	6
A1	0.068	-0.049	0.89	0.113	-0.04	0.08
A3	0	0.044	0.859	0.105	0.023	0.081
A6	-0.013	0.084	0.872	0.14	0.116	-0.021
A8	0.082	-0.026	0.887	0.256	-0.046	0.034
A11	-0.008	0.047	0.843	0.185	0.018	0.127
A14	0.097	-0.011	0.861	0.201	0.018	-0.127
A2	0.06	-0.005	0.267	0.778	0.143	-0.171
A4	0.032	0.098	0.089	0.833	-0.167	0.13
A7	0.013	0.063	0.157	0.823	0.078	-0.004
A10	-0.053	0.039	0.225	0.802	0.055	-0.025
A12	0.027	0.153	0.136	0.826	-0.11	0.144
A15	0.06	0.063	0.14	0.875	0.129	-0.145
A5	0.32	0.094	0.105	0.015	0.198	0.792
A9	0.28	0.281	0.128	-0.079	0.246	0.769
A13	0.26	0.171	-0.052	-0.028	0.381	0.692
B1	0.845	0.186	0.056	0.03	0.26	0.114
B2	0.792	0.329	0.016	0.049	0.084	0.135
B3	0.761	0.147	-0.03	0.007	0.224	0.118
B4	0.754	0.347	0.051	-0.056	0.056	0.099
B5	0.866	0.139	0.091	0.054	0.147	0.12
B6	0.751	0.246	-0.018	0.014	0.012	0.157
B7	0.812	0.295	0.065	0.037	0.089	0.085
B8	0.876	0.219	0.042	0.044	0.084	0.124
C1	0.284	0.699	-0.048	-0.056	0.149	-0.086

**Table 4.4** Factor analysis results

Measure the item	element					
	1	2	3	4	5	6
C2	0.179	0.708	-0.144	-0.011	0.386	-0.1
C5	0.22	0.748	0.093	0.081	0.195	0.258
C6	0.206	0.795	-0.068	0.122	-0.072	-0.001
C7	0.232	0.764	0.052	0.194	0.076	0.202
C8	0.336	0.726	0.153	-0.057	0.125	0.086
C9	0.179	0.739	-0.051	0.184	0.146	0.168
C11	0.142	0.799	0.081	0.087	-0.036	0.004
C12	0.281	0.781	0.064	-0.004	0.116	0.355
C3	0.255	0.221	-0.008	0.086	0.787	0.259
C4	0.271	0.348	0.125	0.049	0.683	0.245
C10	0.242	0.11	0.028	0.011	0.824	0.245

Factor rotation was performed with orthogonal rotation by maximum variance, classifying the 35 problem options as 6 class factors. The load of each measurement item is higher than 0.5, and there is no high double factor load; and the measurement items under each dimension are aggregated together according to the theoretical distribution, proving that the questionnaire has good content validity. According to the above reliability and validity results, this questionnaire is well set up and can be further investigated as a formal measurement questionnaire.

## 4.2 Analysis of the Formal Survey Results

### 4.2.1 Population Analysis

**Table 4.5** Descriptive statistics of the basic information

Project	Class	Frequency	Percentage
gender	male	206	53.1
	female	182	46.9
marriage	married	122	31.4
	unmarried	251	64.7
	dissociation	15	3.9
degree of education	High school and below	32	8.2
	junior college	98	25.3
	undergraduate course	175	45.1
	Master's degree or above	83	21.4
working life	5 Years and below	47	12.1
	5-10 Years	174	44.8
	10-15 Years	110	28.4
	15 Years and above	57	14.7
professional ranks and titles	elementary	129	33.2
	middle rank	214	55.2
	senior	45	11.6

A total of 400 questionnaires were collected in this survey. Through the examination of the questionnaire, invalid questionnaires that failed the lie test, only chose the same option and had certain rules were eliminated. Finally, 388 questionnaires were adopted, and the effective recovery rate of the questionnaire reached 90%. The personal information of valid samples is shown in Table 4.1. In terms of gender, men, 46.9% in women, 12.1% in 5 years or less, 44.8% in 5-10 years, 28.4% in 10-15 years,

15 years, 14.7%; in terms of marital status, unmarried, 64.7%, 31.4% were married, 3.9% were divorced. In terms of educational degree, bachelor's degree accounts for the majority, accounting for 45.1% of total respondents, including 21.4% for master or above, 33.5% for junior college or below; in terms of professional title, 33.2%, intermediate, 55.2% and senior 11.6%.

#### 4.2.2 Common Method Deviation Test

The most used Harman's univariate method was chosen to test the common method bias, as shown in the results in the table below.

**Table 4.6** Common Methods for deviation test

element	Initial eigenvalue			Extract the squared sum and load		
	am	% Of	accu	am	% Of the	accu
	ount to	the variance	multate%	ount to	variance	multate%
1	12.272	35.063	35.063	12.272	35.063	35.063
2	3.359	9.597	44.659	3.359	9.597	44.659
3	2.067	5.905	50.564	2.067	5.905	50.564
4	1.961	5.603	56.167	1.961	5.603	56.167
5	1.863	5.324	61.491	1.863	5.324	61.491
6	1.315	3.756	65.247	1.315	3.756	65.247
...	...	...	...	...	...	...
35	0.14	0.399	100			

According to the recommendations of Podsakoff et al. (2003), this study conducted a factor analysis of all items and using the principal component analysis (i. e., Harman single factor test) to evaluate the impact of common method bias. The analysis showed that the largest factor variance interpretation rate of unrotation was 35.063%, well below 40%, indicating that no single factor explaining the vast part of the variation, that is, there is no serious common method bias in this study.



### 4.2.3 Reliability Analysis

This article uses the SPSS.21 The reliability coefficient, CIC values and the reliability coefficient after the deletion of each dimension are calculated to determine whether the empirical data of each latent variable meets the requirements of internal consistency.

**Table 4.7** Reliability analysis of the variables

variable	dimension	Measure the item	CITC	Delete the Cronbach 's Alpha value for the item	Cronbach 's Alpha
Entrepreneurship passion perception $\alpha=0.893$	Create passion perception	A1	0.699	0.853	0.877
		A3	0.668	0.859	
		A6	0.614	0.867	
		A8	0.652	0.861	
		A11	0.698	0.854	
	Develop passion perception	A2	0.732	0.866	0.89
		A4	0.652	0.879	
		A7	0.661	0.877	
		A10	0.693	0.873	
		A12	0.721	0.868	
	Innovative passion perception	A15	0.785	0.858	0.846
		A5	0.742	0.756	
		A9	0.724	0.773	
		A13	0.671	0.823	

**Table 4.7** Reliability analysis of the variables

variable	dimension	Me asure the item	CITC	Delete the Cronbach 's Alpha value for the item	Cron bach's Alpha	
Innovative self-efficacy		B1	0.833	0.91	0.926	
		B2	0.78	0.914		
		B3	0.679	0.922		
		B4	0.699	0.92		
		B5	0.76	0.916		
		B6	0.673	0.922		
		B7	0.739	0.917		
		B8	0.826	0.91		
Innovative behavior $\alpha=0.898$	Execute innovative conceived behavior	C1	0.641	0.902	0.909	
		C2	0.627	0.902		
		C5	0.705	0.897		
		C6	0.725	0.896		
		C7	0.676	0.899		
		C8	0.692	0.898		
		C9	0.687	0.898		
		C1	0.681	0.899		
		1				
		2	C1	0.751		0.894
Generduce innovative conceived behavior		C3	0.715	0.748	0.833	
		C4	0.693	0.77		
		C1	0.674	0.788		
		0				

According to the reliability analysis results of the above table, 35 measurement items were set up in this study, Corresponding to the 3 variables and 6

dimensions, Among them, entrepreneurial passion perception includes three dimensions, Its Cronbach's Alpha of 0.893, The Cronbach's Alpha of creating passion perception is 0.877, the Cronbach's Alpha of developing passion perception is 0.89, and the Cronbach's Alpha of developing innovative passion perception is 0.846; One-dimension of innovation self-efficacy, Its Cronbach's Alpha is 0.926; Innovation behavior contains 2 dimensions, Its Cronbach's Alpha of 0.898, The Cronbach's Alpha is 0.909, the Cronbach's Alpha for executing the innovative idea behavior is 0.833, The Cronbach's Alpha coefficients of each latent variable met the basic criteria of greater than 0.7, The questionnaire reliability was good.

