

## EXPLORING THE RELATIONSHIP BETWEEN ONLINE USER COMMUNITY STATUS AND ENTREPRENEURIAL INTENTION: THE MEDIATING ROLE OF SELF-EFFICACY AND OPPORTUNITY IDENTIFICATION

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### Article Info

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### Abstract

The online user community has become an important platform for users to share knowledge, communicate with each other, and voluntarily participate in community activities. This paper investigates the influence of users' status in online user communities on their entrepreneurial intention. We focus on the mediating role of self-efficacy and opportunity identification in this relationship.

Using the CSDN community as the research object, we conducted a questionnaire survey on users in the community through major social platforms. The results show that users' status in online user communities has a significant impact on their self-efficacy and entrepreneurial intention. Specifically, users with a higher status in the community have a stronger self-efficacy, which in turn leads to a higher level of entrepreneurial intention. Furthermore, entrepreneurial self-efficacy was found to influence entrepreneurial intention through the mediating effect of opportunity identification.

Our study contributes to the literature on entrepreneurship by providing insights into the role of online user community status in shaping individuals' entrepreneurial intentions. The findings suggest that policymakers and practitioners should focus on promoting users' status in online communities to enhance their self-efficacy and foster entrepreneurial intention. Future research could examine the impact of other factors such as network ties, community structure, and cultural values on the relationship between online user community status and entrepreneurial intention.

### Introduction

An online user community is a social network structure that provides information, support, social interaction, social identity and a sense of belonging<sup>[1]</sup>. Individual users, as part of an online user community, regularly connect with each other, share ideas, information and resources<sup>[2]</sup>, stimulate ideas for collaboration and sharing<sup>[3]</sup>, and

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create, refine, disseminate and evaluate innovations through participation in the online user community, and showcase their innovations so that other members can further develop or improve the product<sup>[4]</sup>. Online user communities sometimes also provide tools to facilitate communication and interaction between users and the creation and dissemination of innovations<sup>[4]</sup>.

Entrepreneurship is often defined as an intentional and purposeful behaviour<sup>[5]</sup>, and entrepreneurial intention are critical to this behaviour<sup>[6]</sup>. Of the many factors influencing entrepreneurial intention, entrepreneurial self-efficacy and entrepreneurial opportunity recognition were selected for study.

Users' entrepreneurial self-efficacy is an important factor that influences their choice and development of entrepreneurship<sup>[5]</sup>. Entrepreneurial self-efficacy affects the feasibility and outcome of willingness<sup>[7]</sup> and the likelihood of a behaviour is related to the individual's willingness to do that behaviour<sup>[8]</sup>. Feasibility is the degree to which one feels that "I can do it" when embarking on a task <sup>[7]</sup>, as it is the cognitive domain that facilitates or undermines action, and perceived feasibility increases beliefs about entrepreneurial self-efficacy<sup>[9]</sup>.

Entrepreneurial opportunities are the basis of entrepreneurial activities and identifying and exploiting them is the focus of research in the field of entrepreneurship<sup>[10]</sup>. Xie argues that entrepreneurial opportunity identification in the entrepreneurial process is a personal summary of the cognitive process and entrepreneurial activities, and is a precursor to various entrepreneurial actions such as the entrepreneur's evaluation and exploration of entrepreneurial opportunities<sup>[11]</sup>. Entrepreneurial opportunity identification is closely related to entrepreneurial activity; without entrepreneurial opportunity identification there is no entrepreneurship<sup>[12]</sup>, and entrepreneurial opportunity identification is a prerequisite for entrepreneurial activity, as is entrepreneurial willingness, where the identification of opportunities stimulates entrepreneurial willingness to engage in entrepreneurial activity<sup>[7]</sup>.

In summary, this paper selects users' status in the online community as the independent variable, their entrepreneurial intention as the dependent variable, and introduces users' entrepreneurial self-efficacy and entrepreneurial opportunity identification as mediating variables to construct a "user status in the community - entrepreneurial self-efficacy - user entrepreneurial intention" and "user status in the community - entrepreneurial self-efficacy - user entrepreneurial intention". The theoretical model of "user status in the community-entrepreneurial self-efficacy-entrepreneurial opportunity identificationuser's willingness to start a business" is developed. The theoretical models of "user status in the community - entrepreneurial self-efficacy - entrepreneurial opportunity identification - user willingness to start a business" and "user status in the community - entrepreneurial self-efficacy - entrepreneurial opportunity identification - user willingness to start a business" are explored.

