



Study on Influencing Factors of College Students' Entrepreneurial Intention Based on Logistic Model

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Abstract:

Based on the survey data of 600 college students from 7 colleges in the city of Wuhu China, a logistic model was used to empirically analyze the influencing factors of the entrepreneurial willingness from four dimensions: individual characteristics, self perception of entrepreneurship, family environment, and school environment. The research found that entrepreneurial interest, entrepreneurial activity, family support, entrepreneurial education form, and climate of innovation and entrepreneurship are positively significant on the entrepreneurial willingness, and the gender, character, place of origin, grade level, perception of the entrepreneurial policy, degree of entrepreneurship between friends and relatives, and number of entrepreneurial education sessions are not related to the entrepreneurial intention, so we propose strategies to enhance the entrepreneurial willingness of college students.

Keywords: college students; entrepreneurial intention; influencing factors; logistic model

1 INTRODUCTION

At the Summer Davos Forum in September 2014, Premier Li Keqiang issued a call for "mass entrepreneurship and innovation". As a new force for innovation and entrepreneurship, the strength of college students' willingness to start a business not only is related to the probability of college students participating in entrepreneurial activities, but also affects the progress and strength of the national strategy of double creation. According to Max's "2021 Employment Report of Chinese College Students" (Blue Book), the proportion of "independent entrepreneurship" of undergraduate graduates in 2020 was 1.3%, a slight decrease compared with the class of 2016 (2.1%); the proportion of "independent entrepreneurship" of higher vocational graduates in 2020 was 2.8%, which was significantly lower than that of the class of 2019 (3.9%). The proportion of college students in developed countries who start a business is 20%-30%, indicating that the entrepreneurial rate and entrepreneurial willingness of college students in China are at a low level as a whole, and show a downward trend. In view of this phenomenon, domestic scholars have made positive explorations around the connotation, dimension and development of entrepreneurial willingness, and summarized a large

number of relevant materials. From the perspective of research methods, the current research on entrepreneurial willingness is mostly qualitative speculative research, mainly focusing on theoretical construction, and there are few empirical studies that introduce binary regression models for quantification. Therefore, empirical research on the influencing factors of college students' willingness to start a business is not only an urgent need to improve the rate of college students' independent entrepreneurship, but also an important entry point for deepening the reform of innovation and entrepreneurship education. [5]

2 THEORETICAL ANALYSIS AND RESEARCH HYPOTHESES

2.1 Econom Theory

Econom theory holds that the econom is rational, and he will make judgments based on the social environment, his own situation, individual traits and his own interests, and adopt corresponding decisions and behaviors to achieve the goal of maximizing his own interest or utility. Shuzhen He and Yingxiang Gong (2022) conducted a survey on the entrepreneurial willingness of 1231 college graduates across the country, and found that the entrepreneurial policy has a positive impact on the

entrepreneurial willingness, and the entrepreneurial education plays a good role in mediating. [7] Tao Chen et al. (2017) believe that there are differences in the willingness to start a business and the perception of entrepreneurial education among college students with different characteristics such as gender, grade, place of origin, party members, and only children. [9] Nan Tian (2020) extracted the main component factors through factor analysis and found that the "life planning" in individual factors had a negative impact on the willingness to start a business. [6] Guozhong Meng (2019) believes that reasonable and effective entrepreneurship policies can fully stimulate the willingness of college students to start a business. [1] Therefore, this study believes that individual characteristics such as gender, personality, and hobbies of college students may have an impact on their willingness to start a business. Hypothesis based on theoretical analysis and literature review:

H1. Individual characteristics such as gender, personality, grade, and place of origin of college students are positively correlated with their willingness to start a business.

H2. Entrepreneurial self-awareness characteristics such as entrepreneurial interest, entrepreneurial experience, entrepreneurial activities, and familiarity with entrepreneurial policies are positively correlated with entrepreneurial willingness.

2.2 Resource Dependence Theory

Resource dependence theory believes that the survival and development of an organization is inseparable from the support of resources, and no organization can fully realize the self-sufficiency of resources, and must interact with the factors in the environment on which it depends to obtain resources. Entrepreneurship is not to lead the "passive water", planting "no wood", the process of entrepreneurship is the process of entrepreneurs to establish, integrate and expand resources, college students to start a business need both the entrepreneur's personal ability, technology and other internal resources, but also need funds, connections, talents and other external resources, and most of these resources originate from the environment in which they are located, so this study believes that in different families, schools, social environments, college students to obtain and integrate entrepreneurial resources are significantly different, will inevitably have a very different impact on college students' entrepreneurial willingness. Yiming Gu (2021) believes that the main factors affecting college students' return to their hometowns to start a business are family income, entrepreneurial education and entrepreneurship support policies, and there are positive impacts. [10] Kunpeng Xu

(2019) analyzes the positive impact of entrepreneurial role models such as relatives and friends on the entrepreneurial attitude, subjective norms and perceptual behavior control of potential entrepreneurs from the perspective of planned behavior theory, thereby improving the level of individual willingness to start a business. [3] Jiping Jiang and Jinyan Hu (2019) pointed out that students who have participated in college students' innovation and entrepreneurship projects are significantly more willing to start a business than college students who participate in ordinary practical activities. Hypothesis based on theoretical analysis and literature review: [2]

H3. The impact of family support and friends and family on entrepreneurship is positively correlated with entrepreneurial willingness.