In addition, the TC (corrected total correlation) between the observed variables and their latent variables meets the requirement of greater than 0.5, the item of each latent variable is set well, and the questionnaire reliability is good. At the same time, by excluding the observation variables, the specific method is to delete each variable once. After deleting, the overall Cronbach's Alpha coefficient of each item is not improved, and each item is well set.

#### 4.2.4 Validity Analysis

This article applies the spss.21 Software, to test the composition of each dimension.

**Table 4.8** KMO and Bartlett's tests

<b>KMO</b>		<b>0.927</b>
	Approximate chi square	8310.757
The sphericity test of the Bartlett	df	595
	Sig.	0.000

The test results show that the KMO test value of the survey data is 0.927, greater than 0.70, indicating that the questionnaire is suitable for factor analysis. The results of Bartlett sphere test show that the approximate chi square value is 8310.757

and the probability of significance is 0.000 ( $P < 0.01$ ), so the null hypothesis of Bartlett sphere test is rejected, indicating that the scale is suitable for factor analysis, so the validity structure is good.

**Table 4.9** Total variance explained

element	Initial eigenvalue			Extract the squared sum and load			Rotary square sum loading		
	amount to	% Of the variance	accumulated%	amount to	% Of the variance	accumulated%	amount to	% Of the variance	accumulated%
1	12.272	35.063	35.063	12.272	35.063	35.063	5.22	14.914	14.914
2	3.359	9.597	44.659	3.359	9.597	44.659	5.204	14.868	29.782
3	2.067	5.905	50.564	2.067	5.905	50.564	3.912	11.178	40.96
4	1.961	5.603	56.167	1.961	5.603	56.167	3.902	11.148	52.108
5	1.863	5.324	61.491	1.863	5.324	61.491	2.304	6.583	58.691
6	1.315	3.756	65.247	1.315	3.756	65.247	2.295	6.556	65.247
7	0.854	2.44	67.687						
8	0.782	2.233	69.921						
9	0.72	2.058	71.979						
10	0.701	2.003	73.982						
11	0.653	1.866	75.848						
12	0.62	1.772	77.62						
13	0.569	1.626	79.246						
14	0.565	1.614	80.86						
15	0.499	1.425	82.285						
16	0.483	1.381	83.666						

**Table 4.9** Total variance explained

element	Initial eigenvalue		Extract the squared sum and load			Rotary square sum loading	
	amount to	% Of the variance	amount to	% Of the variance	accumulate %	amount to	% Of the variance
17	0.462	1.32	84.986				
18	0.44	1.258	86.244				
19	0.399	1.141	87.385				
20	0.387	1.106	88.49				
21	0.374	1.067	89.558				
22	0.363	1.036	90.594				
23	0.346	0.989	91.583				
24	0.34	0.97	92.553				
25	0.301	0.861	93.414				
26	0.292	0.835	94.249				
27	0.286	0.816	95.065				
28	0.275	0.786	95.851				
29	0.255	0.73	96.581				
30	0.249	0.71	97.291				
31	0.229	0.654	97.945				
32	0.216	0.618	98.563				
33	0.187	0.535	99.098				
34	0.176	0.504	99.601				
35	0.14	0.399	100				

In the process of factor analysis, principal component analysis (Principal Factor Analysis) was used to extract 6 common factors with eigenvalue greater than 1. It was found that the total variance interpretation rate of 6 factors was 65.247%, greater than 60%, and the validity of the scale was good.

**Table 4.10** Factor analysis results

Measure the item	element					
	1	2	3	4	5	6
A1			0.751			
A3			0.759			
A6			0.663			
A8			0.73			
A11			0.764			
A14			0.83			
A2				0.716		
A4				0.693		
A7				0.72		
A10				0.709		
A12				0.74		
A15				0.813		
A5						0.813
A9						0.801
A13						0.784
B1	0.782					
B2	0.734					
B3	0.62					
B4	0.697					

**Table 4.10** Factor analysis results

Measure the item	element					
	1	2	3	4	5	6
B5	0.774					
B6	0.666					
B7	0.715					
B8	0.818					
C1		0.695				
C2		0.707				
C5		0.647				
C6		0.702				
C7		0.653				
C8		0.67				
C9		0.682				
C11		0.711				
C12		0.726				
C3					0.792	
C4					0.807	
C10					0.826	

For factor rotation by orthogonal rotation by the maximum variance method, 35 question options can be classified as 6 factors, and the load of each measurement item is higher than 0.5. There is no high double factor load. The measurement items under each dimension are aggregated together according to the theoretical distribution, and the validity of the questionnaire content is very good.

