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Relationship between Entrepreneurial Team Characteristics and Venture Performance in China: From the Aspects of Cognition and Behaviors

Xue-Liang Pei ^{1,2}, Tung-Ju Wu ^{3,*}, Jia-Ning Guo ¹ and Jia-Qi Hu ¹

¹ College of Business Administration, Huaqiao University, Quanzhou 362021, China; peixueliang@hqu.edu.cn (X.-L.P.); 1716112005@stu.hqu.edu.cn (J.-N.G.); 1416111024@stu.hqu.edu.cn (J.-Q.H.)

² East Business Management Research Centre, Huaqiao University, Quanzhou 362021, China

³ School of Management, Harbin Institute of Technology (HIT), Harbin 150001, China

* Correspondence: tjwu@hit.edu.cn

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Abstract: Entrepreneurial and innovative activities are becoming a global economic and social phenomenon, especially in emerging economies. This study focuses on a typical emerging economy, China, and its entrepreneurial and innovative activities. On the basis of current research, the literature review and the chain of “cognition–behavior–outcome” are used for constructing the theoretical model for the relationship among entrepreneurial team cognition characteristics, behavior characteristics, and venture performance. A total of 101 valid copies of questionnaire are collected from entrepreneurial team members, as the research objects, and the structural equation modeling (SEM) method is applied to test the theoretical hypotheses. The research results reveal (1) significant effects of entrepreneurial team cognition characteristics and behavior characteristics on venture performance and (2) partial mediating effects of entrepreneurial team behavior characteristics on the relationship between cognition characteristics and venture performance. The research results are the expansion of research on entrepreneurial teams as well as the important reference for entrepreneurial team management and behavioral practice.

Keywords: entrepreneurial team; cognition characteristics; behavior characteristics; venture performance

1. Introduction

The effective implementation of sustainable growth and the development of organizations through entrepreneurship and innovation is a pressing matter for countries around the world, especially among those with emerging economies. According to the data of the National Development and Reform Commission of China from 2015, when the China government proposed the slogan of “mass entrepreneurship brings a mass of innovations” and implemented national policies that encouraged innovative entrepreneurship. Until to 2018, it already had 11,808 entrepreneur incubation organizations countrywide, with over 6.7 million new registered companies in 2018. Moreover, 3.5 million related jobs were created in total [1]. Innovative entrepreneurship is increasingly becoming an important driver of Chinese economic growth and sustainable development. Therefore, entrepreneurial and innovative activities are becoming a global economic and social phenomenon, one that is increasingly drawing the attention of theoretical and practical fields alike [2].

Moreover, the current contribution rate of emerging economies to the global economy is continuously increasing and is becoming the main source of the global economy’s stability. Because of this, entrepreneurial and innovative activities within emerging economies should be given

more attention. However, Singh and Gaur [2] believe that most of the present literature on entrepreneurship and innovation management focus on the research of relatively developed economies (e.g., North America and Europe), and that literature focusing on entrepreneurship and innovation management in emerging economies is scarce and not frequently published. Furthermore, owing to the higher level of obscurity and uncertainty in the business environments of emerging economies, it is imperative that the rules of entrepreneurial and innovative activities within these economies are more carefully uncovered [3]. On the basis of the foregoing, this study focuses on a typical emerging economy, China, and its entrepreneurial and innovative activities.

In the innovative and entrepreneurial activities of emerging economies, entrepreneurial ventures play an important role in the national economy and social development [4]; particularly, under the rapid development of information technology and the constant change of customer needs, entrepreneurial ventures, with the characteristics of flexibility, innovation, closeness to customers, and prompt responses, became critical economic power [5]. In the establishment and development process of entrepreneurial ventures, team entrepreneurship showed higher success rate than individual entrepreneurship, and the leadership and management patterns gradually changed from individual to team entrepreneurship [6]. In this case, research on the relationship among entrepreneurial team characteristics, the composition, and venture performance in entrepreneurial venture management became topics in the past years [7].

In China, “Fujian Merchants” are a unique group of businessmen who are characterized by “dedicate yourself and you will win”, which is the most intuitive embodiment of entrepreneurship [8]. For example, the China Mass Entrepreneurship Index in 2016 (MEI-2016) released by Southwest Jiaotong University shows that Fujian Province ranks among the top ten provinces in terms of innovation and entrepreneurship in China [9]; the 6th Fujian Merchants Forum in 2019 is themed with “condensing the mind, condensing the intelligence; innovating, creating, and entrepreneurship” [10]. Among the innovation and entrepreneurship activities of Fujian Merchants, Quanzhou is the city with the highest economic aggregate, the largest contribution, the largest number of overseas Chinese businessmen, and the oldest history of entrepreneurship. It is also the starting point of the ancient “Maritime Silk Road”, with enrich entrepreneurial culture accumulation [11]. Moreover, Xiamen is one of the earliest special economic zones in China, and it is also one of the cities with the best innovation and entrepreneurship environment in China now [12]. On the basis of above, this article selects the “Fujian Merchants” that are most typical with innovation and entrepreneurship in China, and takes the entrepreneurial teams of Quanzhou and Xiamen as the research objects to survey the entrepreneurial activities in emerging economies represented by China from a sustainable perspective.