H4. The form and frequency of entrepreneurship education in schools, and the atmosphere of innovation and entrepreneurship are positively correlated with the willingness to start a business.

3 RESEARCH DESIGN

3.1 Data Sources

In order to ensure the representativeness and reliability of the data, a questionnaire survey was conducted on 600 college students from 7 colleges and universities in Wuhu City by hierarchical random sampling method, and a total of 564 valid questionnaires were obtained, with an effective rate of 94%, and the basic situation of the valid samples was shown in Table 1. The survey results show that 326 college students have the willingness to start a business, accounting for 57.8% of the total number, and 238 college students have no willingness to start a business, accounting for 42.2% of the total number, indicating that the willingness of college students to start a business is at a high level.

3.2 Define Variables

Entrepreneurial willingness is a subjective attitude of potential entrepreneurs to engage in entrepreneurial activities or not, which is manifested as the psychological intensity of putting entrepreneurial ideas into entrepreneurial practice [4].

According to theoretical analysis and research assumptions, the influencing factors of entrepreneurial willingness are summarized into four dimensions: individual characteristics, entrepreneurial self-cognitive characteristics, family environment and school environment, and the assignment, mean and standard deviation of each variable are shown in Table 1.

Table 1: Assignment table of factors influencing college students' willingness to start a business

Types of variables	Variant names	Variant assignment
	dependent variable	Willingness = 0, willingness = 1
Individual characteristics	Sex	Male = 0, female = 1
	Provenance	Rural = 0, urban = 1
	grade	Grade I = 1, grade II = 2, grade III = 3, grade IV = 4
	character	Inward type = 0, outward type = 1
Entrepreneurial self perception	Entrepreneurial interest	None = 0, with = 1
	Entrepreneurial activities	None = 0, with = 1
	Entrepreneurial policy perceptions	Unfamiliar = 0, familiar = 1
home environment	Family support	No support = 0, support = 1
	Friends and family Entrepreneurship	None = 0, with = 1
	Entrepreneurial education forms	Very little = 1, less = 2, general = 3, more = 4, very much = 5
school environment	Number of entrepreneurial education	Very little = 1, less = 2, general = 3, more = 4, very much = 5
	Climate for innovation and Entrepreneurship	Non thick = 0, thick = 1

3.3 Model Building

3.3.1 Logistic Regression Model

Logistic regression model is a probability model, which takes the probability of an event occurring P as the dependent variable, the factor affecting P as the independent variable, and is mainly suitable for data with the dependent variable as binomial or multiple classifications. [8]. The dependent variable in this study is whether there is a willingness to start a business, that is, "willing" and "unwilling", which belong to the dichotomical variables, assigned "1" and "0"

respectively. Therefore, this study chose to build a binary Logistic regression model with the following expressions:

3.3.2 Framework

Through the literature review, the influencing factors of entrepreneurial willingness are summarized and classified, and the assessment indicators are subdivided from four dimensions, such as students' individual characteristics, entrepreneurial self-cognitive characteristics, family factors, and school entrepreneurship education.

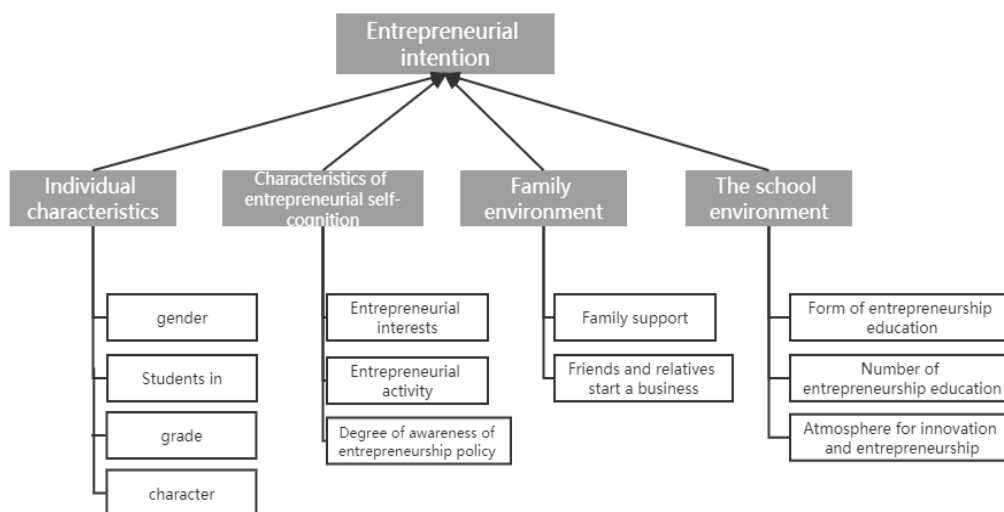


Figure 1: Research framework

4 RESULTS AND ANALYSIS

The variance expansion factor (VIF) is used to perform multiple commonality tests on 12 independent variables, and the results show that the VIF of all variables is less than 10, indicating that there is no

collinearity between the independent variables, and logistic regression analysis can be performed directly. The data were analyzed by SPSS statistical software for binary Logistic regression, and the results are shown in Table 2.