### 4.2.5 Validity Test-AmOS Confirmatory Factor Analysis

Fig Confirmatory factor analysis model

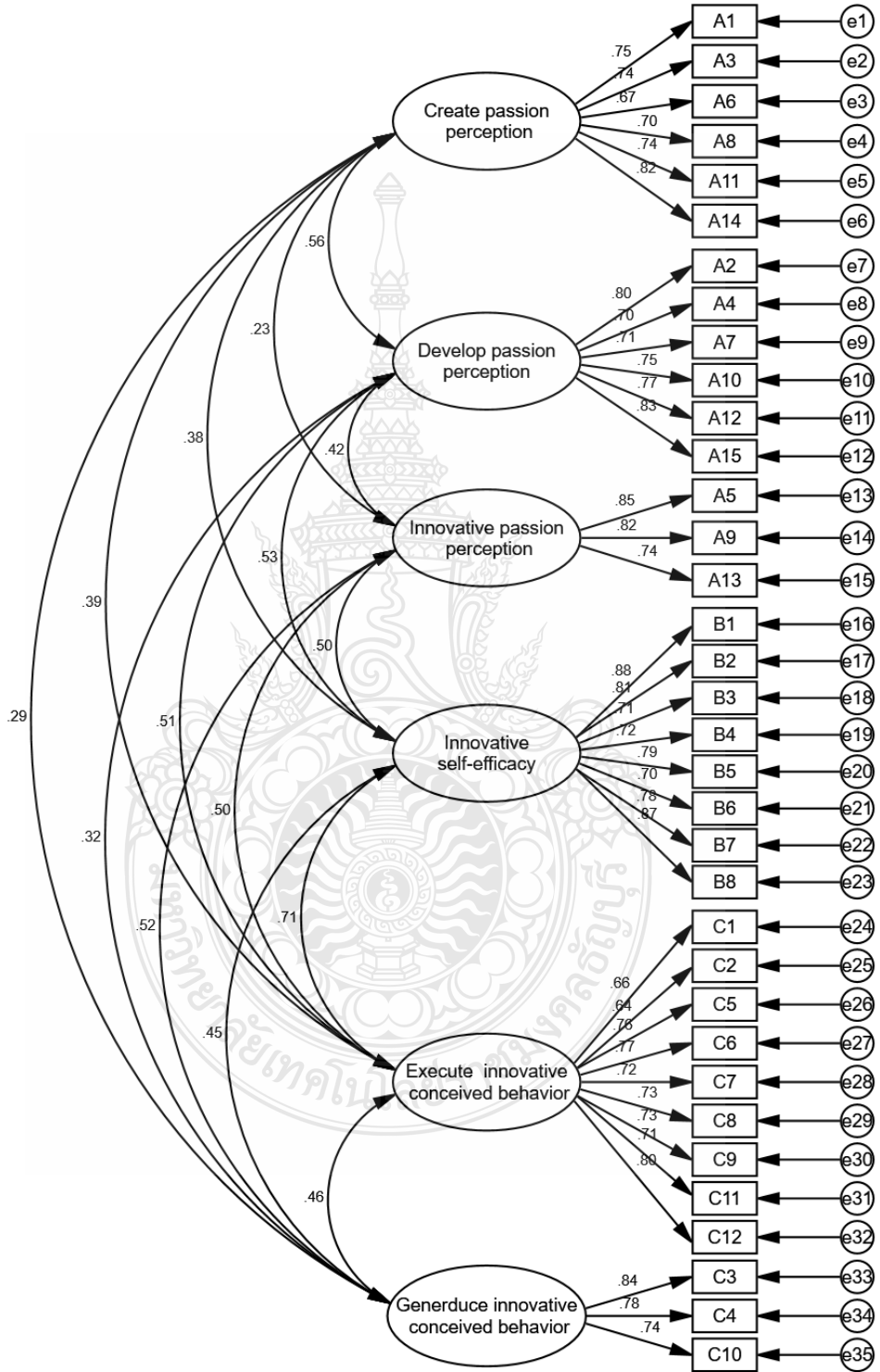


Fig 4.1 Confirmatory factor analysis model



### Model Goodness of fit Test

**Table 4.11** Validation factor analysis of the model fit metrics

<b>Fits the index</b>	<b>criterion for judgement</b>	<b>actual value</b>
Chi-square degrees of freedom than $X^2 / df$	<5 Acceptable; <3 Ideal	2.147
Goodness-of-fit index, GFI	> 0.8 Acceptable;> 0.9 Ideal	0.856
Adjusted goodness of fit index AGFI	> 0.8 Acceptable;> 0.9 Ideal	0.834
Normative fitting of the exponent NFI	> 0.8 Acceptable;> 0.9 Ideal	0.866
Revised the fitting index IFI	>0.9	0.924
Comparison of the fitted exponential CFI	>0.9	0.923
Non-sample fitting index NNFI (TLI)	>0.9	0.916
Approximation error square root exponent RMSEA	<0.08	0.054

According to the fitting index results of the confirmatory factor analysis model map, the test results of  $X^2 / df$  are 2.147, less than the standard value 3,0.856, AGFI 0.834, NFI 0.866, IFI 0.924, CFI 0.923, TLI 0.916, and RMSEA 0.054, which is less than the standard level of 0.08. The above results indicate that all the goodness of fit indicators of the study model are reached and greater than the universal standard value, respectively. Therefore, the confirmatory factor analysis model presented in this study is effective, and the matching degree of the model and the recovered survey data reaches the standard.

**Table 4.12** Standardized factor loading, combined reliability, and convergent validity

variable	Measure the item	Standardized load	standard error	t	P	CR	AVE
Create passion perception	A1	0.753					
	A3	0.737	0.065	14.3	***		
	A6	0.67	0.063	12.923	***		
	A8	0.705	0.064	13.632	***		
	A11	0.744	0.062	14.458	***		
	A14	0.824	0.064	16.083	***	0.879	0.548
Develop passion perception	A2	0.795					
	A4	0.7	0.057	14.46	***		
	A7	0.714	0.053	14.793	***		
	A10	0.75	0.058	15.729	***		
	A12	0.772	0.053	16.302	***		
Innovative passion perception	A15	0.834	0.054	17.962	***	0.892	0.581
	A5	0.846					
	A9	0.825	0.057	16.982	***		
	A13	0.743	0.057	15.371	***	0.847	0.650
Innovative self-efficacy	B1	0.878					
	B2	0.808	0.048	20.671	***		
	B3	0.714	0.043	16.86	***		
	B4	0.723	0.046	17.169	***		
	B5	0.787	0.044	19.745	***		
	B6	0.696	0.046	16.22	***		
	B7	0.779	0.048	19.383	***		
	B8	0.867	0.041	23.62	***	0.927	0.615

**Table 4.12** Standardized factor loading, combined reliability, and convergent validity

variable	Measure the item	Standardized load	standard error	t	P	CR	AVE
Execute innovative conceived behavior	C1	0.661					
	C2	0.643	0.085	11.403	***		
	C5	0.761	0.103	13.17	***		
	C6	0.768	0.104	13.276	***		
	C7	0.718	0.09	12.539	***		
	C8	0.73	0.096	12.724	***		
	C9	0.726	0.095	12.658	***		
Generduce innovative conceived behavior	C12	0.796	0.106	13.673	***		
	C11	0.707	0.098	12.377	***	0.908	0.525
	C3	0.844					
	C4	0.783	0.059	15.363	***		
	C10	0.742	0.057	14.679	***	0.833	0.625

**Note:** \* \* \* is  $P < 0.001$

According to the output of the confirmatory factor analysis model in the table above, the standardized factor load value of each measurement item in the questionnaire is in the range of 0.643 and 0.878, which is greater than the standard value of 0.5, and the standard error value of each item is less than the standard range of 0.5, indicating that each measurement item can explain the dimension structure well. Therefore, the validity of the questionnaire used in this study is good.

In the test results of the above items show that the standardized factor load of the questionnaire is the general standard above 0.5, and that the combined reliability CR value is above 0.7, AVE, the value is a general standard greater than 0.5, which can

show that the combined reliability and convergence validity of each variable surface and the measurement items meet the theoretical requirements, and the consistency and effectiveness are all ideal.

### Differential Validity

**Table 4** Discrimination validity

	Produce innovative idea behavior	Execute the innovative conception behavior	Innovative self-efficacy	Innovative passion perception	Develop passion perception	Create passion perception
Produce innovative idea behavior	<b>0.791</b>					
Execute innovative conception behavior	0.459	<b>0.725</b>				
Innovative self-efficacy	0.455	0.708	<b>0.784</b>			
Innovative passion perception	0.518	0.498	0.502	<b>0.806</b>		
Develop passion perception	0.321	0.511	0.533	0.423	<b>0.762</b>	
Create passion perception	0.293	0.386	0.382	0.235	0.559	<b>0.740</b>

**Note:** Bold characters indicate the open square root value of AVE, and the correlation coefficient between the various variables is shown below the diagonal line.

As can be seen from the above table, the correlation coefficient between each latent variable is less than the highest upper limit of the 0.85 standard value, indicating that there is a certain correlation between each variable, but there is no excessive correlation. The open square root of AVE of each variable is also greater than the correlation coefficient between each variable, and each variable has good differential validity.

#### 4.2.6 Differential Analysis among Individual Demographic Variables

##### 1. Differential results of different gender in each variable

**Table 5** Independent-sample t-test for gender

variable	gender	mean	standard deviation	F	P
Entrepreneurship passion perception	male	3.499	0.603	3.254	0.001
	female	3.279	0.727		
Innovative self-efficacy	male	3.613	0.829	2.743	0.006
	female	3.371	0.909		
Innovative behavior	male	3.684	0.652	3.748	0.000
	female	3.418	0.747		

For different sex and different variables, there were significant differences ( $P < 0.05$ ).

##### 2. Differential results between different marital status on various variables

**Table 4.15** Differential results between different marital status on various variables

<b>variable</b>	<b>marital status</b>	<b>mean</b>	<b>standard deviation</b>	<b>F</b>	<b>P</b>
Entrepreneurship passion perception	married	3.642	0.546	12.699	0
	unmarried	3.282	0.677		
	dissociaton	3.298	0.974		
Innovative self-efficacy	married	3.748	0.714	7.489	0.001
	unmarried	3.381	0.896		
	dissociaton	3.458	1.269		
Innovative behavior	married	3.725	0.592	5.063	0.007
	unmarried	3.487	0.720		
	dissociaton	3.406	1.123		

The results were obtained by one-way ANOVA. Different marital status showed significantly variable ( $P < 0.05$ ).