The high risks, high failure rate, and high uncertainties of entrepreneurial ventures revealed the difference in entrepreneurial team characteristics from traditional businesses [13]. For instance, capital chain break, core technician loss, and external macro environment change might appear in the process of entrepreneurial venture development to result in entrepreneurial team loss and even disbandment [14], while in traditional businesses, they do not. Hence the necessities to further research the relationship between entrepreneurial team characteristics and venture performance [7].

Meanwhile, current research on the relationship between entrepreneurial teams and venture performance has focused on the internal mechanism of the structure and characteristics of entrepreneurial teams (e.g., heterogeneity, knowledge sharing, conflict resolution, and innovation ability) affecting venture performance, while the theoretical regulation behind the effect of entrepreneurial team characteristics on venture performance is yet to be interpreted [15]. In this case, team cognition theory is introduced to this study, wherein entrepreneurial team characteristics are divided into cognition characteristics and behavior characteristics, and the chain of “cognition–behavior–outcome” is followed to analyze the relationship between entrepreneurial team characteristics and venture performance [7,16].

Furthermore, owing to the higher degree of ambiguity and uncertainty in the business environment of emerging economies, it is more necessary to carefully explore the rules of entrepreneurship and

innovation activities from a sustainable perspective in both theory and practice. It can promote the development of innovation and entrepreneurship activities.

2. Theoretical Basis and the Proposal of Research Hypothesis

2.1. Definition of Related Concepts

2.1.1. Entrepreneurial Teams and Their Characteristics

There is no universal definition of an entrepreneurial team within the academe. However, in the context of academic literature, the most widely accepted definition is that proposed by Kamm et al. [4], wherein they believe that an entrepreneurial team is a group of two or more people based on common prospects and interests who cooperate to establish a new enterprise for the purpose of gaining better economic profits. After this, Gartner et al. [17] expanded the concept of entrepreneurial teams, believing that the concept not only includes the multiple individuals who cooperated to start the enterprise, but also those individuals who have direct and important impacts on the formulation of the strategy of the company. Ensley and Carland [18] and Mol, Khapova, and Elfring [7] combined the afore-stated views and defined the characteristics of individuals within the entrepreneurial team from the perspectives of economic profit, team cooperation, and strategy formulation. Therefore, we proposed that the term “entrepreneurial team” refers to a group formed in the early establishment period of the company made up of individuals with shared responsibility, who have complementary talents and common entrepreneurial goals and prospects, and is a group wherein these individuals cooperate to set and implement business strategies.

There are many different schools of thought when it comes to the structure and characteristics of entrepreneurial teams [15]. On the basis of the objectives of this research, we divide entrepreneurial characteristics into cognitive characteristics and behavioral characteristics based on team cognition theory.

2.1.2. Venture Performance

Venture performance is the goal behind the establishment and development of entrepreneurial companies, and is also a focal point of discussion in the entrepreneurial research field [7,19]. Scholars believe that the impact on the behavior of the entrepreneur mainly manifests itself in the form of venture performance [16]. Furthermore, venture performance is not just the enumeration of various related indicators, but rather a more systematic whole that should yield related indicators through the analysis of the environment of the company, the entrepreneurial team, and the individuals composing that team [20]. Furthermore, venture performance should also include the results of entrepreneurship as well as the entrepreneurship process [21]. On the basis of the foregoing, this study holds that venture performance refers to an important reference indicator that evaluates the degree to which firms are able to complete certain tasks or reach certain goals throughout the entire entrepreneurial process.

2.2. Theoretical Analysis of the Relationship between the Cognition Characteristics and Venture Performance of an Entrepreneurial Team

Cognition characteristics of an entrepreneurial team refer to cognition basis and emotion difference among entrepreneurial team members. From the aspect of an organization, an entrepreneurial team is the establishment stage of a traditional business organization. Traditional research on the high management team of an enterprise indicated that the heterogeneity of background and experiences among high management team members would result in different cognition bases, thereby causing cognitive conflict. The cognitive conflict of such high management teams could improve the strategic decision making of an enterprise to further improve the business performance [22]. On the other hand, researchers considered that the different works engaged by high-level management team members would result in task conflict, which, essentially, is a kind of cognitive conflict to improve business

performance [23]. According to the research on entrepreneurial teams, Roure and Maidique [24] indicated that an entrepreneurial team with higher skill heterogeneity could better improve the business performance with strategic decision making. Kamm and Nurick [25] mentioned that an entrepreneurial team with higher skill heterogeneity could effectively cope with risks and uncertainties in the entrepreneurial process. Carpenter [26] further determined the direct effects of the cognition characteristics of the heterogeneous skills, background, and experiences of an entrepreneurial team on venture performance. Accordingly, it is proposed that H1: cognitive conflict in the cognition characteristics of an entrepreneurial team presents remarkably positive effects on venture performance.