## **1. Literature Review & Research Hypothesis**

### **1.1 Users' Status in Online User Communities**

Although entrepreneurship is often described as an individual act, it occurs in a social context and is therefore socially influenced<sup>[13]</sup>. A person's social status and social identity are evolving in the ongoing construction of society. Social roles and expectations of related roles are also both determined within the structure of changing networks, which include roles that facilitate the entrepreneurial activities of users<sup>[14]</sup>. An individual's position in the structure will inevitably limit his activities, as different network positions may confer different access to internal information and resources, which in turn may confer different opportunities to influence the activities of others<sup>[15]</sup>. This social structure may be an online user community where users seek advice, solve problems, share experiences, develop new products or new versions of products, and meet to socialise<sup>[16]</sup>.

There are reasons why individuals participate in online communities. For example, to seek advice, to solve problems, or to socialise with people who share similar interests. In some cases, users within the community see

business opportunities and gather resources from this social environment to build companies and benefit financially from the innovations they collectively participate in developing, or from the skills developed or enhanced through community involvement by selling bespoke services<sup>[17]</sup>.

In online user communities, the social status of users will have a significant impact on their behaviour<sup>[16]</sup>. In online user communities, users tend to share a common mission, similar values, group intention and group identity<sup>[18]</sup>. In order for online user communities to engage in shared activities, users need to respond to each other's actions, share a common commitment to online activities, and commit to supporting others in the community<sup>[19]</sup>. Users with high status will be recognised by other users in the community, their statements in the online community will be more closely followed and they will receive more responses and feedback. This visible and consequent privileged access to information and influence over opportunities will enhance the ability of high-status users to identify new opportunities and to mobilise resources and action in pursuit of new opportunities<sup>[16]</sup>

### **1.2 Entrepreneurial Intention**

Entrepreneurship is defined as the process by which an organisation emerges<sup>[20]</sup>. The willingness to start a business is crucial in this process and is at the top of the list of actions that lead to the creation of an organisation<sup>[6]</sup>. Furthermore, willingness to behave in a behaviour may be a strong guide to that behaviour<sup>[21]</sup>.

Our understanding of entrepreneurial willingness is informed by two models: Ajzen's theory of planned behaviour (TPB) and Shapero's model of entrepreneurial events (SEE)<sup>[22, 23]</sup>. Entrepreneurial intention is derived from perceptions of desirability, feasibility and the propensity to take advantage of opportunities. In this model, perceived desirability is defined as the attractiveness of starting a business, perceived feasibility is the extent to which a person feels capable of doing so, and behavioural propensity is the tendency of an individual to act on his or her decision.

Both the TPB model and the SEE model provide comparative explanations of entrepreneurial intention. Krueger et al. demonstrate that attitudes and subjective norms in the TPB model are conceptually related to perceived desirability in the SEE; perceived behavioural control in the TPB corresponds to perceived feasibility in the SEE model. In essence, perceived desirability and perceived feasibility are essential elements of intentional behaviour<sup>[7]</sup>.

In this paper, we investigate the effect of status in social networks on perceived desirability and perceived feasibility in entrepreneurial intention. This study links entrepreneurial self-efficacy and entrepreneurial opportunity recognition, at the individual level, to entrepreneurial intention.

### **1.3 Entrepreneurial Self-efficacy**

Entrepreneurial self-efficacy refers to the strength of an individual's belief in his or her ability to complete an entrepreneurial task and the individual's perceived estimate of his or her ability to mobilize the resources, activities and motivations that are necessary to control the events in his or her life<sup>[24]</sup>. In this paper we define an entrepreneur's entrepreneurial self-efficacy as the entrepreneur's confidence in his entrepreneurial abilities and his confidence in his ability to perform a particular entrepreneurialrelated task.

When discussing entrepreneurship, the individual and his behavioural processes are the first concepts to emerge. Therefore, individuals with high entrepreneurial self-efficacy are likely to become entrepreneurs. These beliefs can be defined as one's perceptions of one's ability to become an entrepreneur and to successfully perform the role and tasks of an entrepreneur<sup>[25]</sup>. These beliefs are an explanatory variable that determines the source of entrepreneurial intention and the likelihood that such intention will lead to entrepreneurial activity, thus it distinguishes entrepreneurs from others<sup>[26]</sup>. High entrepreneurial self-efficacy is one of the requirements for potential entrepreneurs. Individuals with high entrepreneurial self-efficacy evaluate the business environment as

full of opportunities, but individuals with low entrepreneurial self-efficacy perceive the same environment as full of obstacles<sup>[9]</sup>. We therefore propose the following hypothesis.

