

# The Influence of Entrepreneurship Education and Entrepreneurship Environment on College Students' Entrepreneurial Intention: Based on the Linear Regression Technology of SPSS 2.5 Software

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**Abstract:** Based on SPSS 2.5 software, this study adopts linear regression method to investigate the influence mechanism of entrepreneurial environment and entrepreneurial education on entrepreneurial intention of college students, as well as the mediating role of entrepreneurial self-efficacy, so as to provide theoretical support for universities and society to promote entrepreneurial intention of college students. The results show that:

(1) Entrepreneurial education and entrepreneurial environment have a positive effect on entrepreneurial intention. (2) Entrepreneurial self-efficacy plays a mediating role between entrepreneurial education and entrepreneurial intention. (3) Entrepreneurial self-efficacy plays a mediating role between entrepreneurial environment and entrepreneurial intention.

**Keywords:** entrepreneurial education, entrepreneurial environment, entrepreneurial self-efficacy, entrepreneurial intention

## 1 Introduction

Throughout the economic and social development, independent entrepreneurship is the product of the rapid development and expansion of China's market economy. China's economy is developing at an ultra-high speed, and the steady and sustainable development of China's economy needs to be promoted by the force of independent entrepreneurship. However, according to the data of the "2022 Chinese College students Employment report", the proportion of graduates of the class of 2022 "starting their own business" is only 1.2%, and the overall proportion is on the low side. How to improve college students' Entrepreneurial intention has become the focus of many domestic scholars. The literature on the influencing factors of college students' entrepreneurial intention is mainly reflected in the following two aspects: first, the research is carried out from the environmental factors such as family background, entrepreneurial policy, social network relationship, social capital, entrepreneurial example and peer groups; secondly, from the demographic characteristics of college students, entrepreneurial passion, initiative personality, creative personality, self-efficacy and other individual factors<sup>[1]</sup>.

As colleges and universities attach importance to entrepreneurship education and entrepreneurship environment, more and more scholars have conducted empirical research on

how entrepreneurship education and entrepreneurship environment affect college students' entrepreneurial intention. Based on the existing research literature, this paper introduces entrepreneurial self-efficacy as an intermediary factor between entrepreneurial education, entrepreneurial environment and college students' entrepreneurial intention, and reveals the internal mechanism that entrepreneurial education and entrepreneurial environment affect college students' Entrepreneurial intention. It can provide reference for stimulating college students' entrepreneurial intention through entrepreneurial education and entrepreneurial environment.

## **2 Literature Review**

### **2.1 Entrepreneurial education and Entrepreneurial intention**

Entrepreneurial intention is a dependent variable in the development of entrepreneurial activities. Krueger (1993) defines entrepreneurial intention as the inner idea of predicting whether a person will engage in entrepreneurial activities in the future, which is the premise of individual entrepreneurial behavior. Only when individuals have a strong entrepreneurial desire can they promote their entrepreneurial behavior <sup>[2]</sup>. Thompson (2009) believes that entrepreneurial intention is a kind of confidence and belief that individuals expect to start a new business in the future, and will practice in the future <sup>[3]</sup>.

Entrepreneurship education was first proposed in the late 1980s. It is relatively early for some western countries to carry out research in this field. Bridge et al. (2010) believe that entrepreneurship education is the education of individuals with a range of basic skills and related knowledge, regardless of whether individuals choose to work or start their own business, these abilities can enable them to make unique innovation and creative contributions in their work<sup>[4]</sup>. Curavic (2011) proposed that entrepreneurship education is to develop the ability of individuals to translate their ideas into action, including creativity, innovation, risk-taking spirit, and the ability to plan and manage project goals <sup>[5]</sup>. Solesvik (2013) the research based on TPB theory shows that individuals with entrepreneurship education have higher entrepreneurial motivation <sup>[6]</sup>. Based on this, this paper will put forward the following assumptions:

**H1:** entrepreneurship education has a positive effect on college students' entrepreneurial intention.

### **2.2 Entrepreneurial environment and Entrepreneurial intention**

With the rapid development of a series of entrepreneurial activities, the discussion of entrepreneurial environment has attracted more and more attention. Gartner (1985) describes the new enterprise creation framework from four dimensions: individual, organization, process and environment. He believes that the establishment of an entrepreneurial environment depends on factors such as the availability of entrepreneurial resources, surrounding universities and research institutions, government intervention and people's attitudes towards entrepreneurship <sup>[7]</sup>. Scott (1987) summarizes the results of previous studies and believes that the entrepreneurial environment is essentially an institutional environment. He divides the institutional environment into three dimensions: regulatory institutional environment,

normative institutional environment and cognitive institutional environment. They influence entrepreneurial behavior from three angles: compulsion, social consensus and social identity [8].

Duan and Du (2012) revalidated the GEM model and revised the questionnaire according to China's national conditions, conducted a questionnaire survey of Chinese college students, and concluded that financial support, government policies, education and training, R & D transfer, and the degree of openness of the domestic market have a significant positive effect on college students' entrepreneurial intention [9]. Shi (2018) divides the entrepreneurial environment into entrepreneurial policy, financing environment, education and training and social and cultural environment based on the GEM model. She found that entrepreneurial policy, financing environment, education and training and sociocultural environment have a positive predictive effect on entrepreneurial intention [10]. Based on the theoretical analysis above, the following hypothesis is proposed:

**H2:** entrepreneurial environment has a positive effect on college students' entrepreneurial intention.

### **2.3 Mediating Role of Entrepreneurial self-efficacy**

The study of self-efficacy began in the 1970s. The so-called sense of self-efficacy refers to the evaluation of the belief intensity and self-ability of individuals on whether they can complete a certain activity at a given level. Subsequently, scholars introduced the sense of self-efficacy into the field of entrepreneurship, and found that self-efficacy has a certain universality in the field of entrepreneurial research, resulting in entrepreneurial efficacy. Laviolette (2012) believes that entrepreneurial self-efficacy is an important uncontrollable variable to judge the intensity of entrepreneurial intention and whether they take entrepreneurial action in advance [11]. Previous studies have shown that college students who have received entrepreneurship education have stronger entrepreneurial self-efficacy. Cox et al. (2002) also concluded that entrepreneurship education has a significant positive effect on entrepreneurial self-efficacy, and entrepreneurial self-efficacy has a significant positive effect on entrepreneurial intention [12]. Based on the theoretical analysis above, the following hypothesis is proposed:

**H3:** entrepreneurial self-efficacy has a mediating effect on the relationship between entrepreneurial environment and entrepreneurial intention. **H4:** entrepreneurial self-efficacy has a mediating effect on the relationship between entrepreneurial education and entrepreneurial intention.

## **3 Materials and Methods**

### **3.1 Data Collection**

In this paper, by using the method of random sampling, a questionnaire survey was conducted among 297 college students in Anhui Province, China. The subjects were mainly from Huangshan College, Anhui University of Finance and Economics, Fuyang normal University and Anhui normal University. Among them, a total of 24 invalid questionnaires were deleted, of which 273 valid questionnaires were collected, with an effective rate of 91.9%. Statistical

analysis of sample data characteristics of college students participating in the survey is shown in Table 1:

**Table 1.** Profile of the respondents

Item	Category	Frequency	Percentage
Gender	Male	144	52.75%
	Female	129	47.25%
Grade	First	5	1.83%
	Second	104	38.1%
	Third	105	38.46%
	Fourth	59	21.61%
Educational background	Junior college	9	3.3%
	Undergraduate	258	94.51%
	Master	6	2.2%