From the viewpoint of emotion difference in cognition characteristics of an entrepreneurial team, researchers considered that the heterogeneity among entrepreneurial team members not being reasonably used would not encourage team members to pursue creative conflict. Further, it will affect the positive emotion among members. In this study, normal communication channels might be blocked to form emotional conflict and further hinder teamwork [27]. Emotional conflict was generally regarded as negative. Chen [16] indicated that the emotional conflict of an entrepreneurial team would weaken the cooperation among its entrepreneurial team members, thereby negatively influencing venture performance. Accordingly, it is also proposed that H2: emotional conflict in cognition characteristics of an entrepreneurial team shows notable negative effects on venture performance.

2.3. Theoretical Analysis of the Relationship between the Behavior Characteristics and Venture Performance of an Entrepreneurial Team

The behavior characteristics of an entrepreneurial team refer to the behavioral performance of the same. In comparison with traditional businesses, entrepreneurial ventures have to do better on innovation ability and strategic sustainability in order to survive in the environment with rapid changes and uncertainties; the importance thus is higher. In terms of innovation ability, Kuratko, Ireland, & Hornsby [28] stated that an entrepreneurial team would form the innovation ability through exploring new problems or opportunities to enhance venture performance. Regarding strategic continuity, Covin and Miles [29] stated that an entrepreneurial team should purposively re-define the organization and market and confirm strategic objectives to further improve venture performance. On the basis of the foregoing, it is proposed that H3: innovation ability in behavior characteristics of an entrepreneurial team reveals significantly positive effects on venture performance and H4: strategic sustainability in behavior characteristics of an entrepreneurial team presents remarkably positive effects on venture performance.

2.4. Theoretical Analysis of the Relationship between the Cognition Characteristics and Behavior Characteristics of an Entrepreneurial Team

The cognitive and behavioral characteristics of entrepreneurial teams originated from the cognitive behavioral theory of psychology. In the field of entrepreneurial management, research scholars believe that the cognitive conflict of entrepreneurial team members can increase the individual confidence and ability of members, and, therefore, solve various problems encountered during the entrepreneurial process, with the overall effect of increasing the innovation ability of the entrepreneurial team [30]. On the basis of the foregoing, we propose that H5: the cognitive conflict of the cognitive characteristics of an entrepreneurial team has a notable positive influence on innovation ability.

The cognitive conflict aspect of an entrepreneurial team can also accelerate the processes of considering and solving problems within the entrepreneurial team, thereby increasing the ability of the entrepreneurial team in setting strategies and improving strategic sustainability [31]. Hence, we propose that H6: the entrepreneurial team cognitive characteristic of cognitive conflict has a notable positive influence on strategic sustainability.

At the same time, because the entrepreneurial team cognitive characteristic of emotional conflict will weaken the normal sentiments between team members, it is deemed, therefore, to have a negative influence on the innovation ability of the entrepreneurial team [16]. Thus, this we propose that H7:

the entrepreneurial team cognitive characteristic of emotional conflict has a notable negative influence on innovation ability.

Furthermore, the entrepreneurial team cognitive characteristic of emotional conflict damages the emotional bonds between team members, thereby putting obstacles in the way of normal communication channels among them. This impairs the ability of members to understand each other and weakens their understanding of the environment and decisions of the company. This, in turn, makes decision quality and company efficiency low to the point that the strategic sustainability of the entrepreneurial team is affected negatively [32]. Thus, we propose that H8: the entrepreneurial team cognitive characteristic of emotional conflict has a markedly negative influence on strategic stability.

The intermediary role played by entrepreneurial team behavioral characteristics in the relationship between cognitive characteristics and venture performance has not been directly discussed in the current literature. However, indirectly, scholars in the field of organization team research have researched and demonstrated the intermediary effect produced by organization team behavior on the relationship between cognitive characteristics and team performance [33,34]. Taking this view and applying it to the field of entrepreneurial companies, while also adhering to the theoretical framework of “cognition–behavior–performance”, this study holds that there is a marked intermediary effect produced by the behavioral characteristics of entrepreneurial teams on the relationship between cognitive characteristics and venture performance. On the basis of the foregoing theoretical foundation, the researchers interviewed entrepreneurial team members online, one-on-one, from 20 different entrepreneur incubation parks. These interviews extracted factors related to the research of this study that influence team productivity and company performance. The researchers found that the innovation ability and strategic sustainability of entrepreneurial teams are important factors that have an impact on the relationship between entrepreneurial team cognition and venture performance. To summarize the theoretical analysis and the practical research, we hold that the cognitive conflict of teams can have an impact on venture performance and also influence the behavioral characteristics of entrepreneurial teams, including innovation ability and strategic sustainability, thereby affecting venture performance.

As the cognitive characteristics of entrepreneurial teams have a notable impact on innovation ability and on venture performance, we propose that H9: the innovation ability of entrepreneurial teams plays a pronounced intermediary role in the relationship between cognitive characteristics and venture performance. In addition to the foregoing, cognitive characteristics of entrepreneurial teams have a notable impact on strategic sustainability and the latter has a notable impact on venture performance. Therefore, on the basis of the “cognition–behavior–performance” framework, we propose that H10: the strategic sustainability of entrepreneurial teams plays a pronounced intermediary role in the relationship between cognitive characteristics and venture performance.

