

# The Impact of Social Capital on University Students' Entrepreneurial Opportunity Recognition

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## ABSTRACT

Through the questionnaire survey of 387 undergraduate entrepreneurs, this paper adopts analysis methods such as literature research, empirical research and data statistical analysis, and modeling technology such as structural equation model to analyse the impact of social capital on the opportunity identification of entrepreneurial university students. This study concludes that social capital is positively correlated with entrepreneurial opportunity recognition, and entrepreneurial alertness plays an intermediary role. This study further enriches the theory of entrepreneurial opportunity recognition for university students, and helps university entrepreneurs to further understand the importance of social networks and entrepreneurial alertness for opportunity recognition, so as to build and improve personal social networks, enhance entrepreneurial awareness and opportunity recognition ability, and improve the success rate of entrepreneurship.

**Keywords:** Social capital, opportunity recognition, entrepreneurial alertness

## 1. INTRODUCTION

In the 21<sup>st</sup> century, China is in a crucial period of social reform. Faced with changeable social environment and increasing competitive pressure, the employment situation of university student is more serious. In order to realize self-value, self-employment is recognized and accepted by more students. However, compared with ordinary entrepreneurs, university entrepreneurs are more special. They have advanced knowledge reserve and solid economic theory foundation with limited scope of social network and difficulties in identifying opportunities, leading to frequent failure in entrepreneurship. According to the employment report of Chinese university students in 2018 released by Mycos research institute in June, 2018, the proportion of Chinese university students starting their own businesses, compared with 2015 and 2016 (both 3%), has slightly decreased to 2.9% in 2017 [1].

Therefore, in order to further encourage university students' entrepreneurial activities, this paper takes initiative as subjects and uses Amos structural equation model, the Five-Likert scale method and SPSS data analysis to make an empirical analysis of the impact of social capital on the entrepreneurial opportunity identification of university students, which supplements the theoretical research on the opportunity identification of university students and has a good guiding significance for improving the entrepreneurial status of university students.

## 2. LITERATURE REVIEW AND HYPOTHESIS

So far, many scholars at home and abroad have conducted research on the impact of social capital on the recognition of entrepreneurial opportunities. Nanapiet (1998) first divided social capital into structural capital, relational capital and cognitive capital for analysis [2]. Hao and Hafis (2015) define social capital as a basic resource for entrepreneurs, which is the network connection and cognitive sum that help entrepreneurs effectively identify opportunities [3]. Mehran (2018) studied entrepreneurial alertness in the process of opportunity recognition and concluded that entrepreneurial alertness affects entrepreneurs' opportunity recognition [4].

Based on micro-enterprise entrepreneurs or social entrepreneurs respectively, Gao (2013) [5] and Wang (2017) [6] analyzed that entrepreneurs' social capital had a positive impact on recognition of opportunities, and entrepreneurship alertness played an intermediary role between social capital and opportunity recognition. Yuan (2017) [7], Wang (2015) [8] and Zhang (2015) [9] pointed that social capital has a positive impact on opportunity recognition from different dimensions of social capital.

To sum up, different scholars analyze social capital from different dimensions with diverse research models, which are of great help to this paper. But now scholars pay less attention on entrepreneurial group of university students, and introducing alertness as an intermediate variable is relatively scarce. Hence, this research basing on university students studies the impact of social capital on entrepreneurial opportunity recognition and further

explores the mediating role of entrepreneurial alertness between the two.

**2.1. The Impact of Social Capital on Entrepreneurial Opportunity Recognition**

Social capital is the relationship network established by entrepreneurs or organizations in the process of entrepreneurship practice. Opportunity recognition refers to the ability to find new business opportunities based on existing information. This paper uses structural capital, relational capital and cognitive capital to analyze the impact of social capital on student' opportunity recognition. Structural capital reflects the scope for searching information. The core of relational capital is trust. Within a social organization, trust among members are conducive to effective dissemination of knowledge and information, and further generates innovative ideas. As important social capital, common cognition are embedded in social networks to facilitate information exchange. Therefore, the richer the social capital, the more information it collects, and the better it is for opportunity identification.

Hypothesis 1: Social capital has a positive impact on the opportunity recognition of university students.