H1: user entrepreneurial self-efficacy (M) in online user communities mediates the relationship between users' status (X) and user entrepreneurial intention (Y).

#### **1.4 Entrepreneurial Opportunity Identification**

Entrepreneurial opportunity identification is defined as the ability to identify and commercialise a good idea, or the ability to make significant improvements to an existing business that adds value to customers or society and generates income for the entrepreneur<sup>[27]</sup>. Entrepreneurial opportunity identification has long been recognised as a critical step in the entrepreneurial process<sup>[28]</sup>. In fact, without opportunity identification, there is no entrepreneurship<sup>[29]</sup>. Entrepreneurial opportunity identification is a key component of the entrepreneurial process<sup>[30]</sup> and it is an intentional process<sup>[7]</sup>.

Stronger perceptions increase the willingness to create new firms and the ability of potential entrepreneurs to start companies<sup>[31]</sup>. The perception of entrepreneurial opportunities can stimulate willingness-based cognitive processes that lead to entrepreneurial action<sup>[7]</sup>. It has been shown that entrepreneurial opportunity recognition and entrepreneurial intention are closely related<sup>[6]</sup>. That is, a person who identifies a desirable or viable opportunity is likely to create a business<sup>[12]</sup>.

Dutton and Jackson argue that when one's perception of the outcome is positive and the situation is perceived as manageable, then it is considered an entrepreneurial opportunity<sup>[32]</sup>. Krueger and Brazeal argue that the perception of opportunity relies on two equally important antecedents of entrepreneurial intention, namely the perception of desirability and feasibility<sup>[33]</sup>. In other words, if individuals perceive entrepreneurship as desirable and feasible, they are more likely to see entrepreneurial opportunities and thus develop entrepreneurial intention<sup>[34]</sup>.

#### **1.5 Entrepreneurial Self-efficacy and Entrepreneurial Opportunity Identification**

Entrepreneurial self-efficacy has been shown to play an important role in opportunity identification and new venture growth<sup>[35]</sup>. Individuals with high entrepreneurial self-efficacy focus on pursuing potentially valuable opportunities, whereas individuals with low entrepreneurial self-efficacy tend to focus on risk avoidance and perceive threats rather than opportunities<sup>[36]</sup>. Ardichvili et al. suggest that high entrepreneurial self-efficacy beliefs are accompanied by high entrepreneurial optimism, which may be related to entrepreneurial opportunity recognition<sup>[30]</sup>.

Ozgen and Baron suggest that individuals with high entrepreneurial self-efficacy may be more proactive in seeking opportunities than individuals with low entrepreneurial self-efficacy. Furthermore, high entrepreneurial self-efficacy may facilitate entrepreneurs' efforts to identify opportunities because they may be more confident in the success of their screening efforts than entrepreneurs with low entrepreneurial self-efficacy. Thus, their study suggests that entrepreneurial self-efficacy is positively related to self-reported entrepreneurial opportunity recognition<sup>[28]</sup>. Using similar reasoning, Gibbs investigated the effects of creativity and entrepreneurial self-efficacy on self-reported entrepreneurial opportunity recognition behaviour and perceptions. He argues that entrepreneurial self-efficacy positively influences entrepreneurial opportunity recognition perceptions<sup>[35]</sup>. We therefore propose the following hypothesis.

H2: user entrepreneurial opportunity recognition (N) in online user communities mediates between user self-efficacy (M) and user entrepreneurial intention (Y).

#### **1.6 Research Framework**

This paper seeks to explore the impact of the personal level on User entrepreneurial intention. Most of the current research on user entrepreneurship has focused on describing the phenomenon in the context of different industries,

and there is still less research on the influence of the individual level on user intention to become entrepreneurs. It is clear that not all users want to become entrepreneurs, and the conditions that influence the intention to become an entrepreneur are the focus of this study. In our study, we draw on research on user entrepreneurship, social network theory, self-efficacy and opportunity identification to propose a model that considers users' status within a community as an important factor influencing entrepreneurial intention.

Rather than interpreting user entrepreneurship as a rational behaviour derived from precise calculations, we see factors in an individual's environment as an external contingency that creates the conditions for individuals to access information and resources. We also want to explore whether an individual's social status in an online user community gives him more freedom and motivation to stimulate or enhance his entrepreneurial pursuits.