Hence, Figure 1 demonstrates the theoretical model of this study.

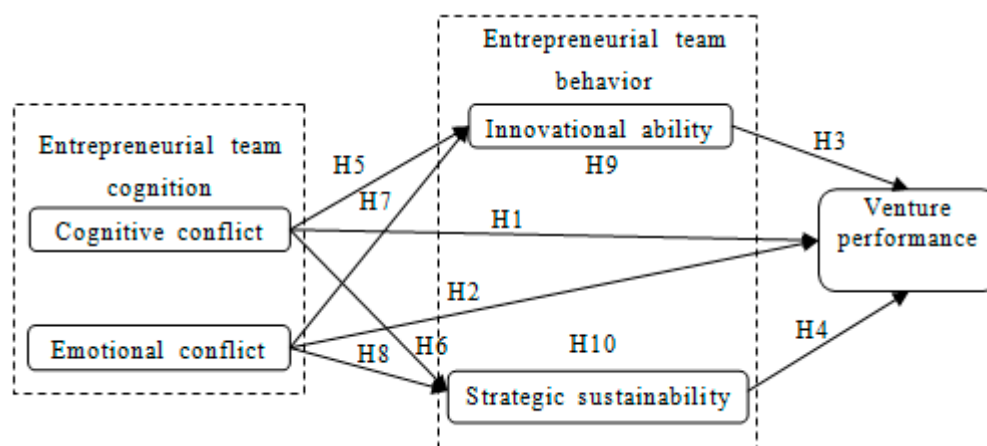


Figure 1. The framework of the relationship among entrepreneurial team cognition, entrepreneurial team behavior, and venture performance.

3. Research Method and Data Survey

3.1. Source and Process of Questionnaire Survey

The research subjects are entrepreneurial and innovative activities within emerging economies, mostly within the context of China. The Fujian province area is located in the southwest coast of China, an area with some of the most dynamic entrepreneurial and innovative activities outside of the major cities of Beijing, Shanghai, and Guangzhou. According to statistics from the Fujian province government, there were over 807,000 newly registered entrepreneurial companies in 2018, a 27.6% increase from 2017. Within Fujian, the cities of Quanzhou and Xiamen are some of the most economically developed areas and their entrepreneurial and innovative activities are among the most dynamic. According to statistics from the Fujian province government for the first half of 2019, the gross domestic products (GDPs) of Quanzhou and Xiamen make up almost 40% of the total GDP of the province [35]. It was for the foregoing reasons that the entrepreneurial companies within the entrepreneur incubation parks of Quanzhou and Xiamen were chosen as the subject of investigation.

Furthermore, “Fujian Merchants” are one of the most famous merchant groups, since a long time ago, and their typical characteristic is “dedicate yourself and you will win”, which is the most intuitive embodiment of entrepreneurship. Therefore, we select Quanzhou, which is the oldest traditional city in Fujian [11], and Xiamen which is the most rapidly developing and potential emerging city, as our research area [12]. Then, we surveyed the entrepreneurial teams and collected the research data from these two cities.

Since 2015, the China government has proposed the slogan of “mass entrepreneurship brings a mass of innovations”, and it intensively issued various policies to promote innovation and entrepreneurship activities in the same time. However, the relevant policies of innovation and entrepreneurship activities in Fujian Province are concentrated from the beginning to the end of 2015, and it will take time for the policies to be implemented. According to the data of innovation and entrepreneurship policy base of National Development and Reform Commission, Fujian Province is in the implementation stage of the policy between November 2015 and December 2017 [1]. Therefore, we chose to survey during November 2017 to May 2018.

Using online/offline questionnaire, entrepreneurial ventures in entrepreneur incubation parks in Quanzhou and Xiamen in Fujian Province were selected for data collection. A total of 225 copies of questionnaire were distributed from November 2017 to May 2018. By excluding the ones that were not seriously answered and the lack of data, a total of 101 valid copies were retrieved, with the retrieval rate of 44.88%. The valid sample characteristic statistics reveal that most respondents (62.38%) are female and aged between 21 and 30 (46.54%) and 30 and 50 (38.61%), and the market channels of the supervisors focus on physical stores (45.55%) and online (30.69%). For descriptive statistics regarding the research subject of this study, see Table 1.

Table 1. Descriptive statistics of research sample characteristics.

Characteristic	Categories	Sample Number	Percentage Value
Sex	Male	38	37.62%
	Female	63	62.38%
Whether or Not the Individual is a Founding Member of the Company	Is a Founding Member	69	68.32%
	Is Not a Founding Member	32	31.68%
Age	0–20	9	8.91%
	21–30	47	46.54%
	30–50	39	38.61%
	50+	6	5.94%

Table 1. Cont.