### 3.Results of different degrees on each variable



**Table 4.16** Results of different degrees on each variable

<b>variable</b>	<b>record of formal schooling</b>	<b>N</b>	<b>mean</b>	<b>standard deviation</b>	<b>F</b>	<b>P</b>
Entrepreneurship passion perception	High school and below	32	3.302	0.625	2.191	0.089
	junior college	98	3.501	0.609		
	undergraduate course	175	3.317	0.735		
	Master's degree or above	83	3.472	0.601		
Innovative self-efficacy	High school and below	32	3.160	0.914	4.042	0.008
	junior college	98	3.603	0.745		
	undergraduate course	175	3.413	0.964		
	Master's degree or above	83	3.690	0.744		
Innovative behavior	High school and below	32	3.159	0.789	8.634	0.000
	junior college	98	3.662	0.616		
	undergraduate course	175	3.463	0.780		
	Master's degree or above	83	3.793	0.501		

The above results were obtained by one-way ANOVA. There was no significant difference in the perception of entrepreneurial passion among different degrees, ( $P > 0.05$ ), and a significant difference in all other variables ( $P < 0.05$ ).

#### 4. Differential results of different working years on each variable

**Table 67** Differential results of different working years on each variable

variable	working life	mean	standard deviation	F	P
Entrepreneurship passion perception	5 Years and below	3.440	0.601	1.396	0.244
	5-10 Years	3.392	0.605		
	10-15 Years	3.462	0.730		
	15 Years and above	3.244	0.788		
Innovative self-efficacy	5 Years and below	3.580	0.823	2.672	0.047
	5-10 Years	3.474	0.863		
	10-15 Years	3.635	0.869		
	15 Years and above	3.248	0.921		
Innovative behavior	5 Years and below	3.575	0.594	5.305	0.001
	5-10 Years	3.618	0.650		
	10-15 Years	3.633	0.744		
	15 Years and above	3.221	0.817		

The results were obtained by one-way ANOVA. There was no significant difference in the perception of entrepreneurial passion between different working years, ( $P > 0.05$ ), with a significant difference in all other variables ( $P < 0.05$ ).

#### 5. The difference results of different professional titles in different variables



**Table 4.18** The difference results of different professional titles in different variables

variable	professional ranks and titles	mean	standard deviation	F	P
Entrepreneurship passion perception	elementary	3.462	0.619	5.55	0.004
	middle rank	3.420	0.679		
	senior	3.090	0.713		
Innovative self-efficacy	elementary	3.532	0.832	7.211	0.001
	middle rank	3.575	0.823		
	senior	3.044	1.093		
Innovative behavior	elementary	3.636	0.609	9.158	0.000
	middle rank	3.600	0.681		
	senior	3.144	0.950		

The above results were obtained by comparing different titles in each variable by one-way ANOVA. Different professional titles had significant differences in each variable ( $P < 0.05$ ).

#### 4.2.7 Descriptive Statistical Analysis of the Variables

**Table 4.19** Analysis of each dimension of entrepreneurial passion perception and its measurement items

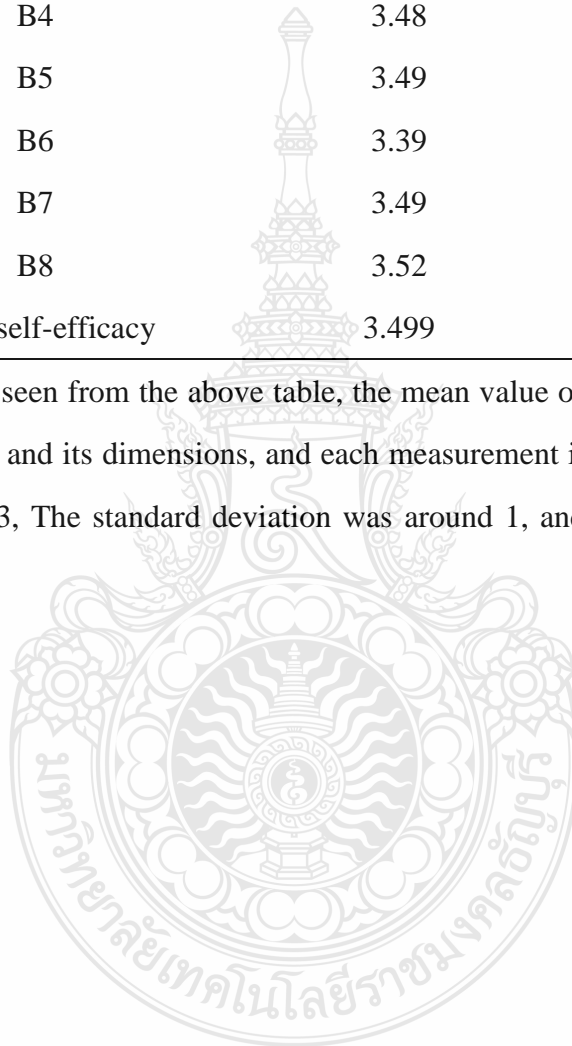
variable	mean	standard deviation
A1	3.35	1.148
A3	3.23	1.097
A6	3.24	1.048
A8	3.29	1.071
A11	3.24	1.048
A14	3.26	1.074
A2	3.59	1.166
A4	3.56	1.09
A7	3.47	1.023
A10	3.59	1.118
A12	3.63	1.035
A15	3.56	1.067
A5	3.24	0.951
A9	3.3	0.951
A13	3.39	0.949
Entrepreneurship passion perception	3.396	0.672
Create passion perception	3.269	0.851
Develop passion perception	3.565	0.873
Innovative passion perception	3.310	0.831

As can be seen from the above table, the mean value of the innovation passion perception variable and its dimensions, and each measurement item are greater than the intermediate level 3, The standard deviation was around 1, and the variables were set reasonably.

**Table 4.20** Self-efficacy of innovation and its measurement items

<b>variable</b>	<b>mean</b>	<b>standard deviation</b>
B1	3.66	1.095
B2	3.49	1.169
B3	3.45	0.973
B4	3.48	1.06
B5	3.49	1.06
B6	3.39	1.037
B7	3.49	1.138
B8	3.52	1.072
Innovative self-efficacy	3.499	0.874

As can be seen from the above table, the mean value of the innovation passion perception variable and its dimensions, and each measurement item are greater than the intermediate level 3, The standard deviation was around 1, and the variables were set reasonably.



**Table 4.21** Analysis of the current situation of each dimension of innovation behavior and its measurement items

Measure the items and variables	mean	standard deviation
C1	3.58	0.949
C2	3.56	0.945
C5	3.65	1.119
C6	3.57	1.126
C7	3.47	0.989
C8	3.57	1.051
C9	3.55	1.035
C11	3.48	1.079
C12	3.62	1.139
C3	3.6	1
C4	3.55	0.983
C10	3.51	0.947
Innovative behavior	3.559	0.709
Execute innovative conceived behavior	3.561	0.798
Generduce innovative conceived behavior	3.552	0.846

As can be seen from the above table, the mean value of the innovation passion perception variable and its dimensions, and each measurement item are greater than the intermediate level 3, The standard deviation was around 1, and the variables were set reasonably.

#### 4.2.8 Correlation Analysis

When there is a connection between things, but it cannot directly explain the causal relationship, the relationship between things is called a related relationship. This paper uses the Person correlation to first analyze the relationship among the variables in this study.