### 3.2 Measures

Entrepreneurship education: this scale is compiled by Franke & Luthje and Fayolle & Klandt. At the same time, the two scales are summarized according to the theme of this paper when designing the questionnaire. Finally, entrepreneurship education is divided into three dimensions, a total of 12 items. Entrepreneurial environment: the scale draws lessons from Gnyawali & Fogel's five-dimensional model and GEM model, and finally divides the entrepreneurial environment of college students into four dimensions, a total of 16 items. Entrepreneurial self-efficacy: the scale draws lessons from De Noble et al. and the scale developed by Tang, and divided it into five dimensions, a total of 20 items. Entrepreneurial intention: this scale draws lessons from the scale of Hu, Jiang and Luo (2016), and four items are used in the measurement.

In this study, the sobel method was adopted to verify the mediating effect. The formula and steps of the test were divided into three steps:

**Step1:  $Y=cX+e_1$ .**

According to this formula, we need to analyze the regression of X to Y, and test the significance of regression coefficient c (that is, test  $H_0: c=0$ );

**Step2:  $M=aX+e_2$ .**

According to this formula, we need to analyze the regression of X to M, and test the significance of the regression coefficient a (that is, test  $H_0: a=0$ );

**Step 3:  $Y=c'X+bM + e_3$ .**

According to this formula, we need to analyze the regression of X to Y after adding the intermediary variable M, and test the significance of regression coefficients b and c' (that is, test  $H_0: b=0, H_0: c'=0$ ).

## 4 Data Analysis and Results

### 4.1 Reliability analysis

In this study, the reliability of the four scales was analyzed by SPSS25.0 statistical analysis software. The verification index of reliability is Cronbach's Alpha. Table 2 shows that the Cronbach's alpha coefficients of entrepreneurship education, entrepreneurial environment, entrepreneurial intention and entrepreneurial self-efficacy are 0.941, 0.922, 0.912 and 0.953 respectively, all of which are more than 0.7 and close to 1.

**Table 2.** Result of reliability analysis

variable	number	Cronbach's Alpha
Entrepreneurship education	12	0.941
Entrepreneurial environment	16	0.922
Entrepreneurial intention	4	0.912
Entrepreneurial self-efficacy	20	0.953

### 4.2 Correlation analysis

In this study, the analysis tool used in variable correlation analysis is spass25.0. Pearson correlation analysis is used to test the correlation between variables.

**Table 3.** Means, standard deviations, and correlations

	1	2	3	4	M	SD
Entrepreneurship education	1				2.91	1.02
Entrepreneurial environment	0.89**	1			2.78	0.90
Entrepreneurial intention	0.62**	0.68**	1		3.06	0.97
Entrepreneurial self-efficacy	0.43**	0.45**	0.67**	1	3.24	0.81

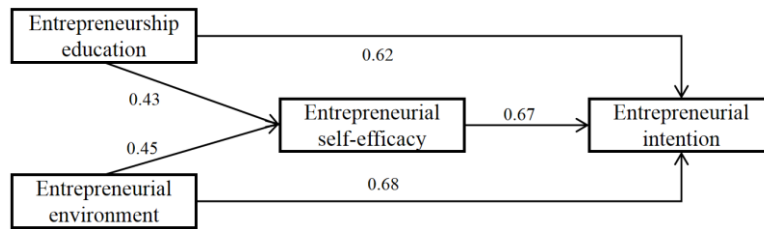
\*:  $p < 0.05$ , \*\*:  $p < 0.01$

Table 3 presents that there is a significant positive correlation between entrepreneurship education and entrepreneurship environment. Entrepreneurship education is significantly positively correlated with Entrepreneurial intention. Entrepreneurship education is significantly positively correlated with entrepreneurial self-efficacy. Entrepreneurial environment is significantly positively correlated with entrepreneurial intention. There is a significant positive correlation between entrepreneurial environment and industrial self-efficacy. Entrepreneurial intention has a significant positive correlation with entrepreneurial self-efficacy.