Characteristic	Categories	Sample Number	Percentage Value
How Long the Company has been Established	0–1	27	26.73%
	2–5	59	58.42%
	5–10	14	13.86%
	10+	1	0.99%
Main Market Channel for Company Operations	Internet	31	30.69%
	Direct-to-Customer	13	12.87%
	Storefront	46	45.55%
	Other	11	10.89%

3.2. Variable Measurement

3.2.1. Measurement of Entrepreneurial Team Characteristics

Different scholars have different methods for measuring the entrepreneurial cognitive characteristic of cognitive conflict. Jehn believes that task conflict exists in the circumstance where team members have different views on the content of a task currently being carried out. She uses four factors to measure task conflict: (1) the number of times team members have differing views on the work being carried out, (2) the frequency of differing views within the team, (3) the level of conflict in regard to the task, and (4) the level of difference between the various views [23]. Amason holds that cognitive conflict refers to a difference in task orientation that originates from differing viewpoints, and uses the following three questions to measure cognitive conflict: (1) “how much disagreement is there in regard to different ways of thinking?”, (2) “how many differences are there in decision content?”, and (3) “how many different types of views are there in the group?” [27]. Chen et al. [16], on the other hand, sees the task as the center of cognitive conflict, with differences regarding the various methods of arrival at the task objective as the most important force. Therefore, he uses the two criteria of “differences in thought” and “differences in decision content”, among others, to measure the cognitive conflict within entrepreneurial groups. We combine different measurement methods of cognitive conflict found within the existing literature, design question items to address the various necessary aspects (i.e., task conflict, differing views, differing management styles, and differing strategic plans), and measure such question items through a preliminary test. By calculating the Cronbach’s alpha after deleting a given question item, unreasonable items are omitted. In the end, three question items are used to measure the cognitive conflict of entrepreneurial team members. The specific items can be found in Table 2.

In measuring the entrepreneurial team cognitive characteristic of emotional conflict, this study mainly used the measurement method within Jehn’s intragroup conflict scale (ICS), specifically that part referring to the measurement of emotional conflict [23], and combined it with some practical adjustments made by Chinese scholars to make it appropriate to Chinese circumstances. We designed questions that measure emotional conflict from perspectives such as individual characteristics, relationships, emotions, and identification, and deleted unreasonable questions through the preliminary test. In the end, three question items were used to measure the emotional conflict of entrepreneurial teams, which can be found in Table 2.

Regarding the measurement of the entrepreneurial team behavioral characteristic of innovation ability, the most classic analysis is presently Schumpeter’s definition of innovation, wherein he holds that forms of innovation within a firm include the methods for the development of new products, the acquisition of new markets, and the procurement of new resources. On the basis of this view, Miller and Friesen measure innovation through the following three criteria: (1) emphasis on research and development, cutting-edge technology, and innovative sales; (2) the number of new products and or services sold; and (3) the level of change in products and or services [36]. Karagozoglu and Brown measure team innovation by asking managers about their willingness to abandon old ideas and explore new choices [37]. This study combines the research of these two scholars and borrows from practical adjustments made to this measurement to make it more appropriate for Chinese circumstances. This

research designed question items that measure team innovation by looking at products and services, market development, whether or not teams are keeping abreast of current trends, and the desire to innovate. Furthermore, unreasonable items were deleted through the preliminary test. In the end, three question items were used to measure the innovation ability of entrepreneurial teams, which can be found under Table 2.

Considering the impact of long-term position-making behaviors of entrepreneurial teams and implementing strategies on corporation performance. We measured the long- and short-term perspectives of behavioral characteristics by the entrepreneurial team behavioral characteristic of strategic sustainability. Moreover, Taneja and Chenault's work focused heavily on the issue of sustainable development for entrepreneurial firms [38]. We consider the concepts of long- and short-term orientation within Hofstede's theory of cultural dimensions, and put them in the context of the sustainable implementation of strategies of entrepreneurial firms. It measures strategic sustainability by looking at market share, business plans, and repeated innovation. There were no question items deleted through the preliminary test [39]. The specific items can be found in Table 2.

Meanwhile, the coefficient of internal consistency (Cronbach's Alpha, CA) and corrected item-total correction coefficient (CITC) are used for evaluating the reliability of the questionnaire. The reliability analysis results reveal that the team characteristics reliability coefficient (0.805) satisfies the basic reliability requirement. Applying statistical product and service solutions (SPSS) 19.0 to exploratory factor analysis, the results show that the cumulative variance explained that the extracted factors are at 67% and the factor loadings are higher than 0.5 that the validity conformity to the basic requirement.

3.2.2. The Measurement of Venture Performance

In evaluating venture performance, scholars have determined four main representative indicators: (1) arriving at a specified milestone, such as a new company completing the development of a product [40]; (2) the entrepreneurial firm made progress over the course of two or more stages of preparatory activities [41]; (3) whether or not the entrepreneurial process can be characterized as shutting down, still struggling, or operating normally [42]; and (4) the entrepreneurial firm made the first or second profit on a sale [19]. When this study evaluates venture performance, it is mainly concerned with consulting the measurement method laid out by Venkatraman and Ramanujam, which combines the aforementioned four indicators [43]. No items were deleted through the preliminary test. The specific items are found in Table 2.

Meanwhile, the reliability analysis results reveal the reliability coefficient of venture performance (0.890) satisfying the basic requirement for reliability. The exploratory factor analysis result shows the cumulative variance showed the extracted factors 56% and that the factor loadings are higher than 0.5, reaching the basic requirement for validity.