**Table 4.22** Correlation analysis

	1	2	3	4	5	6	7	8
gender	1							
marriage	-0.018	1						
degree of education	-0.029	0.001	1					
working life professional ranks and titles	0.017	-0.062	-0.003	1				
Entrepreneurship perception	0.077	0.037	-0.061	0.052	1			
Innovative self-efficacy	-.163**	-.230**	0.009	-0.052	-.135**	1		
Innovative behavior	-.138**	-.173**	0.093	-0.058	-.115*	.550**	1	
	-.187**	-.156**	.146**	-.128*	-.164**	.555**	.672**	1

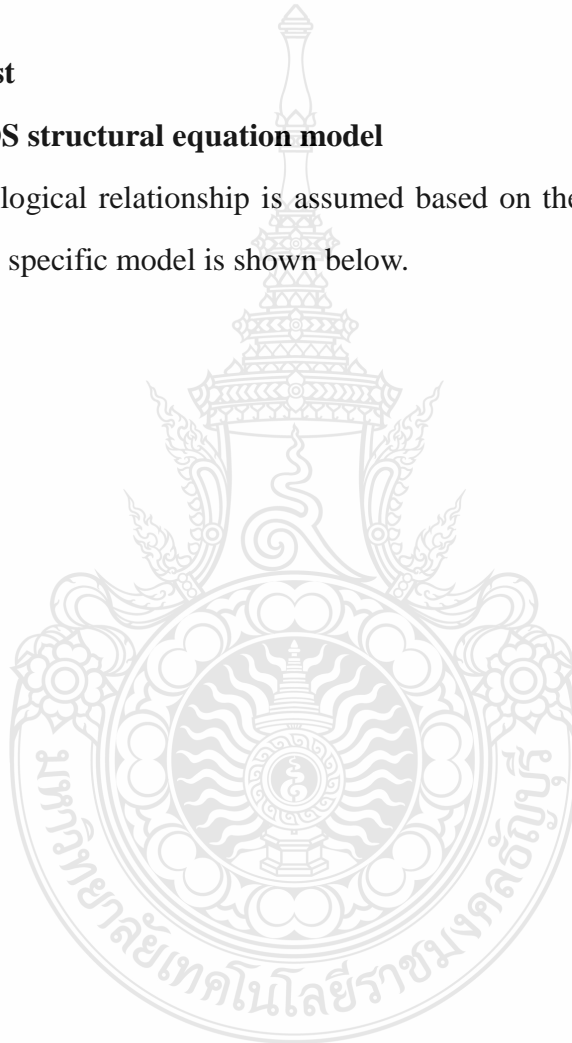
\*\* in.01 significant correlation on level (bilateral)

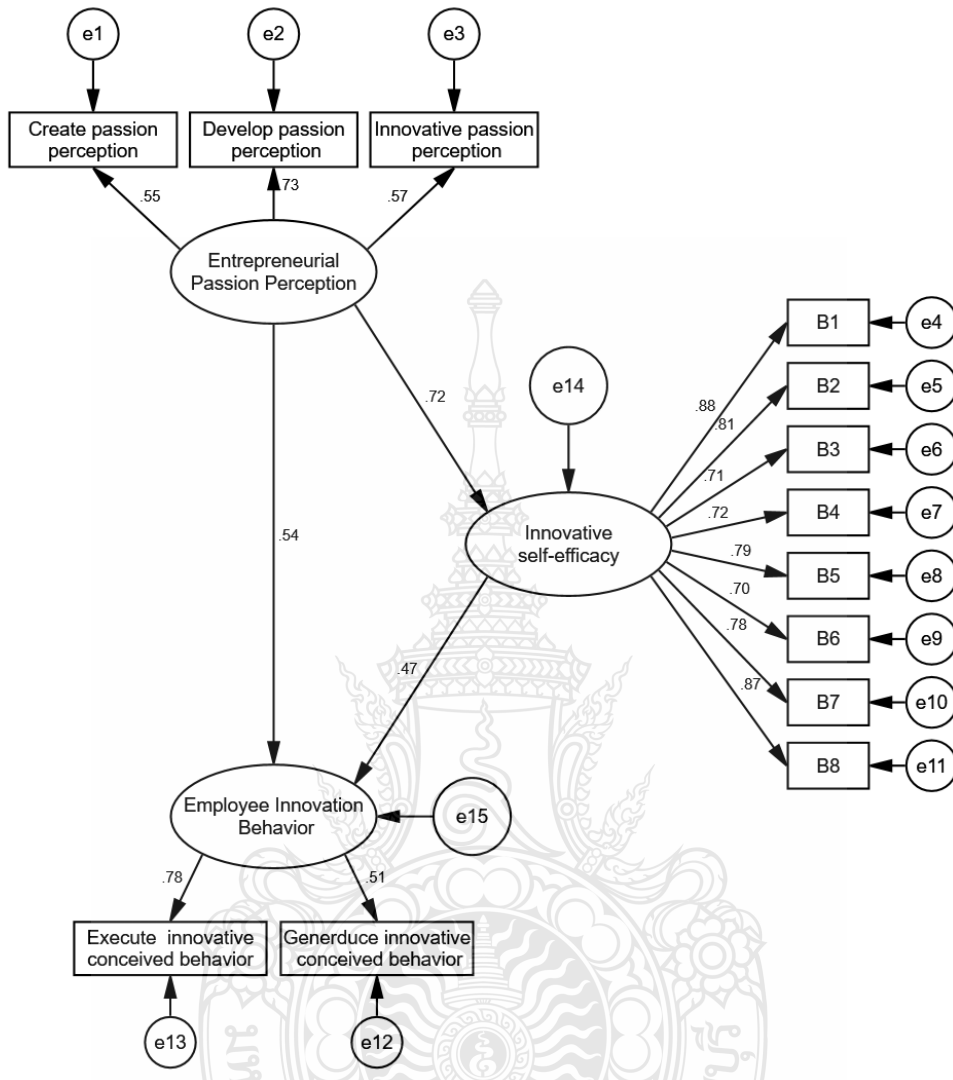
The above table shows the results of the correlation analysis. The results show that under the control of the control variables, the corresponding correlation values between the three latent variables involved in this paper are less than 0.05, which has significant statistical significance, indicating that the three latent variables have significant correlation.

### 4.3 Hypthesis Test

#### The AMOS structural equation model

The logical relationship is assumed based on the covariance matrix and latent variables, the specific model is shown below.





**Fig 4.2** Structural equation model

**4.3.1 Model Goodness of fit Test**

**Table 4.23** Structural equation model fitting index

<b>Fits the index</b>	<b>criterion for judgement</b>	<b>actual value</b>
Chi-square degrees of freedom than $X^2 / df$	<5 Acceptable; <3 Ideal	2.735
Goodness-of-fit index, GFI	> 0.8 Acceptable;> 0.9 Ideal	0.940
Adjusted goodness of fit index AGFI	> 0.8 Acceptable;> 0.9 Ideal	0.913
Normative fitting of the exponent NFI	> 0.8 Acceptable;> 0.9 Ideal	0.940
Revised the fitting index IFI	>0.9	0.961
Comparison of the fitted exponential CFI	>0.9	0.961
Non-sample fitting index NNFI (TLI)	>0.9	0.951
Approximation error square root exponent RMSEA	<0.08	0.067

According to the above table, the  $X^2 / df$  value is 2.735, less than the ideal standard of 3; GFI =0.940, AGFI=0.913, NFI = 0.940, IFI = 0.961, CFI = 0.961, TLI = 0.951; the test result value of RMSEA is 0.067 and is less than the standard level of 0.08. All the goodness of fit indexes in the structural equation model established in this study are reached and higher than the general standard value, so it can fully explain that the structural equation model is effective and has a good matching degree with the recovered questionnaire data.



### 4.3.2 Pathway Hypothesis Test Results

**Table 4.24** Pathway hypothesis test results

Suppose the path		Standardized path coefficient	Standard error	t	P	
Innovative self-efficacy	<---	Entrepreneurship passion	0.719	0.174	8.442	***
		perception				
Innovative behavior	<---	Innovative self-efficacy	0.468	0.045	4.662	***
Innovative behavior	<---	Entrepreneurship passion	0.537	0.11	4.432	***
		perception				

**Note:** \* \* \* is  $P < 0.001$

From the path analysis results of structural equation model in the table above table, it can be seen that the standardized path coefficient of entrepreneurial passion perception on innovation self-efficacy is 0.719 (t value =8.442,  $p < 0.001$ ), which indicates that entrepreneurial passion perception has a significant positive effect on innovation self-efficacy, so that the hypothesis verification proposed in this study is valid;

The standardized path coefficient of innovation self-efficacy on innovation behavior was 0.468 (t value =4.662,  $p < 0.001$ ), indicating that innovation self-efficacy has a significant positive effect on innovation behavior, so it indicates that the hypothesis verification proposed in this study is valid;

The standardized path coefficient of entrepreneurial passion perception on innovative behavior was 0.537 (t value =4.432,  $p < 0.001$ ), indicating that

entrepreneurial passion perception has a significant positive effect on innovative behavior, so that the hypothesis verification proposed in this study is valid.

