

# **A study on the correlation between business model, entrepreneur ability and enterprise performance of entrepreneurial enterprises**

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**Abstract:** This research starts from the problems faced by entrepreneurial enterprises, uses literature review, the combination of theory and practice, and statistical analysis to select and classify the business models of entrepreneurial enterprises, and explores the relationship between the business models of entrepreneurial enterprises and the capabilities of entrepreneurs. The mechanism of the impact of different capabilities on corporate performance and the inherent correlation between the three. Constructed a structural model of the interaction between innovative business models, entrepreneurial capabilities and performance. This study will use this as a theoretical basis to help entrepreneurs play a guiding role in the selection of business models and the improvement of their capabilities. Through the matching of business models and capabilities, they can improve the performance of enterprises, thereby increasing the survival rate of startup enterprises.

## **1. Introduction**

Since the introduction of "Popular Innovation, Mass Entrepreneurship", the number of entrepreneurial enterprises in China has increased dramatically, but business failure rate as high as 80%. Therefore, the survival and growth of these startups have received widespread attention from the academic community. How to more effectively improve the performance of startups in the current environment has become a hot topic for scholars to discuss. An important reason for the low survival rate of most domestic startups is that entrepreneurs lack a sufficient understanding and understanding of the business model design and corporate capabilities of the enterprise itself. In the complex and changing process of entrepreneurship, entrepreneurial enterprises lack of in-depth understanding and grasp of customer value, unable to form core competitiveness, making it difficult to survive the start-up period. In addition, as the direct data to measure the success of entrepreneurship, enterprise performance is crucial for start-ups. Based on the above foundation, this study aims to make a comparative study of the business models existing in domestic entrepreneurial enterprises, use empirical research and statistical analysis to explore the relationship between business models and entrepreneurial capabilities, and the impact mechanism of entrepreneurial capabilities on performance and the interrelationship between the three, in order to enrich the research in the field of entrepreneurial economics and management, help entrepreneurs to play a guiding role in the selection of business models and the improvement of their capabilities. Through the matching of business models and capabilities to improve corporate performance survival rate of startups.

## **2. Literature review**

### **2.1 Business model**

Amit & Zott (2001, 2010) believes that business models describe the content, structure, and management of companies facing market transactions, and help companies seize business opportunities to obtain profits. Johnson, Christensen & Kagermann (2008) believe that the business

model is composed of four related elements: customer value proposition, profit model, key resources, and key processes, and they jointly create and deliver value. Chinese scholar Wen Liang believes that startups need to choose a business model reasonably during the start-up period and continuously adjust the business model [1]. Jiayu Zhang scholars believe that fundamentally improving the dynamic capabilities of the organization can help companies to continuously innovate business models in a dynamic environment and maintain the organization's competitive advantage [2].

## **2.2 Entrepreneur ability**

This paper divides the entrepreneurial ability into four dimensions: opportunity identification and utilization, entrepreneurial learning, organizational operation, conception and commitment. Under the business model that ADAPTS to the market environment, entrepreneurs can turn enterprise capability into enterprise entrepreneurial advantage and further improve enterprise performance.[3] The ability of entrepreneurs, including learning ability, relationship ability and environmental perception ability, can be transformed into enterprise ability to help entrepreneurs succeed. [4] The ability of entrepreneurs directly affects the perception and decision-making of unexpected events, which further affects the ability of enterprises to deal with risks and the success or failure of entrepreneurship.

## **2.3 Corporate performance**

There are two mainstream studies on how to improve corporate performance in foreign academic circles. [5] The other is that business model innovation is an important driver of corporate performance.[6] Jianchun Fu believes that in a dynamic environment, the ability of entrepreneurs can mediate the development of entrepreneurial enterprises.[7] From a practical point of view, we need to recognize the relationship between the components that make up the business model of an enterprise. It is the interconnections between these components that determine the performance of an enterprise.

## **2.4 Literature review**

Now there are many researches on the business model, entrepreneur ability and enterprise performance of entrepreneurial enterprises at home and abroad, which provide abundant theoretical resources for this study and provide certain inspirations on relevant research directions and methods. Previous literatures mainly focus on the relationship between enterprise capability and enterprise performance under the intermediary of business model, but there are few researches on the ability of entrepreneurs to enterprise performance. This study intends to explore the influence mechanism of entrepreneur ability on enterprise performance, enrich the research in this field, put forward effective Suggestions for contemporary innovative entrepreneurs, and improve the success rate of entrepreneurship.