Table 2. Items used to measure entrepreneurial team characteristics.

Variable	Item
The Cognitive Conflict of Team Members	Members of the original entrepreneurial team frequently have different opinions on how to manage the company
	Disagreements among members of the original entrepreneurial team are, to a large extent, about work tasks
	Members of the original entrepreneurial team frequently have differing opinions on what course to take in managing the new company
The Emotional Conflict of Team Members	There is obvious personality conflict among members of the original entrepreneurial team
	Among members of the original entrepreneurial team, we see ourselves as partners who are collectively pushing our company towards success
	Members of the original entrepreneurial team do work tasks as if they are their own tasks

Table 2. Cont.

Variable	Item
Innovation Ability	We are the first company to introduce this product/service to the market
	We are always looking for new opportunities related to our business
	Our team frequently keeps abreast of recent trends
Strategic Sustainability	We are willing to sacrifice profits to increase market share
	We take time to set a comprehensive business plan and then ensured that it is strictly administered
	We frequently test our business model on the market and adjust according to market feedback
Venture Performance	Overall, we provided satisfactory investment returns to our founders and investors and arrived at our anticipated goal(s)
	Our company reached our anticipated product or service development goal(s)
	Our company reached our anticipated user-based or customer-based goal(s)
	Our company reached our anticipated regional market entry goal(s)

This study further evaluated the overall measurement model through the use of confirmatory factor analysis (CFA). The results of this analysis show that the measurement model has a relatively good degree of fit ($\chi^2 = 125.42$, $df = 94$, $p = 0.017$, $\chi^2/df = 1.334$, GFI (goodness-of-fit index) = 0.905, AGFI (adjusted goodness-of-fit index) = 0.958, CFI (comparative fit index) = 0.973, NFI (non-normed fit index) = 0.948, RMSEA (root mean square error of approximation) = 0.040, SRMR (standard root mean-square residual) = 0.037). The load factor of each measurement item fell between 0.707 and 0.947, and all had a p -value greater than $p < 0.001$. The construct reliability (CR) results yielded values greater than 0.7, showing that the underlying variables all have good internal consistency. The values of the average variance extracted (AVE) results all are greater than 0.5, which demonstrates that the average ability of the measurement indicators to explain the underlying variables is good. Therefore, it can be seen that the underlying variables have good construct reliability and validity. When a measurement model has differentiated validity, the correlation coefficients between its underlying variables must be smaller than the internal correlation coefficient of the underlying variables. This study utilized the correlation matrix between the underlying variables to verify that such was the case. The results show that the square root average of the average variance extracted estimate is higher than the correlation coefficient between the underlying variables, which demonstrates that the differentiated validity is good, as shown in Table 3, which depicts the average values of each variable, their standard variation, the square root of the AVE, and the correlation coefficients between each variable. As can be seen in Table 3, the square root of the AVE is greater than any other correlation coefficient in any row or column.

Table 3. Means, standard deviation, correlation coefficient, and discriminative validity

Variable	Average Value	Standard Deviation	1	2	3	4	5
1 Cognitive Conflict	3.16	1.02	0.68				
2 Emotional Conflict	3.46	0.86	−0.32 **	0.66			
3 Innovation Ability	2.88	1.09	0.54 **	−0.10 *	0.69		
4 Strategic Sustainability	3.67	0.78	0.42 **	−0.230 **	0.54 ***	0.70	
5 Venture Performance	3.84	0.83	0.469 ***	−0.154	0.343 ***	0.503 ***	0.72

Note: * means $p < 0.05$, ** means $p < 0.01$, *** means $p < 0.001$. Bold data are square root, which explains the variance. Data underneath the diagonal line are the correlation coefficient between the variables, all are two-tailed tests.

4. Results

This study used the structural equation modeling (SEM) method to test the previously proposed hypotheses. According to the SEM approach, the coefficient analysis results are as follows (seen in Figure 2): (1) the entrepreneurial team cognitive characteristic of cognitive conflict has a significant positive influence on venture performance (standardized regression weight = 0.496, $p < 0.001$), thereby confirming hypothesis 1; (2) the entrepreneurial team cognitive characteristic of emotional conflict had no significant influence on venture performance (standardized regression weight = -0.082 , $p > 0.1$), thereby eliminating hypothesis 2; (3) the entrepreneurial team behavioral characteristic of innovation ability had a significant impact on venture performance (standardized regression weight = 0.343, $p < 0.001$), thereby confirming hypothesis 3; (4) the entrepreneurial team behavioral characteristic of strategic sustainability had a significant positive influence on venture performance (standardized regression weight = 0.501, $p < 0.001$), thereby confirming hypothesis 4; (5) the entrepreneurial team cognitive characteristic of cognitive conflict had a significant positive influence on innovation ability (standardized regression weight = 0.562, $p < 0.001$), thereby confirming hypothesis 5; (6) the entrepreneurial team cognitive characteristic of emotional conflict had a significant negative influence on innovation ability (standardized regression weight = -0.101 , $p < 0.05$), thereby confirming hypothesis 6; (7) the entrepreneurial team cognitive characteristic of cognitive conflict had a significant positive influence on strategic sustainability (standardized regression weight = 0.421, $p < 0.001$), thereby confirming hypothesis 7; and (8) the entrepreneurial team cognitive characteristic of emotional conflict had a significant negative influence on strategic sustainability (standardized regression weight = -0.233 , $p < 0.001$), thereby confirming hypothesis 8.