The high social status of users in online user communities, as evidenced by the high number of visits and responses to individual postings, will likely increase the confidence of users in being able to use the community's advice and resources to mobilise. This confidence will influence the perception of entrepreneurial opportunity identification and may lead to more proactive pursuit of entrepreneurial opportunities. Furthermore, users with high entrepreneurial self-efficacy and high entrepreneurial opportunity recognition are more likely to have high entrepreneurial intention. The theoretical framework proposed in this paper is shown in Figure 1.

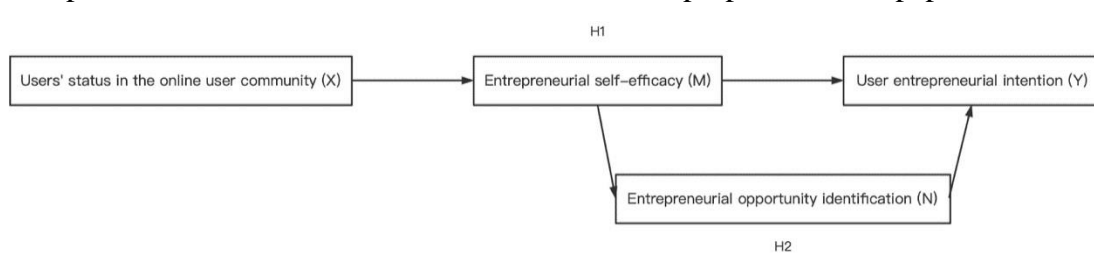


Figure 1: Theoretical model diagram.

## 2. Research Design

### 2.1 Research Subject: CSDN Professional Developer Community

CSDN (Chinese Software Developer Network) is a professional IT community in China. The reasons for choosing this community for this study are: firstly, the CSDN community is a very professional online user community with over 3.4 million users, most of whom are engaged in the IT industry, which is conducive to obtaining samples and data for this study, as well as pinpointing the industry under study with more practical significance. Secondly, there are more technological innovations in the IT industry than in other industries, and in the user community, user innovation is a prerequisite for user entrepreneurship, and more user innovation means more user entrepreneurship in this community, which is conducive to obtaining a more valid sample and data for this study.

### 2.2 Sample & Data Collection

We distributed the questionnaire to the CSDN professional developer community and received 118 copies. The questionnaires were screened according to certain criteria: 1. The questionnaire set the screening question "This is a screening question, please choose the more unsatisfactory", those who did not choose as required mostly did not read the question carefully, and the error was large, so they were screened out; 2. Some of the users who filled in the questionnaire browsed the CSDN community but did not register, so they are potential users and will not be investigated in this study, so they are screened out; 3. In the end, 106 valid questionnaires were obtained, with a valid return rate of 89.83%. The composition of the valid sample is shown in Table 1.

Table 1: Summary of the composition of the valid sample (N = 106).

Project	Category	Quantity (persons)	Percentage (%)	Project	Category	Quantity (persons)	Percentage (%)
Gender	Male	89	83.96	Industries	IT/Software and hardware services /E-commerce /Internet operations	76	71.7
	Female	17	16.04		Education/Training/Research/Institutions	9	8.49
Age	Under 26 years old	84	79.25		Communications/Telecom Operations /Network Equipment/VAS	6	5.66
	27-35 years old	15	14.15		Manufacturing	3	2.83
	Over 35 years old	7	6.6		Banking/Insurance/Securities /Investment banking/Venture funds	2	1.89
Educational background	Post-secondary and equivalent	2	1.89		Electronic Technology /Semiconductor/Integrated Circuit	1	0.94
	Tertiary and equivalent	4	3.77		Pharmaceuticals/Bioengineering /Medical Devices/Instruments	1	0.94
	Bachelor's degree and equivalent	74	69.81		Automotive and spare parts	1	0.94
	Master's degree and above	26	24.53		Dining/Entertainment/Travel /Hotels/Living Services	1	0.94
Position	Grassroots staff	84	79.25		Instrumentation/Industrial automation	1	0.94
	General Management	19	17.92		Trade/Import/Export	1	0.94
	Middle & senior management	3	2.83		Publishing/Printing/Packaging	1	0.94
Length of service	Under 3 years	72	67.92		Other industries	3	2.83
	3-7 years	20	18.87				
	7-10 years	11	10.38				
	Over 10 years	3	2.83				



### 2.3 Measurement of Variables

Table 2: Variable measurement table.