# **3. Research hypothesis**

## **3.1 Business model and entrepreneurial enterprise performance**

Business model innovation helps enterprises adapt to the changing environment by optimizing key resources, key processes, and profit model and customer value proposition, to show their advantages in the market. By adjusting internal and external key resources, the innovative business model can make up for its own lack of ability and reduce the constraint of limited resources. Through the optimization of key processes to achieve cost reduction and service improvement, the innovative operation process to improve the enterprise supply chain system, ensure efficient enterprise value creation, promote the growth of performance and efficiency of new enterprises. Enterprises implementing business model innovation pay more attention to realize customer value, create and deliver new value for customers, expand the influence of products and services in the market, and bring higher entrepreneurial performance. Based on the above theories, hypothesis 1 is proposed in this study:

H1: there is a positive relationship between business model innovation and entrepreneurial performance.

### **3.2 Regulating effect of entrepreneur's ability**

The ability of entrepreneurs is divided into four dimensions: opportunity identification and utilization, entrepreneurial learning, organizational operation, vision and commitment. Entrepreneurs can identify and make use of opportunities to help get the first-mover advantage, to ensure that the start-up business in the process of maintaining the right direction of entrepreneurship. Continuous learning and absorption of the latest entrepreneurial information in a dynamic and changing environment can help entrepreneurs to use the knowledge they have learned or the entrepreneurial ability built from previous experience to positively affect the entrepreneurial performance of entrepreneurs. Only through proper organization and operation can the resources and capabilities owned by entrepreneurs be effectively provided to customers and converted into enterprise performance. The conception and commitment of entrepreneurs in entrepreneurial activities will not only affect the formulation and implementation of enterprise development strategy, but also further enhance the entrepreneur's entrepreneurial identity and entrepreneurial belief in the increasingly complex entrepreneurial process. Therefore, the ability to identify and utilize opportunities, the ability to learn, the ability to organize and operate, the ability to conceive and commit, etc. that entrepreneurs have under the conditions of highly uncertain external environment and internal resource constraints are often important characteristics of successful entrepreneurs, which will also directly affect the performance of enterprises. Based on this, hypothesis 2 is proposed:

H2: entrepreneur ability to regulate the positive relationship between business model innovation and the performance of new enterprises. The higher the entrepreneurial ability of entrepreneurs, the greater the impact of business model innovation on the performance of new enterprises.

## **4. Research hypothesis**

A questionnaire survey method was used to select entrepreneurs and entrepreneurs with business experience in MBA and EMBA who have registered for business registration and obtained business licenses in Wuhan University Business Incubation Park, and put 300 copies in total, 252 were actually recovered, and 227 valid questionnaires were obtained after excluding invalid questionnaires.

### **4.1 Measurement of variables**

#### **4.1.1 Business model innovation**

Using ZottC and AmitR, Guo Hai, and Shen Rui's novel business model innovation scale, and referring to Casadesus to make some adjustments to the research results of business model innovation, and finally formed "continuously introducing new methods and processes into the business model", "Will provide products and services using a novel model" scale of 9 items.

#### **4.1.2 Entrepreneur ability**

The entrepreneurial ability measurement refers to the mature scale used by Man and Cai [15, 30], which divides the entrepreneurial ability into four dimensions including "opportunity identification and utilization ability", "entrepreneurial learning ability", "organizational operation ability" and "vision and commitment ability". Examples include "you can seize high quality business opportunities and act" and "you can allocate your business's human, financial and material resources".

#### **4.1.3 Performance of new enterprises**

Startup performance scale reference Casadesus people and domestic scholars Long Jing [20, 26] research on the performance of new ventures, and in combination with the practical situation of the interview to the entrepreneurs, from two aspects of profitability and growth, select "compared with

the same industry, your company has good profitability", "compared with the same industry, your company's customer satisfaction high" article 5 orders, such as measurement.

#### 4.1.4 Control variables

There may be differences between entrepreneurs of different genders and professions, and of different sizes and industries. Smaller companies may be more affected by the entrepreneurial network in terms of business model innovation; entrepreneurs from different disciplines may show differences in business model innovation and entrepreneurial capabilities. Therefore, gender, professional background, enterprise size, industry category, and market competition strength were selected as control variables in the hypothesis test.

### 4.2 Data analysis and hypothesis testing

#### 4.2.1 Homologous variance analysis

In order to make the research conclusion more credible, this study conducted process control during the questionnaire survey. For example, the distribution and collection of questionnaires were separated with an interval of one month, and all questionnaire items were filled in anonymously to prevent the evaluators from having psychological concerns. In addition, in the data analysis of this study, the Harman single factor test method was used to conduct factor analysis of all scales involved in the questionnaire. In the final statistical data of this study, 7 factors with characteristic roots greater than 1 were eutectoid, and the interpretation rate of all factors to the total variance was less than 50% (the maximum interpretation rate of single factor was 39.1%). Therefore, it can be considered that the sample data used in this study did not have the problem of homologous square difference.