### 4.3 Hypotheses testing

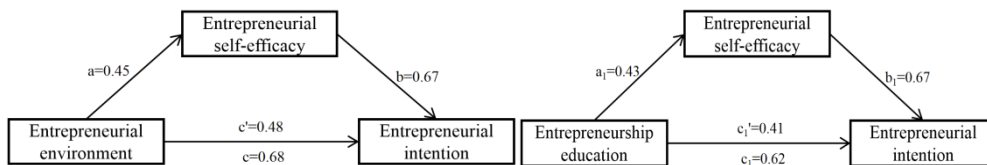
From the results of the above analysis, we can see that there is a significant correlation between the dimensions of entrepreneurial environment and entrepreneurial intention, but this relationship does not explain the specific form of relationship between variables. therefore, regression analysis is used to further explain the predictive power of entrepreneurial

environment and entrepreneurial education on entrepreneurial intention. According to figure 1, entrepreneurship education positively predicted entrepreneurial intention ( $\beta=0.62$ ,  $t=12.43$ ), entrepreneurial environment positively predicted entrepreneurial intention ( $\beta=0.68$ ,  $t=14.77$ ), entrepreneurial self-efficacy positively predicted entrepreneurial intention ( $\beta=0.67$ ,  $t=14.14$ ), and entrepreneurial education positively predicted entrepreneurial self-efficacy ( $\beta=0.43$ ,  $t=7.52$ ). Entrepreneurship education has a significant positive effect on entrepreneurial self-efficacy ( $\beta=0.45$ ,  $t=7.86$ ).



**Fig. 1.** Results of regression analysis

Figure 2 shows that the regression coefficient a, b, c are 0.45, 0.67 and 0.68 respectively. Because c' is 0.48, reaching a significant level, and c' has the same symbol as ab, it shows that entrepreneurial self-efficacy plays a mediating role between entrepreneurial environment and entrepreneurial intention, and H3 has been verified. Figure 3 shows that the regression coefficient a1, b1, c1 are 0.43, 0.67 and 0.62 respectively. Because c1' is 0.41, reaching a significant level, and c1' has the same symbol as a1b1, it shows that entrepreneurial self-efficacy plays a mediating role between entrepreneurship education and entrepreneurial intention, and H4 has been verified.



**Fig. 2.** Results of mediating effect 1

**Fig. 3.** Results of mediating effect 2

## 5 Research conclusions and implications

### 5.1 Conclusions

This study uses the form of questionnaire to verify the model. Through the data analysis of SPSS2.5, we verified that entrepreneurship education and entrepreneurial environment have a positive effect on college students' entrepreneurial intention, and verified the mediating role of entrepreneurial self-efficacy.

### 5.2 Implications

According to the results of the analysis, colleges and universities should closely follow the social trend, strengthen the basic entrepreneurship education for college students, and carry out diversified courses related to entrepreneurship education. Different universities should

constantly improve the contents of entrepreneurship education courses according to the actual situation of them, not only to impart theoretical knowledge, but also to combine with the corresponding entrepreneurial practical activities. make students' awareness of entrepreneurship continue to enhance, so that students' entrepreneurial self-efficacy can also be improved, and then enhance students' intention to start a business.

The government should keep pace with the times and promulgate preferential policies conducive to college students' entrepreneurship according to social changes, so as to provide a good social entrepreneurial environment for college students' entrepreneurial practice. At the same time, the relevant government departments should also actively guide and encourage colleges and universities to support college students' entrepreneurship, so that colleges and universities under the guidance of the government can also create a good campus entrepreneurial environment. At the same time, the relevant governments should also do a good job in supervision and supervise the implementation of entrepreneurial preferential policies of relevant departments. Finally, the relevant government departments should further improve the degree of social security of entrepreneurial college students, such as improving the medical system or the minimum living security system, so as to alleviate the worries of college students in entrepreneurial activities.

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