Measurement Variable	Measure Dimension	Item	References
Entrepreneurial Selfefficacy	Marketing Dimension	I can successfully sell a product or service to a new customer.	[5]
	Management Dimension	I can select the right staff for the business.	
		I can motivate members with an innovative business idea.	
		I can write a clear and complete business plan.	
		I have a clear plan for the future of the business.	
	Financial Dimension	I can convince investors to invest money.	
		I can estimate the cost of a new project or business in operation.	
	Innovation Dimension	I can create new products.	
Entrepreneurial Opportunity Identification	Market Dimension	I am good at identifying market segments.	[37]
		I can identify potential consumer or customer needs.	
	Innovation Dimension	I can develop new products or find ways to improve existing products.	
	Value Dimension	I can identify valuable business opportunities.	
Entrepreneurial Intention	Subjective Dimension	If given the freedom to choose, I would choose to start my own business.	[38]
	Objective Dimension	If I consider my current situation and various constraints, I would still choose to start my own business.	

A person's social status will be reflected in the reactions of others to her posts. The higher a person's status, the more responses her posts will receive<sup>[16]</sup>. Therefore, we use the number of replies to a user's posts to measure the status of the user in an online user community.

In the scale designed for this paper, each question is on a five-point Likert scale, with '1' meaning 'completely disagree' and '5' meaning "completely agree". The dimensions of each variable, the specific questions, and the literature referenced for the scale are shown in Table 2.

## 3. Research Results

### 3.1 Reliability Analysis

In this study, SPSS was used to analyze the reliability of the questionnaire. Table 3 shows the Cronbach  $\alpha$  coefficient values of the key indicators in the scale designed in the course of this study. The Cronbach  $\alpha$  coefficient of each scale is higher than 0.55, and the overall Cronbach  $\alpha$  values are higher than 0.65. This fully shows that the reliability of the questionnaire is good and the measurement of each index is reliable.

Table 3: Reliability analysis of the questionnaire.

Measurement Variable	Cronbach $\alpha$ Coefficient	Number of Items
Entrepreneurial Self-efficacy	0.909	8
Entrepreneurial Opportunity Identification	0.825	4
Entrepreneurial Intention	0.753	2
Whole Scale	0.956	14

### 3.2 Effectiveness Analysis

As we clearly delineate the research dimensions in this paper and the scales used in each dimension have been modified and used by multiple scholars. Therefore, validated factor analysis (CFA) was conducted using AMOS software on the scales used in this paper.

#### 3.2.1 Correlations between Factors and Measures

The correlations between the factors and the analysed items were expressed using the standard loading coefficient values as shown in Table 4.

Table 4: Factor loading factors.

Factor	Measurement items	Non-standard load factors	Std. Error	CR values	p	Std. Estimate
Entrepreneurial Self-efficacy	ESE1	1	-	-	- 0	0.757
	ESE2	1.2	0.135	8.87	0	0.789
	ESE3	1.155 1.218	0.141	8.17	0	0.735
	ESE4	1.274	0.148	8.241	0	0.74
	ESE5		0.151	8.444		0.756
	ESE6	1.078	0.133	8.109	0	0.73
	ESE7	1.125	0.146	7.698	0	0.697
	ESE8	1.321	0.154	8.602	0	0.768
Entrepreneurial Opportunity Identification	EOI1	1	-	-	- 0	0.72
	EOI2	1.123 1.044	0.136	8.25	0	0.73
	EOI3	1.356	0.132	7.9	0	0.697
	EOI4		0.151	8.978		0.799
Entrepreneurial Intention	EI1	1	-	-	-	0.751
	EI2	1.299	0.133	9.79	0	0.817

As can be seen from Table 4, all of the individual measures showed significance at the 0.000 level ( $p < 0.001$ ) and all of the standard estimate were greater than 0.6, thus indicating good correspondence between the factors and the measures and good convergent validity.

#### 3.2.2 Convergent Validity Analysis

The results of the convergent validity analysis using two indicators, AVE and CR, are shown in Table 5.

Table 5: Model AVE and CR indicator results.

Factor	Average extracted AVE values	variance Combined confidence values	CR
Entrepreneurial Self-efficacy	0.558	0.91	
Entrepreneurial Opportunity Identification	0.544	0.826	
Entrepreneurial Intention	0.616	0.762	

As can be seen from Table 5, the AVE values are all greater than 0.5 and the CR values are all greater than 0.7, indicating that the data measured in this study have excellent convergent validity.