**2.2. The Impact of Social Capital on Entrepreneurial Alertness**

Entrepreneurial alertness is defined as entrepreneurs' keen insight into the untapped opportunities in the market based on their current environment (such as technology, market, policy, etc.), and different individuals have different levels of alertness. Alertness of entrepreneurial opportunities reflects in the accumulation, transformation and selection of information. Structural capital promotes information gathering. Relational capital decreases cost of information exchange. Cognitive capital enhances mutual learning. So social capital improves entrepreneurial alertness.

Hypothesis 2: Social capital has a positive impact on entrepreneurial alertness of university students.

**2.3. The Impact of Entrepreneurial Alertness on Opportunity Recognition**

Entrepreneurial alertness requires entrepreneurs' active perception [10]. It is urgent to gather entrepreneurial information for opportunity recognition, including explicit and implicit information. The ability to search for information further screens out some entrepreneurs. Only students with strong ability to collect information can better establish an objective understanding of the external market. Entrepreneurs with high alertness are more sensitive to the surrounding information, more able to discovery the development potential in the market, and then identify entrepreneurial opportunities.

Hypothesis 3: Entrepreneurial alertness has a positive impact on opportunity recognition of university students.

**2.4. The Mediating Role of Entrepreneurial Alertness**

First, for university students entrepreneurs, social capital is the main channel to communicate with the outside. Structural capital expands the scope of information exchange, relational capital helps them reduce exchange cost and cognitive capital can accelerate common vision. In a word, they can receive more resources through social capital, which to some extent enhances their alertness of entrepreneurial opportunities. Individuals with high alertness are more likely to conceive breakthrough ideas and have a keen sense of potential entrepreneurial opportunities. Taking alertness as an intermediate variable, Ardichvil (2003) [11] and Wang (2017) [6] has used empirical research to conclude that social capital has a positive impact on opportunity recognition, and alertness plays an intermediary role between the two.

Hypothesis 4: Entrepreneurial alertness plays an intermediary role between social capital and opportunity recognition of university students.

**3. QUESTIONNAIRE AND EMPIRICAL ANALYSIS**

On the basis of reference of predecessors, a preliminary questionnaire was obtained. A total of 387 questionnaires were distributed and 243 were collected, of which 126 were valid. An empirical analysis was performed based on the data of the valid questionnaire.

**3.1 Reliability Analysis**

SPSS22.0 software is used to study the intrinsic reliability of each scale in the questionnaire. Here the Cronbach  $\alpha$  reliability coefficient is a measure for internal consistency. When the Cronbach  $\alpha$  reliability coefficient values 0.7-0.9, the inherent reliability is considered to be high or acceptable.

**Table 1** Results of reliability analysis

	<b>Cronbach <math>\alpha</math> reliability coefficient</b>
<b>Social Capital</b>	0.786
<b>Entrepreneurial Alertness</b>	0.809
<b>Opportunity Recognition</b>	0.830

As shown in Table 1, the reliability analysis of three scales shows that the Cronbach  $\alpha$  is greater than 0.7, indicating

that scales meets the acceptable standards. The internal reliability is high. In addition, the Cronbach  $\alpha$  is lower than the original coefficient after deleting any one of scales, thus it is not necessary to delete any one. So the questionnaire can be used for further research.

### 3.2 Correlation Analysis

The correlation analysis results of three scales are shown in Table 2. All variables are significantly correlated at the level of 0.05 (noted \*), and the correlation between variables is relatively good.

### 3.3. Structural Equation Model

According to the results of the previous section, the data of this questionnaire has good reliability and validity, thus satisfying the preconditions for establishing a structural equation model. On this basis, a structural equation model is established by using AMOS 21.0 software, and the experiment and analysis are carried out.

#### 3.3.1. Establishment of Original Model

According to hypothesis in Chapter 2, the original model M1 is established, as shown in Figure 1. Model M1 is used to study the direct role of social capital in university students' opportunity cognition. The independent variable, social capital, is divided into three dimensions, namely, structural capital (STC), relational capital (RC) and cognitive capital (CC). Opportunity recognition (OR) is the dependent variable. There are simply name of each observation variable in the parentheses.