#### 4.3.3 Amos Bootstrap Mediation Effect Test

The following table shows the analysis of this study on whether the variables in the data have significant mediation effect using Amos21.0 software. Using the Bootstrap method, select the 95% confidence interval, and then test the mediation effect by 2000 rotation iterations built in the software. Whether there was a significant mediation effect was judged by the upper and lower limits of the 95% confidence interval and the significance P-value in the observed outcome table.

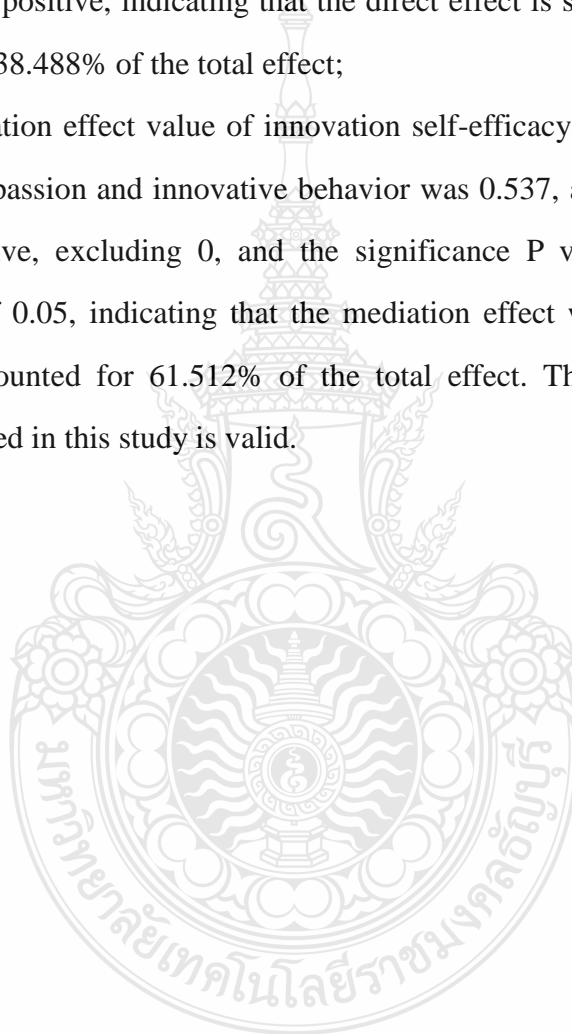
**Table 4.25** Bootstrap Method of mediation effect test

Effect path	Effect value	SE	And the 95% confidence interval		P	Effect ratio
			Lower	Upper		
Indirect effect: entrepreneurial passion perception-innovation self-efficacy-innovation behavior	0.336	0.103	0.124	0.521	0.01	38.488%
Direct effect: the perception of entrepreneurial passion- -innovation behavior	0.537	0.166	0.261	0.92	0.001	61.512%
Total effect: the perception of entrepreneurial passion- -innovation behavior	0.873	0.086	0.684	1.029	0.001	-

The test results in the above table take the perception of entrepreneurial passion as the independent variable, innovation self-efficacy as the intermediary variable, and innovation behavior as the dependent variable. The mediation effect test

by Bootstrap method based on AMOS software, repeated sampling 2000 samples, calculate 95% credible interval. From the test results in the table above, the total effect value of entrepreneurial passion perception on innovation behavior is 0.873, and the upper and lower intervals are positive, indicating that the direct effect value of entrepreneurial passion perception on innovation behavior is 0.336, and the upper and lower intervals are positive, indicating that the direct effect is significant and the effect value accounts for 38.488% of the total effect;

The mediation effect value of innovation self-efficacy between the perception of entrepreneurial passion and innovative behavior was 0.537, and the 95% confidence interval was positive, excluding 0, and the significance P value was less than the significant level of 0.05, indicating that the mediation effect was significant, and the indirect effect accounted for 61.512% of the total effect. Therefore, the hypothesis verification proposed in this study is valid.



## **CHAPTER 5**

### **RESEARCH CONCLUSION**

#### **5.1 Conclusion**

This paper in the entrepreneurial passion perception, innovation self-efficacy and staff innovation behavior related knowledge literature on the premise of the sorting and understanding of the relationship between the path, research hypothesis and theoretical model, which is the entrepreneurial passion as a precursor variable into create passion perception, developing passion perception and entrepreneurial passion perception three dimensions, self-efficacy as a intermediary variable without further dimension, employee innovation behavior as the result variable divided into the behavior of generating innovative ideas and the behavior of implementing innovative ideas two dimensions. The data was collected by questionnaire survey, and the statistical software was used to analyze the effective data, and the following main conclusions were drawn

1. Perception of entrepreneurial passion positively affects the innovators' behavior of employees.

The perception of entrepreneurial passion positively affects the employees' behavior of innovation. This paper confirms the positive correlation between the perception of entrepreneurial passion and its various dimensions and the employees' innovative behavior. The perception of entrepreneurial passion includes the cognitive and emotional experience of entrepreneurial enthusiasm, sense of mission and self-assessment, which in turn will promote the employee's innovative behavior. In addition, the perception of entrepreneurial passion can also improve the innovation ability of employees. The sense of mission and enthusiasm reflected in the perception of entrepreneurial passion will trigger employees to learn and master the knowledge and skills related to innovation, so as to improve their innovation ability and level.

2.The self-efficacy of innovation positively affects the innovation behavior of employees.

Innovation self-efficacy positively affects employees' innovation behavior. This paper confirms the positive correlation between innovation self-efficacy and employee innovation behavior, and innovation self-efficacy can positively influence employee innovation behavior, that is, employees are easier to show innovation behavior when they think they have innovation ability and confidence. First of all, innovation self-efficacy can improve employees' confidence and motivation for innovation, so as to stimulate employees' innovative behavior. When employees have a high degree of innovative self-efficacy, they will be more confident to face challenges and difficulties, and are more likely to demonstrate innovative behavior.

3.Innovation self-efficacy plays a partial intermediary role between the perception of entrepreneurial passion and employees' innovation behavior.

This paper confirms the significant mediation of innovation self-efficacy between entrepreneurial passion perception and employee innovation behavior. Research shows that entrepreneurial passion has a positive impact on employees' innovative behavior. At the same time, innovation self-efficacy can also have an important impact on the innovation behavior of employees. Innovative self-efficacy can be used as an important intermediary variable for employees to realize innovative behavior. When employees perceive the strong entrepreneurial passion of the organization, they are more inclined to show the innovation behavior, but there is an intermediary role between this innovation behavior and the individual innovation self-efficacy. Employees need to believe that they have the ability and confidence to show their innovative behavior, so that they can truly participate in innovation activities. Innovative self-efficacy can transform the perception of entrepreneurial passion of the organization into the actual innovative behavior of employees. Therefore, innovation self-efficacy plays a partial intermediary role between the perception of entrepreneurial

passion and employees' innovation behavior.

To sum up, innovation self-efficacy plays a partial intermediary role between the perception of entrepreneurial passion and employees' innovation behavior. In practice, enterprises should pay attention to improving employees' entrepreneurial passion perception and innovation self-efficacy level, so as to stimulate employees' innovation enthusiasm and innovation ability, and improve the innovation ability and competitiveness of the organization.