### 3.3 Analysis of Intermediary Effects

The Bootstrap method was used to test the hypotheses of this study, with a sample size of 106. The status of users in an online community is represented by “X”, entrepreneurial intention by “Y”, entrepreneurial self-efficacy by “M” and entrepreneurial opportunity identification by “N”.

#### 3.3.1 Mediating Variable: Entrepreneurial Self-efficacy (M)

The results of the mediating role analysis are shown in Table 6.



From Table 6, it can be seen that the analysis was conducted with entrepreneurial self-efficacy as the mediator and the following model was constructed.

$$Y = 4.960 + 0.000 * X \quad (1)$$

$$M = 21.186 + 0.000 * X \quad (2)$$

$$Y = -0.726 - 0.000 * X + 0.268 * M \quad (3)$$

The results of the intermediary role test are shown in Table 7.

As can be seen from Table 7,  $c$  denotes the regression coefficient when  $X$  is on  $Y$  (when there is no mediating variable  $M$  in the model), i.e. the total effect;  $a$  denotes the regression coefficient when  $X$  is on  $M$ ,  $b$  denotes the regression coefficient when  $M$  is on  $Y$ , and  $a*b$  is the product of  $a$  and  $b$ , i.e. the mediating effect; 95% BootCI denotes the 95% confidence interval calculated from Bootstrap sampling, with an interval of 0.726 to 0.881 (excluding including 0), indicating significant;  $c'$  denotes the regression coefficient at  $X$  versus  $Y$  (when there is a mediating variable  $M$  in the model), i.e. the direct effect.

In Table 7  $a$  is 0.000\*\*, indicating insignificant;  $b$  is 0.268\*\*, indicating significant; and the 95% BootCI for  $a*b$  does not include the number 0 (significant); and  $c'$  is -0.000, indicating insignificant, then  $M$  is a full mediator between  $X$  and  $Y$ , verifying H1.

The results of the mediated effect sizes are shown in Table 8.

As  $M$  is a full mediator, the effect share is 100%.

Table 6: Results of the analysis of the mediating role of entrepreneurial self-efficacy (n=106).

	Y				M				Y						
	B	Std. Error	t	p	$\beta$	B	Std. Error	t	p	$\beta$	B	Std. Error	t	p	$\beta$
Constants	4.960**	0.163	30.348	0	-	21.186**	0.537	39.46	0	-	-0.319	2.277	0.025	-	-
X	0.000**	0	13.008	0	0.796	0.000**	0	14.794	0	0.831	0	0.04	0.968	-	0.002
M											0.015	18.397	0	0.96	
R <sup>2</sup>			0.633					0.691					0.918		
Adjustment of R <sup>2</sup>			0.63					0.688					0.917		
F-value	F (1,98) =169.215, p=0.000					F (1,98) =218.863, p=0.000					F (2,97) =545.156, p=0.000				
	* p<0.05 ** p<0.01														

Table 7: Results of tests of the mediating role of entrepreneurial self-efficacy.

Projects	Mediated Total effect			effect value of	a*b		a*b (p value)	a*b (95% BootCI)	Direct Test effect conclusion of c'
	effect	a	b		(Boot SE)	(z value)			
X=>M=>Y	0.000**	0.000*	0.268*	0	0.04	0	1	0.726 ~ 0.881	Fully Intermediary
	* p<0.05 ** p<0.01								

Table 8: Mediated effect size results for entrepreneurial self-efficacy.

Test	Total effect	Mediated effect	Direct effect	Effectiveness	Effectiveness
Projects	conclusion	of c	value of a*b	of c'	ratio formula ratio
X=>M=>Y Fully Intermediary	0	0	0	-	100%

**4.3.2 Mediating Variable: Entrepreneurial Opportunity Identification (N)** The results of the intermediary role analysis are shown in Table 9.

As can be seen from Table 9, the analysis was conducted with entrepreneurial opportunity identification as the mediator and the following model was constructed.

$$Y = -0.716 + 0.268 * M \quad (4)$$

$$N = 1.051 + 0.471 * M \quad (5)$$

$$Y = -1.001 + 0.140 * M + 0.271 * N \quad (6)$$

The results of the intermediary role test are shown in Table 10.