#### 4.2.2 Reliability and validity analysis

Cronbach's coefficient was used as the standard test for reliability, KMO and Bartlett spherical test were used for validity, and SPSS 22.0 was used for data analysis. The result showed that the coefficient of 0.91 was suitable for exploratory factor analysis. Cronbach's coefficient is 0.87; factor load for business model innovation is between 0.648 ~ 0.826, Cronbach's coefficient is 0.89; factor load for entrepreneurial ability is between 0.648 ~ 0.818, Cronbach's coefficient is 0.90; factor load for new business performance between 0.805 and 0.874, the Cronbach's coefficient is 0.89. It shows that the selected scale has better reliability and convergence validity. In order to test the discriminant validity between the key variables "innovative business model", "entrepreneur capability" and "enterprise performance" and the corresponding measurement parameters of each measurement scale, this study uses AMOS 17.0 to perform a confirmatory factor analysis on the key variables and compare between single-factor, two-factor, and multi-factor models. The results show that the four-factor model has a good fit:  $\chi^2 / df = 2.62 < 3$ ;  $RMSEA = 0.065 < 0.08$ ;  $CFI = 0.92 > 0.90$ ;  $NFI = 0.91 > 0.90$ ;  $TLI = 0.92 > 0.90$ . The analysis results show that the scale has good structural validity.

Table. 1 Mean value, standard deviation and correlation coefficient of each major variable

Variables	1	2	3	4	5	6	7	8
Gender	1							
Background	0.16*	1						
Business Scope	0.19**	0.09	1					
Company Size	-0.02	-0.09	0.03	1				
Competition	0.05	0.06	-0.09	0.09	1			
Business model Innovation	-0.03	0.03	0.07	-0.15	-0.07	1		
Business Performance	0.06	0.05	-0.04	-0.04	-0.12	0.54**	1	
Entrepreneurial Ability	-0.05	-0.05	0.05	0.05	-0.08	0.32**	0.38**	1
Mean	0.37	1.37	2.19	2.19	3.2	3.58	3.67	3.74
Standard deviation	0.48	0.76	0.69	0.69	0.7	0.84	0.86	1.11
Note: N = 227, * and ** indicate significant correlation at 0.05 and 0.01, respectively								

It can be seen from table 1 that there is a positive correlation between business model innovation, new enterprise performance and entrepreneur ability. The business model innovation is positively correlated with the performance of new enterprises and the ability of entrepreneurs. There is also a significant positive correlation between startup performance and entrepreneurial competence. The analysis results are consistent with the direction of the hypothesis in this study, and the validity of the hypothesis is preliminarily verified.

The regression analysis results of business model innovation and enterprise performance  $P < 0.001$  indicate that business model innovation has a positive impact on the performance of new enterprises, so hypothesis 1 is valid.

In addition, this study also used hierarchical regression method to verify the mediating effect of entrepreneurs' abilities. After taking the performance of new enterprises as the variable, control variables -- gender, professional background, business scope, company size and competition situation are introduced successively, independent variables -- innovative business model and regulatory variables -- entrepreneur ability are added, and the product of independent variables and regulatory variables is added. In order to eliminate the influence of collinearity, the independent variables and regulatory variables were standardized when the product terms of independent variables and regulatory variables were constructed. Specific results for 0.13/0.05/0.03, 0.05/0.47 - \*\*, \*\*\*, \*\*\*, \*\*\*, 0.23 (4.05) / 0.14 \* (2.61), 0.40/0.02 \*\*\*\*, 17.80 and 6.82. Where  $N=227$ , \* denotes  $p < 0.05$ , \*\* denotes  $p < 0.01$ , and \*\*\* denotes  $p < 0.001$ . According to the results, it can be seen that the ability of entrepreneurs has a positive regulating effect on the performance of new enterprises and innovative business models, so hypothesis 2 is valid.

## 5. Conclusion

By means of literature review, combination of theory and practice, and statistical analysis, this study studies the internal relations among the three factors including entrepreneur ability, innovative business model and enterprise performance, and draws the following conclusions:

1. Innovative business models play a positive role in promoting entrepreneurial enterprises. The ability of entrepreneurs can adjust the positive relationship between the innovative business model and the performance of new enterprises. The higher the ability of entrepreneurs is, the greater the positive effect of the innovative business model on the performance of new enterprises will be.
2. In the process of starting a business, entrepreneurs should pay attention to innovating business models according to the changes in the market, so as to improve the ability of enterprises to deal with risks and ensure the survival of enterprises.
3. Entrepreneurs should attach importance to and improve their own abilities and qualities, so that after the success of the innovative business model, the enterprise results can be maintained and continued, and further transformed into the performance of the new enterprise.
4. For potential entrepreneurs, they should consider their own abilities and resources before choosing to start a business. If the lack of entrepreneurial capacity may reduce the possibility of success of innovative business models, the final corporate performance may also be affected.

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