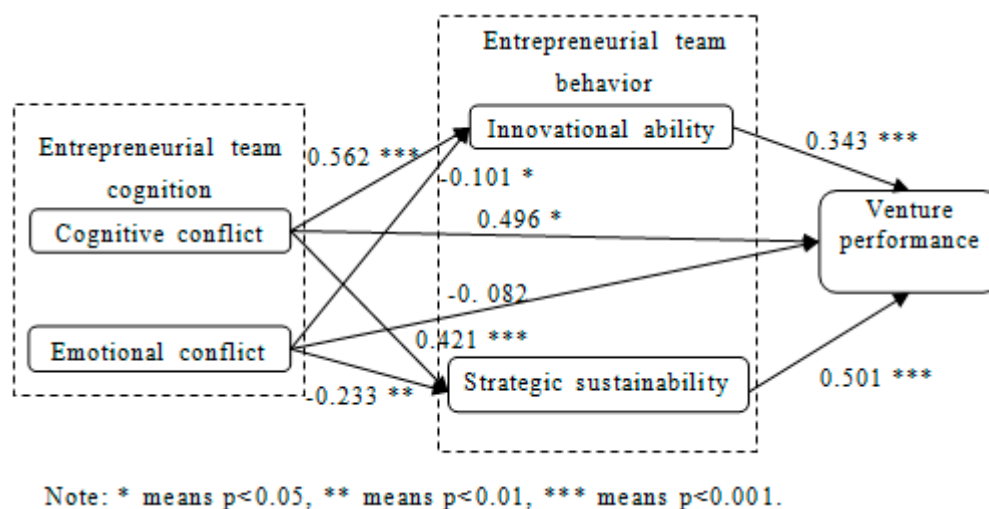


Figure 2. Path graph and standardized parameter estimation.

In order to further test the intermediary effects of entrepreneurial team behavioral characteristics, this study undertook an intermediary effect test according to Brown's multifactor mediating model [44]. In accordance with Brown's view, the effects of the model were separated into direct effects, total effects, total indirect effects, and individual indirect effects. Firstly, the entrepreneurial team cognitive characteristic of emotional conflict had no significant effect on venture performance. Furthermore, the entrepreneurial team cognitive characteristic of cognitive conflict significantly impacts innovation ability. The path coefficients between the entrepreneurial team cognitive characteristic of cognitive conflict, innovation ability, and venture performance were all significant, and in the case of innovation ability, its individual indirect effect of 0.193 (0.562×0.343) was smaller than its direct effect of 0.496, which shows that there is a partial intermediary effect produced by innovation ability, thereby partially confirming hypothesis 9. Finally, the entrepreneurial team cognitive characteristic of cognitive conflict will significantly impact strategic sustainability. Moreover, the path coefficients between the

entrepreneurial team cognitive characteristic of cognitive conflict, strategic sustainability, and venture performance were all significant, and in the case of strategic sustainability, its individual indirect effect of 0.211 (0.421×0.501) was smaller than its direct effect of 0.496, demonstrating the partial intermediary effect produced by strategic sustainability, thereby partially confirming hypothesis 10.

5. Discussion

This study focuses on entrepreneurship and innovation within emerging economies and delves into the relationship between the characteristics of entrepreneurial firms and venture performance from the perspective of cognition and behavior. Furthermore, it explores the mechanism by which the cognitive and behavioral characteristics of entrepreneurial team impact venture performance. The research design of this study is based on two primary foundations: (1) regard for entrepreneurship and innovation within emerging economies and (2) emphasis on the sustainable development of entrepreneurial companies. As such, the study is in accordance with the views put forth by Taneja and Chenault [38]. Applying the theoretical framework of “cognition–behavior–performance” to the relationship between entrepreneurial team behavior and cognitive characteristics and venture performance, this study proposes a theoretical framework wherein the behavioral characteristics of entrepreneurial teams serve an intermediary role in the relationship between the entrepreneurial team cognitive characteristics and venture performance. After this, the SEM approach was used to analyze data from 101 entrepreneurial teams in the entrepreneur incubation parks of Xiamen and Quanzhou in Fujian Province. The research results show that, in the context of entrepreneurial companies, the cognitive characteristic of cognitive conflict has a significant positive influence on venture performance, but the cognitive characteristic of emotional conflict has no influence on innovation ability. In addition, in the context of entrepreneurial companies, the behavioral characteristics of innovation ability and strategic sustainability both have a significant positive influence on venture performance. Furthermore, in the context of entrepreneurial companies, the cognitive characteristic of cognitive conflict has a significant positive influence on innovation ability, and the cognitive characteristic of emotional conflict has a significant negative influence on innovation ability. Moreover, in the context of entrepreneurial companies, the cognitive characteristic of cognitive conflict has a significant positive influence on strategic sustainability, and the cognitive characteristic of emotional conflict has a significant negative influence on strategic sustainability. Finally, in the context of entrepreneurial teams, the behavioral characteristics of innovation ability and strategic sustainability both play an intermediary role in the relationship between the cognitive characteristic of cognitive conflict and venture performance. The theoretical and practical contributions of this study, as well as the limitations of this research, are summarized below.