## 5.2 Discussion

Zhou and Lu (2013) found that employees' perception of their entrepreneur's passion positively influenced their creativity and innovative behavior. and employees' perception of their entrepreneur's passion led to a stronger identification with the company, which in turn positively influenced their innovative behavior. Cardon et al. (2009) found that a positive relationship between employees' perceived entrepreneurial passion and their engagement in innovative behavior. and employees' perception of their entrepreneur's passion led to perceptions of higher innovation support, which in turn positively influenced their innovative behavior. Li et al. (2017) found that innovation self-efficacy partially mediated the relationship between employees' perceived entrepreneurial passion and their innovative behavior. and employees who perceive their entrepreneur as passionate are more likely to have a higher level of confidence in their ability to be innovative, which in turn promotes their innovative behavior. These studies suggest that employees' perception of their entrepreneur's passion has a positive impact on their innovative behavior, and that this relationship is mediated by their identification with the company and their confidence in their ability to be innovative.

1. The perception of entrepreneurial passion can trigger employees' entrepreneurial motivation. Personal enthusiasm for entrepreneurship and a sense of mission is an important part of the perception of entrepreneurial passion. When

employees perceive the organization and their entrepreneurial enthusiasm and sense of mission, they will think that the work they are engaged in is of significance and value, so as to stimulate their entrepreneurial motivation and enthusiasm, and actively participate in the innovation activities of the organization. On the other hand, the perception of entrepreneurial passion can also improve employees' willingness and ability to innovate. Personal self-assessment and judgment are another key component of the perception of entrepreneurial passion. When employees feel that the organization and they have the ability and advantages to achieve innovation, they will enhance their confidence and motivation, so that they are more willing to try new innovative ideas and methods. This is consistent with the research results of Wu Aizhen (2018)

2.The perception of entrepreneurial passion can promote employees' self-efficacy of innovation. When employees perceive the strong entrepreneurial passion of the organization, they will have a positive emotional experience and improve their ability and confidence in the field of innovation. This emotional experience and confidence enhancement are an important component of innovative self-efficacy. Innovation self-efficacy can also enhance the innovation motivation and enthusiasm of employees, and encourage employees to more actively participate in innovation activities. Secondly, innovation self-efficacy can improve the innovation ability and level of employees, so as to promote employees' innovation behavior. Innovative self-efficacy can encourage employees to pay more attention to the learning and improvement of knowledge and skills in the field of innovation. Through learning and improvement, employees can improve their innovation level and ability, so as to show their innovation behavior and achieve their innovation goals. Enterprises should pay attention to improving the employees' innovative self-efficacy in practice, so as to stimulate the employees' innovative behavior, and improve the innovation ability of the organization.

## **5.3 Research Limitations and Recommendation**

### **5.3.1 Study Limitations**

Although this study yielded hypothetical answers, there are still many problems, for example, the samples of this survey mainly come from new enterprises in Jiangxi Province, and mature enterprises also need employee innovation behavior. In the future, further comparative analysis from the perspective of the sample selection, there are still some deficiencies, due to the lack of representativeness of the selected samples and sampling methods, the lack of universal research results; moreover, the questionnaire survey, and the power of the research results needs to be improved.

### **5.3.2 Recommendation**

This study mainly examines the mediating role of innovation self-efficacy, but this mediation variable is not enough to fully explain the effect path of entrepreneurial passion perception on employees' innovative behavior. In the follow-up research, intermediary variables such as knowledge sharing and work input can be added. We mainly focus on new enterprises, and the future research on the passion of entrepreneurs can also be oriented to mature enterprises.

This paper chooses to study the influence of the perception of entrepreneurial passion on employees' innovative behavior from the perspective of employees' innovation. The subsequent studies can study the factors at the organizational level and individual level.



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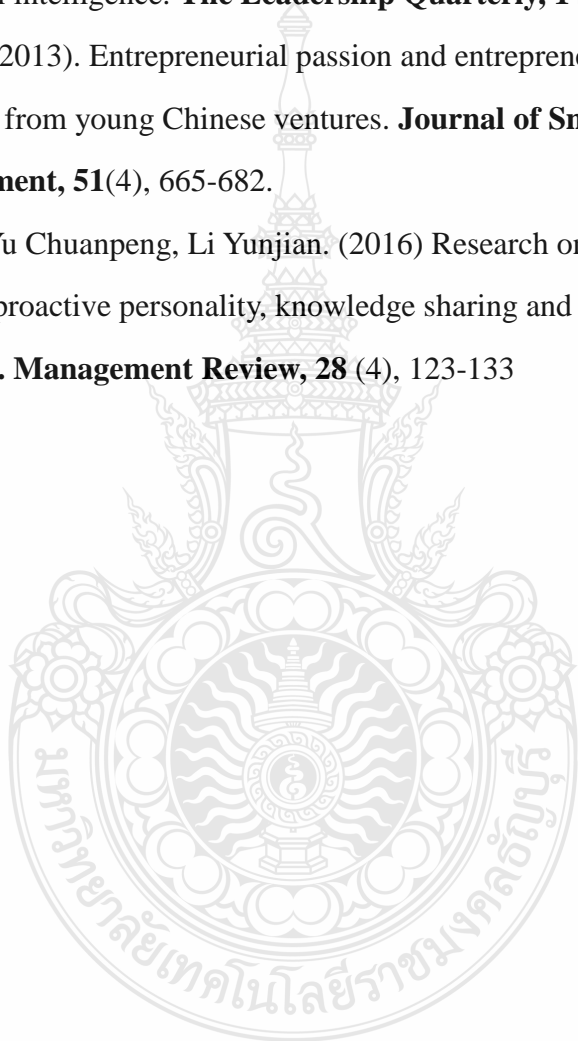
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**APPENDICES**





## **Appendix A Survey Questionnaire (English version)**

### **Perception of entrepreneurial passion and employee innovation behavior survey questionnaire**

Dear Mr. / Madam,

Hello, we are conducting an independent study, and we hope to get your support and help. This questionnaire is conducted anonymously, and all data are only for overall analysis and will never be disclosed separately. There are no right or wrong answers in the questions listed in the questionnaire. Please answer according to your actual situation and feelings. Your answer is crucial to the research results, so please fill it in it carefully and truthfully. If you have any suggestions or the main conclusions of the study, contact \_\_\_\_\_.

Thank you sincerely for your support. I wish you every success in your work and a happy family!

#### **1. Basic personal information**

Note: This section is the basic information about you and your company. Please select the options that match your situation.

1. Gender: A male; B female;
2. Marriage: A married; B unmarried; C divorced;
3. Education level: A high school or below; B junior College; C; D Master or above;
4. Working years: A 5 years or less; B 5-10 years; C 10-15 years; D 15 years or above;
5. Professional title: A junior; B intermediate; C senior

#### **2. Entrepreneurial passion perception questionnaire**

Entrepreneurs, that is, the core entrepreneurs of your enterprise, please compare the real situation shown by the entrepreneur in the work with the situation described in

the following topics, and choose the degree between the description and the real situation. The larger the number, the more consistent the description, from 1 to 5, respectively: very inconsistent, inconsistent, general, consistent and very consistent. There are no right or wrong answers to the questionnaire, please rest assured to answer.

order number	title	Full Uncompliant ——— Full compliant				
		1	2	3	4	5
1	Entrepreneurs are happy to look for new ways to commercialize the unsaturated market demand	1	2	3	4	5
2	Entrepreneurs enjoy exploring new development ideas for their products or services	1	2	3	4	5
3	Entrepreneurs feel energetic when developing prototype products	1	2	3	4	5
4	Entrepreneurs are very actively thinking about how to make existing products or services better	1	2	3	4	5
5	Entrepreneurs are very excited to look for new development opportunities	1	2	3	4	5
6	Entrepreneurs are very excited to create a new company	1	2	3	4	5
7	Entrepreneurs feel energetic to owning a new company	1	2	3	4	5
8	Entrepreneurs are very happy to create new companies	1	2	3	4	5
9	Entrepreneurs are very excited to create something of value	1	2	3	4	5
10	Entrepreneurs enjoy creating new businesses through the success of new businesses	1	2	3	4	5