Table 2 Results of correlation analysis

	Social Capital	Entrepreneurial Alertness	Opportunity Recognition
Social Capital	1		
Entrepreneurial Alertness	0.03*	1	
Opportunity Recognition	0.029*	0.0313*	1

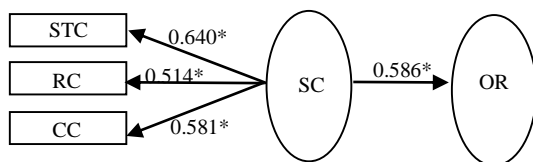


Figure 1 Original model M1

NOTES: \*, \*\* and \*\*\* represents the significance level of path coefficient (p) is less than 0.05, 0.01 and 0.001 respectively.

In this study, the significance level ( $\alpha$ ) is determined to value 0.05, indicating a 95% probability that the decision to accept the null hypothesis is correct. When  $\alpha$  values 0.05, it can be obtained from the t-distribution table that t values 1.645, so as to discuss the significance test effect of each variable on the dependent variable. The following Table 3 shows the regression analysis results of social capital and entrepreneurial opportunity recognition.

As can be seen from Figure 1, the standard regression path coefficient of social capital on college students' entrepreneurial opportunity recognition is 0.586. When  $\alpha$  values 0.05, the t values of all three dimensions are greater than 1.645, indicating that social capital has a significant positive impact on entrepreneurial opportunity recognition, assuming that H1 is significantly established.

Then this paper can further study whether the fitting degree of M1 model is good. If the fitting degree is high, M1 is suitable for this study. The results of M1's fitting degree are shown in Table 4 below. In structural equation models, several indicators are often used to measure the fitting degree:  $\chi^2/df$ , IFI, NFI, GFI, CFI and RMSEA. In general,  $GFI > 0.8$ ,  $\chi^2/df < 5$ ,  $0.05 < RMSEA < 0.1$  belong to the acceptable range, and the model fits well with the data when  $\chi^2/df < 2$ ,  $RMSEA < 0.05$ ,  $GFI > 0.9$ . It's better when GFI, IFI, NFI and CFI are closer to 1.

As can be seen from Table 4, the  $\chi^2/df$  values from 2 to 5, and GFI values between 8 and 9. Therefore, these indicators are acceptable.

Table 3 Regression analysis results of SC and OR

Independent Variable	Model	t
Social Capital	Structural Capital	10.020
	Relational Capital	9.112
	Cognitive Capital	11.312

Dependent Variable: Entrepreneurial Opportunity Recognition

Table 4 Fitting degree of model M1

	Default model	Saturated model	Independence model
$\chi^2/DF$	2.348	-	2.046
IFI	0.910	1.000	0.000
NFI	0.913	1.000	0.000
GFI	0.764	1.000	0.601
CFI	0.982	1.000	0.000
RMSEA	0.076	-	0.225

3.3.2. Comparison of Structural Equation Model

Figure 2 below shows the model M2, in which entrepreneurial alertness is introduced as an intermediate variable to study the impact of social capital on university students' opportunity recognition through entrepreneurial alertness. Finally, this paper compares the fitting indexes of the two models and selects the best model for this paper. M2 increases EA for entrepreneurial alertness. While Table 5 more intuitively reflects the mediating effect of entrepreneurial alertness. After introducing the intermediate variable of entrepreneurial alertness, the fitting degree of the model M2 needs to be tested. The fitting indexes of M1 and M2 models are compared in the following Table 6.

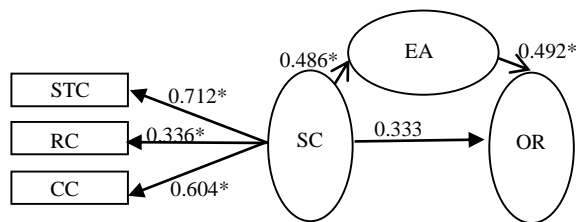


Figure 2 Mediating Effect model M2

Table 5 The mediating effect of EA

Relationships of Variables	Total Effect	Direct Effect	Indirect Effect
SC-OR	0.690	0.333	0.357
SC-EA	0.486	0.486	0.000
EA-OR	0.492	0.492	0.000

Table 6 Comparison of fitting indexes of M1 and M2

Model	M1	M2
$\chi^2/DF$	2.348	1.846
IFI	0.910	0.937
NFI	0.913	0.917
GFI	0.764	0.912
CFI	0.982	0.985
RMSEA	0.076	0.042

According to Table 6, in the model M2, the  $\chi^2/df$  is less than 2, the GFI is more than 9, and the RMSEA is less than 0.05. Besides, IFI, NFI, GFI and CFI are all relatively close to 1. The above data reflects that the intermediary

model is more suitable for the study in this paper, that is, the model M2 is finally selected in this study.