As can be seen from Table 10, c denotes the regression coefficient at X versus Y (when there is no mediating variable M in the model), i.e. the total effect; a denotes the regression coefficient at X versus M, b denotes the regression coefficient at M versus Y, and a\*b is the product of a and b, i.e. the mediating effect; 95% BootCI denotes the 95% confidence interval calculated from Bootstrap sampling, with an interval of 0.224 to 0.674 (excluding 0), indicating significant; c' denotes the regression coefficient at X versus Y (when there is a mediating variable M in the model), i.e. the direct effect.

In Table 10 a is 0.471\*\*, indicating significant; b is 0.271\*\*, indicating significant; and c' is 0.140\*\*, indicating significant, and a\*b is the same sign as c', then N is a full mediator between M and Y, verifying H2.

The results of the mediated effect sizes are shown in Table 11.

As M is a partial mediator, the effect share is a\*b/c, which is 47.594%.

Table 9: Results of the analysis of the mediating role of opportunity identification (n=106).

	Y					M					Y		
	B	Std. Error	t	p	$\beta$	B	Std. Error	t	p	$\beta$	B	Std. Error	t
Constants	-0.716**	0.219	-3.273	0.001	-	1.051**	0.35	3.006	0.003	-	-1.001*	0.207	-4.829
X	0.268**	0.008	33.189	0	0.958	0.471**	0.013	36.516	0	0.965	0.140	0.028	0.502
M											0.271**	0.057	4.725
R2			0.918					0.932					0.934
Adjustment of R <sup>2</sup>			0.917					0.931					0.932
F-value	F		(1,98)			F	(1,98)	=1333.404,			F	(2,97)	=681.804,
								p=0.000	*	p<0.05	**	p<0.01	p=0.000

Table 10: Results of tests of the mediating role of entrepreneurial opportunity identification.

Total effect	Mediated effect a*b		a*b	a*b	a*b	Direct	Test
Projects of c	a	b	effect of conclusion				
	value of a*b (Boot SE)		(z value)	(pc'			
	value) (95% BootCI)						
X=>M=>Y	0.471**	0.271**	0.128	0.112	1.14	0.254	0.140**
	0.268**	0.224 ~ 0.674 *		**			Incomplete
	p<0.05	p<0.01					Intermediary

Table 11: Mediated effect size results for entrepreneurial opportunity identification.

Test	Total effect	Mediated effect	Direct effect	Effectiveness	Effectiveness
Projects	conclusion	of c	value of a*b	of c'	ratio formula
<del>X=&gt;M=&gt;Y</del>	<del>Incomplete</del>	<del>Intermediary</del>	<del>0.268</del>	<del>0.128</del>	<del>0.14</del>
					<del>a * b / c</del>
					47.594%

### 3.4 Path Analysis

A path analysis was conducted on the independent variable users' status in the online community (X), the response variable User entrepreneurial intention (Y), the mediating variable entrepreneurial selfefficacy (M) and entrepreneurial opportunity identification (N), as shown in Table 12.

Table 12: Summary of model regression coefficients.

X→Y	Non-normalized path coefficients	SE	z (CRvalue)	p	Standardised path coefficients
X→M	0.000	0.000	12.160	0.000	0.772
M→Y	0.132	0.017	7.774	0.000	0.459
M→N	0.477	0.029	16.453	0.000	0.855
N→Y	0.273	0.030	8.950	0.000	0.529

Note: → indicates a path influence relationship

The standardised path coefficient value for the effect of X on M was  $0.772 > 0$  and this path showed a 0.01 level of significance ( $z=12.160$ ,  $p=0.000 < 0.01$ ), thus indicating that X would have a significant positive effect on M. The standardised path coefficient value for the effect of M was  $0.459 > 0$  and this path showed a 0.01 level of significance ( $z=7.774$ ,  $p=0.000 < 0.01$ ).

When M is influenced by Y, the standardised path coefficient is  $0.459 > 0$  and this path is significant at the 0.01 level ( $z=7.774$ ,  $p=0.000 < 0.01$ ), thus indicating that M will have a significant positive influence on Y. The standardised path coefficient is  $0.459 > 0$  and this path is significant at the 0.01 level ( $z=7.774$ ,  $p=0.000 < 0.01$ ).

When N is influenced by Y, the standardised path coefficient value is  $0.529 > 0$  and this path shows a significance at the 0.01 level ( $z=8.950$ ,  $p=0.000 < 0.01$ ), thus indicating that N will have a significant positive influence on Y. The standardised path coefficient value for the influence of M on N is  $0.855 > 0$  and this path shows a 0.01 level of significance ( $z=16.453$ ,  $p=0.000 < 0.01$ ), thus indicating that M will have a significant positive influence on N. The above analysis leads to the theoretical model correlation graph for this paper, as shown in Figure 2.