11	Entrepreneurs are very active in persuading others to invest in their businesses	1	2	3	4	5
12	Entrepreneurs like to find the right people to market their products or services	1	2	3	4	5
13	Entrepreneurs are happy to gather great people to work for them	1	2	3	4	5
14	Entrepreneurs enjoy commercializing new products or services	1	2	3	4	5
15	Entrepreneurs are very active in urging themselves and their employees to work hard to make the company better	1	2	3	4	5

### 3. Innovative self-efficacy questionnaire

Please answer the following questions according to your actual feelings. The larger the number is, the more consistent the description is, from 1 to 5 respectively represent: very disagree, disagree, general, compare agree and very agree, please type on the corresponding number in each question.

order number	title	Full Uncompliant ——— Full compliant				
		1	2	3	4	5
1	I can creatively accomplish most of the goals I set for myself	1	2	3	4	5
2	When faced with a difficult task, I am sure that I can do it creatively	1	2	3	4	5
3	Usually, I think I can be creative with results that are important to me	1	2	3	4	5
4	I believe that as long as I make up my mind to	1	2	3	4	5

	make innovative efforts, the vast majority will succeed					
5	I can overcome many challenges creatively	1	2	3	4	5
6	I am confident that I can creatively many different tasks	1	2	3	4	5
7	I can do most tasks creatively compared to others	1	2	3	4	5
8	Even if the task is difficult, I will do it creatively	1	2	3	4	5

#### 4. The Innovative Behavior Questionnaire

Please answer the following questions according to your actual feelings. The larger the number is, the more consistent the description is, from 1 to 5 respectively represent: very disagree, disagree, general, compare agree and very agree, please type on the corresponding number in each question.

order number	title	Full Uncompliant ——— Full compliant				
		1	2	3	4	5
1	I will explore opportunities to improve the organization, department, workflow, or service	1	2	3	4	5
2	I will pay attention to non-routine issues in the work, department, organization, or market	1	2	3	4	5
3	I will propose ideas or solutions to the problem	1	2	3	4	5
4	I will look at things from different angles to get more insight	1	2	3	4	5
5	I will test out the new ideas or problem-solving methods to understand the unmet needs	1	2	3	4	5

6	I will evaluate the pros and cons of the new idea	1	2	3	4	5
7	I will try to convince others of the importance of new ideas or solutions	1	2	3	4	5
8	I will take the initiative to promote the idea and give it a chance to be implemented	1	2	3	4	5
9	I would risk myself to support the new idea	1	2	3	4	5
10	I will engage in changes that may produce benefits	1	2	3	4	5
11	When applying the new operation form to the workflow, technology, product or service, I will try to correct the problems of the new method	1	2	3	4	5
12	I will implement new ideas for improving workflow, technology, products or services in a daily routine	1	2	3	4	5

## Appendix B Survey Questionnaire (Chinese version)

### 创业激情感知与员工创新行为调研问卷

尊敬的先生/女士：

您好，我们正在进行一项独立研究，希望能够得到您的支持与帮助。本问卷严格采用匿名方式进行，所有数据仅供整体分析之用，绝不对外个别披露。问卷所列问题答案均无对错之分，请您根据个人实际情况和感受放心作答，您的答案对研究结果至关重要，恳请您务必认真、真实地填写。如果您有任何建议，或是希望得到研究的主要结论，欢迎通过以下方式联系\_\_\_\_\_。

衷心感谢您的支持，祝您工作顺利，阖家幸福！

#### 一、个人基本信息

注：此部分为您和您所在企业的基本情况，请选择与您情况符合的选项。

- 1.性别：A 男；B 女；
- 2.婚姻：A 已婚；B 未婚；C 离异；
- 3.文化程度：A 高中及以下；B 大专；C 本科；D 硕士及以上；
- 4.工作年限：A 5 年及以下；B 5-10 年；C 10-15 年；D 15 年及以上；
- 5.职称：A 初级；B 中级；C 高级

#### 二、创业激情感知问卷

创业者，即您所在企业的核心创业人员，请根据创业者在工作中所展示的真实情况，与下列题目中所描述的情况进行比较，选择描述情况与真实情况的符合程度。数字越大代表描述与其越相符，从 1 至 5 分别代表：非常不符合、不符合、一般、符合和非常符合。问卷答案没有对错之分，请放心填答。

序号	题目	完全不符合——完全符合				
		1	2	3	4	5
1	创业者很乐意寻找新方法将未饱和的市场需求进行商业化	1	2	3	4	5
2	创业者很享受为产品或者服务去探寻新的发展思路	1	2	3	4	5
3	创业者在开发原型产品的时候感到精力充沛	1	2	3	4	5
4	创业者非常积极的思考如何使现有产品或者服务更好	1	2	3	4	5
5	创业者在寻找新的发展机遇时非常兴奋	1	2	3	4	5
6	创业者在创建新公司的时候非常激动	1	2	3	4	5
7	创业者在拥有自己的新公司的时候感到精力充沛	1	2	3	4	5
8	创业者非常乐于创建新公司	1	2	3	4	5
9	创业者在创造出有价值的东西的时候非常兴奋	1	2	3	4	5
10	创业者很享受通过新业务的成功来培育创建新的企业	1	2	3	4	5
11	创业者很积极的去说服其他人来投资其企业	1	2	3	4	5
12	创业者喜欢寻找合适的人才来营销其产品或者服务	1	2	3	4	5
13	创业者很乐于聚集优秀的人才来为其工作	1	2	3	4	5
14	创业者很享受将新产品或服务进行商业化	1	2	3	4	5
15	创业者非常积极地督促自己及员工努力的工作从而使公司变得更好	1	2	3	4	5

### 三、创新自我效能感问卷

请您根据实际感受对下述问题进行回答。数字越大代表描述与其越相符，从 1 至 5 分别 代表：非常不同意、不同意、一般、比较同意和非常同意，请在每题相应的数字上打√。

序号	题目	完全不符合——完全符合				
		1	2	3	4	5
1	我能有创意地完成我为自己设定的大多数目标	1	2	3	4	5
2	面对困难任务时，我确信自己能能有创意地完成它	1	2	3	4	5
3	通常，我认为自己能能有创意地完成对我来说有重要意义的成果	1	2	3	4	5
4	我相信只要我下定决心做的创新努力，绝大多数都会取得成功	1	2	3	4	5
5	我能有创意地战胜很多挑战	1	2	3	4	5
6	我自信能有创意地完成许多不同的任务	1	2	3	4	5
7	与他人相比，我能有创意地完成大多数任务	1	2	3	4	5
8	即使任务艰巨，我也会有创意地完成	1	2	3	4	5

### 四、创新行为问卷

请您根据实际感受对下述问题进行回答。数字越大代表描述与其越相符，从 1 至 5 分别 代表：非常不同意、不同意、一般、比较同意和非常同意，请在每题相应的数字上打√。



序号	题目	完全不符合——完全符合				
		1	2	3	4	5
1	我会去探寻可以改善组织、部门、工作流程或服务的机会	1	2	3	4	5
2	我会去注意工作、部门、组织或市场中非例行性的议题	1	2	3	4	5
3	我会针对问题提出构想或解决方式	1	2	3	4	5
4	我会从不同角度看待问题，以获得更深入的见解	1	2	3	4	5
5	我会去测试新的构想或问题解决方式，以了解未被满足的需求	1	2	3	4	5
6	我会去评估新构想的优缺点	1	2	3	4	5
7	我会尝试说服他人了解新构想或解决方式的重要性	1	2	3	4	5
8	我会主动去推动构想并使其有机会被实行	1	2	3	4	5
9	我会冒着风险去支持新构想	1	2	3	4	5
10	我会从事可能产生益处的改变	1	2	3	4	5
11	当应用新的作业形态于工作流程、技术、产品或服务时，我会设法修正新方法所产生的毛病	1	2	3	4	5
12	我会将可改善工作流程、技术、产品或服务的新构想，具体实行于每日例行性事务之中	1	2	3	4	5

## Biography

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