3.3.3. Result of Empirical Analysis

As can be seen from Figure 2, the standard regression path coefficient of social capital on university students' alertness is 0.486, which is significantly true when the significance level p is less than 0.05, so H2 is significantly true. Since the standard regression path coefficient of entrepreneurial alertness on opportunity recognition is 0.492, which is significant when p is less than 0.05, H3 is significant. After the entrepreneurial alertness variable is added, social capital has no significant influence on opportunities recognition, so entrepreneurial alertness plays an intermediary role between the two, and hypothesis 4 is established.

Moreover, as is shown in Table 6, after introducing entrepreneurial alertness, the total effect of social capital on opportunity recognition is 0.690. Among them, the direct effect of social capital on entrepreneurial opportunity recognition is 0.333, the indirect benefit of entrepreneurial alertness is 0.357, and the indirect benefit accounts for 51.74% of the total effect. The results show that social capital has both direct and indirect effects on opportunity identification of university students, and the direct effect is greater than the indirect effect. That is, entrepreneurial alertness can better explain how social capital has a positive impact on opportunity identification, which further supports the H4 that entrepreneurial alertness plays a better intermediary role between the two.

4. SUGGESTIONS

Through the research above, this paper illustrates the enlightenment from the perspectives of university students themselves, universities and government, hoping to provide some suggestions for university students' entrepreneurial activities.

4.1. For University Students

Entrepreneurs can accumulate their social capital. Firstly, entrepreneurs should broaden the scope of social interaction and communicate more with members for information conversion. Then entrepreneurs should value mutual respect, sincere cooperation with members. Furthermore, entrepreneurs should cultivate similar values to benefit both sides. Generally speaking, entrepreneurs make full use of their social capital to explore potential competitive entrepreneurial opportunities in the market. It is not an accident to identify entrepreneurial opportunities. It requires entrepreneurs to have a keen sense of opportunities that others can not find. Therefore, entrepreneurs not only need to actively search for enormous information, but integrate it. When processing

information, entrepreneurs should constantly improve their sensitivity and alertness to entrepreneurial opportunities.

#### **4.2. For Universities**

On the one hand, they should actively respond to the call of government' policies, vigorously promote the reform of entrepreneurial education. Firstly, they can implement measures to help entrepreneurs balance their studies and entrepreneurship, such as conversing credit for entrepreneurship. Then entrepreneurs should be allowed to retain their academic status for entrepreneurship, and apply for dissertation defense with entrepreneurial achievements. Otherwise, they can also provide financial support and talent services. At first, they can raise funds from alumni donations and school-enterprise cooperation to support entrepreneurial activities. In addition, they can also provide consultation services for entrepreneurs by employing well-known alumni and elites.

#### **4.3. For Government**

Firstly, it can provide guidance and services for university entrepreneurs and enrich their social capital. It can make full use of its network advantages, regularly organize information exchange meeting and provide entrepreneurs with rich and comprehensive information. Then it can deepen the entrepreneurial education reform, integrate the education into the compulsory curriculum system of universities, encourage students to participate more in entrepreneurship activities such as "Internet +", and strive to cultivate their sense of innovation. Lastly, it can design preferential policies, such as tax reduction and exemption, guaranteed loans for entrepreneurship.

### **5. CONCLUSION**

With the increasing pressure of university students' employment, students' entrepreneurship have become a new phenomenon. Although there are many successful man, there are not a few failures. In order to better guide university students' entrepreneurship and achieve greater success, this paper not only supplements the entrepreneurial theory, but enriches empirical studies.

This paper empirically analyzed the positive impact of social capital on entrepreneurial opportunity identification by taking university entrepreneurs as subjects, and introduced the model of entrepreneurial alertness as intermediate variable. However, the independent variable is only social capital. To some extent, it is one-sided. It lacks analysis of business cases, entrepreneurs' experience and other factors. So it still needs improvements.

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