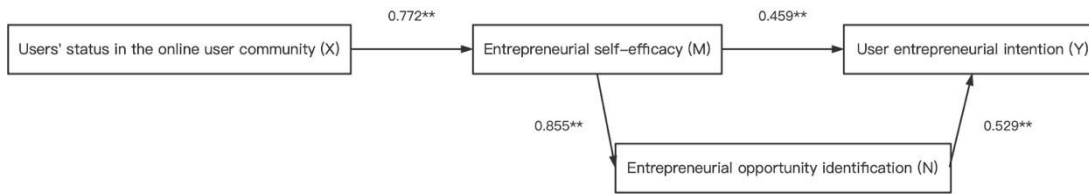


Figure 2: Theoretical model correlation diagram.

#### 4. Conclusion & Discussion

In this study, we contribute to user entrepreneurship research by exploring the influence of the individual level on user entrepreneurial intention within user communities. Currently, most research on user entrepreneurship has focused on describing the phenomenon in different industry contexts and identifying industry-level conditions where user entrepreneurial activity is more likely to occur. However, to date there has been less research on the intention to become a user entrepreneur at the individual level, as it is clear that not all user innovators become entrepreneurs, even if they do receive positive feedback on their innovations.

In this paper, we use a questionnaire to study active users of the CSDN developer community to explore the impact of their position in this community and their intention to become entrepreneurs. Based on the results of this study, it is reasonable to assume that high users' status in an online community is associated with high user entrepreneurial self-efficacy, which in turn influences user entrepreneurial intention to increase. Where user entrepreneurial self-efficacy also positively influences user entrepreneurial intention through entrepreneurial opportunity identification.

##### 4.1 Theoretical Contributions

Firstly, enriches theoretical research on social network structure and user entrepreneurship, especially user entrepreneurial intention, and empirically explores the logical relationship between the two, supported by survey data.

Secondly, the theoretical research on entrepreneurial self-efficacy and entrepreneurial opportunity identification has been enriched by using user entrepreneurial self-efficacy and entrepreneurial opportunity identification to guide and deepen their entrepreneurial intention.

Thirdly, it provides a new way of thinking to study the difference between the entrepreneurial intention of leading users in user communities and those of ordinary users.

##### 4.2 Practical Implications

Firstly, entrepreneurial intention is a guiding indicator of entrepreneurial behaviour. Theoretical research on entrepreneurial intention can be translated into leading guidance on entrepreneurial behaviour, which is a prerequisite for entrepreneurship. Positive entrepreneurial intention can increase the incubation rate of social entrepreneurial behaviour, thus compensating to a certain extent for government failure and market failure, and contributing more to the promotion of common prosperity, solving employment problems and improving the social environment in China.

Secondly, entrepreneurial opportunity identification represents to a large extent the behavioural orientation and dynamics of entrepreneurs. The research in this paper will help to start from the social entrepreneurs themselves and fundamentally help entrepreneurs to make rational adjustments in their daily social entrepreneurial activities, give full play to their subjective initiative and strengthen their social entrepreneurial intention.

Thirdly, entrepreneurial self-efficacy can effectively stimulate entrepreneurial intention. The stronger the sense of entrepreneurial self-efficacy, the more effective it is in bringing into play its innate entrepreneurial abilities, enhancing its entrepreneurial potential, and inspiring confidence and passion for entrepreneurship. These findings

can be combined with entrepreneurship education to enhance the perception of entrepreneurial self-efficacy, maintain a good entrepreneurial mindset, strengthen entrepreneurial determination and acquire entrepreneurial-related skills.

#### **4.3 Research Limitations and Future Research**

Firstly, the effective recall rate of the questionnaire was low and the sample size was small. In future research, communities or platforms that are easy to distribute questionnaires and have a high response rate can be searched for to collect a large number of samples to re-validate the ideas presented in this paper.

Secondly, only the IT industry was surveyed in this paper, and only one of the communities, making the ideas in this paper less generalisable. Future research could be extended to multiple communities in various industries to support the ideas presented in this paper.

Thirdly, this paper uses fewer variables and a simpler model, which may be more fortuitous. Future research could use a more comprehensive data model with multiple variables to synthesise and validate the ideas in this paper.

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