5.1. Theoretical Contributions

The relationship between entrepreneurial team characteristics and venture performance is an important issue within the field of entrepreneurial management research. Past research has tended to focus on the impact of entrepreneurial team heterogeneity on the development and competitive advantage of entrepreneurial firms [27]. The section of this study that explored the impact of cognitive and behavioral characteristics of entrepreneurial teams on venture performance confirmed this previously held view. Moreover, in the context of an emerging economy such as China, the cognitive conflict, innovation ability, and strategic sustainability of entrepreneurial teams all markedly increase venture performance. At the same time, however, research results also discovered that, in the context of entrepreneurial teams, the cognitive characteristic of emotional conflict has no obvious negative influence on venture performance. This result is consistent with Chen’s view [16]. The relationship between emotional conflict and venture performance must be researched further.

Moreover, the influence of the entrepreneurial team behavioral characteristics of innovation ability and strategic sustainability on venture performance is further discussed. Current research has tended to focus on the relationship between the innovation of entrepreneurial teams and venture performance.

This study's research also confirmed this close relationship in the context of entrepreneurial and innovative activities within emerging economies and further verified the markedly positive impact of innovation ability on venture performance. In addition, we focused on the positive influence of strategic sustainability behavior on venture performance. This both reflected and confirmed the theoretical value and meaning of long-term orientation in entrepreneurial management, a finding consistent with the most recent research.

Finally, the notable intermediary role played by entrepreneurial team behavioral characteristics in the relationship between entrepreneurial team cognitive characteristics and venture performance also reflects the importance of the innovation ability and strategic sustainability of entrepreneurial teams to the firm. Just as Taneja and Chenault expressed a focus on the sustainable development of entrepreneurial firms, entrepreneurial teams that possess innovation ability and have a long-term orientation are better able to lead the entrepreneurial firm to success [38]. Furthermore, the resulting discovery of this intermediary effect produced by entrepreneurial team behavioral characteristics is a theoretical extension and application of the "cognition-behavior-performance" theoretical framework within the entrepreneurial management field.

5.2. Implications for Practice

In the management process of entrepreneurial companies, entrepreneurial teams play an important role. Entrepreneurial teams that possess different cognitive structures notably increase the innovation ability of the entrepreneurial company, and thereby make the company more adaptive in responding to market and environmental changes, thereby increasing venture performance and leading to the accumulation of competitive advantages. In addition to this, entrepreneurial teams that possess different cognitive structures give the entrepreneurial company a more long-term orientation when setting strategy, developing markets, and settling on a business model, thereby increasing the sustainable development of the firm.

This research also revealed the role played by behavioral characteristics of entrepreneurial teams in the development process of the entrepreneurial firm. This is especially the case in emerging economies where, owing to the vagueness and uncertainty present in these business environments, entrepreneurial teams must deal with external markets and adapt to them. Moreover, in the context of emerging markets, where there are rapid changes in both the technological environment and the imperfect institutional environment, entrepreneurial teams must combine innovation ability and strategic sustainability in order to allow the entrepreneurial firm to better respond to the external environment and achieve sustainable development.

5.3. Limitations and Future Research

This research has the following limitations. (1) This research only focused on the cognitive and behavioral characteristics of entrepreneurial teams and does not take into consideration other characteristics. (2) This research's consideration of the impact of other factors on venture performance is not comprehensive. (3) Although this research focuses on innovative and entrepreneurial activities within emerging economies, the study lacks an in-depth look into the selection of its research subject and a concrete definition of the circumstances of emerging economies. These all must be explored further in future research.

6. Conclusions

This study explored the relationship between entrepreneurial team cognitive characteristics, behavioral characteristics, and venture performance in the context of China, a representative emerging economy, based on the theoretical framework of "cognition-behavior-performance". It analyzed the notable impact of entrepreneurial team cognitive and behavioral characteristics on venture performance. In addition to this, this research also demonstrated the intermediary effect produced by entrepreneurial team behavioral characteristics on the relationship between entrepreneurial team

cognitive characteristics and venture performance. The theoretical contributions of this study are as follows: (1) we examined the relationship between entrepreneurial team characteristics and entrepreneurial performance in the context of emerging economies from the perspective of sustainability, and extended the traditional theory of the relationship between those; (2) we revealed the partial mediating effect of entrepreneurial team's innovation ability and strategic sustainability on the relationship between entrepreneurial team cognition and entrepreneurial performance. It showed the impact of entrepreneurial team's long-term strategy on entrepreneurial performance, and enriched the current theory of the relationship between entrepreneurial team's behavior and entrepreneurial performance. The practical contribution of this article is to propose that the entrepreneurial team should pay more attention to the long-term strategy making and ability cultivation, in order to enable entrepreneurial enterprises to achieve sustainable development.

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