Table 2: Logistic model parameter estimation results

Types of variables	Variant names	B	S.E.	Wals	df	Sig.	Exp (B)
Individual characteristics	Sex	-.367	.256	2.056	1	.152	.693
	Provenance	-.331	.316	1.097	1	.295	.718
	grade	-.153	.170	.808	1	.369	.858
	character	.164	.252	.424	1	.515	1.178
Entrepreneurial self perception	Entrepreneurial interest	3.423	.288	141.693	1	.000	30.652
	Entrepreneurial activities	1.134	.340	11.118	1	.001	3.107
	Entrepreneurial policy perceptions	.311	.283	1.206	1	.272	1.365
home environment	Family support	.768	.266	8.346	1	.004	2.155
	Friends and family Entrepreneurship	.426	.280	2.312	1	.128	1.531
	Entrepreneurial education forms	-.624	.197	10.008	1	.002	.536
school environment	Number of entrepreneurial education	.321	.179	3.200	1	.074	1.378
	Climate for innovation and Entrepreneurship	1.457	.437	11.115	1	.001	4.292
	constant	-1.622	.657	6.092	1	.014	.197

Note: Significance (Sig) less than 0.01 means very significant, and less than 0.05 means significant.

4.1 *The Influence of Individual Characteristics of College Students on Entrepreneurial Intention*

Gender did not pass the significance test because with the development of society and the popularization of education, the shackles of the traditional concept of "men are outside and women are in" have been gradually broken, and female college students' awareness of pursuing independence has continued to increase. The origin of students has no significant impact on the entrepreneurial intention of college students. The reason is that although urban college students are exposed to emerging things more and earlier, and have the necessary human, financial and material resources for starting a business, rural college students are more motivated, innovative and adventurous to start a business due to their poor living conditions, so there is no significant difference in entrepreneurial willingness between urban and rural college students. There is no significant negative correlation between grade and entrepreneurial intention, which may be due to the fact that young students are not afraid of tigers, dare to face risks, and have more entrepreneurial enthusiasm. Extroverted college students are more willing to start a business than introverted college students, which may be because extroverted college students have more teamwork and social communication skills required for entrepreneurship, but they have not passed the significance test. So H1 does not hold.

4.2 *The Influence of College Students' Entrepreneurial Self-cognition Characteristics on Entrepreneurial Intention*

Entrepreneurial interest has a significant positive impact on entrepreneurial intention. The probability of engaging in entrepreneurial activities is 30.652 times that of college students who are interested in starting a business. The main reason is that once potential entrepreneurs have entrepreneurial interest, they will pay attention to entrepreneurial practice activities, and then love and pursue, and thus embark on the road of entrepreneurial practice. Entrepreneurial activities have a significant positive impact on entrepreneurial willingness. The entrepreneurial willingness of college students who have participated in entrepreneurial activities or training is 3.107 times that of college students who have not participated in entrepreneurial activities or training. College students' understanding of innovation and entrepreneurship. The degree of familiarity with entrepreneurial policies has a positive impact on the entrepreneurial intention of college students, but it has not passed the significance test, indicating that entrepreneurial policy is only one of the incentives for college students to start a business, and is

not closely related to college students' entrepreneurial willingness. So Hypothesis 2 is partially validated.

4.3 *The Influence of Family Environment on Entrepreneurial Intention*

There is a significant positive correlation between family support and entrepreneurial intention. The entrepreneurial intention of college students who received family entrepreneurship support was 2.155 times that of college students who did not receive family entrepreneurship support. The greater the family's support for entrepreneurship, the stronger the college students' entrepreneurial willingness. It can not only provide college students with economic and social network resources support, but also give them spiritual encouragement. The entrepreneurial behavior of relatives and friends has a positive effect on the entrepreneurial intention of college students, but it is not significant. So Hypothesis 3 is all verified.

4.4 *The Influence of School Environment on Entrepreneurial Intention*

The form of entrepreneurship education has a significant positive correlation with entrepreneurial willingness, mainly because the school, as the main position for college students to contact innovation and entrepreneurship information and knowledge, not only imparts entrepreneurial knowledge to college students, but also has a profound impact on college students' career outlook and career choice outlook. The form of education can enhance the effect of education, thereby enhancing the recognition of college students to entrepreneurship. There is a significant positive correlation between innovation and entrepreneurship atmosphere and entrepreneurial intention. The atmosphere of innovation and entrepreneurship reflects the behaviors and values that the school respects. A strong atmosphere of innovation and entrepreneurship can promote college students to inspire entrepreneurial inspiration in innovative practice and form entrepreneurial tendencies in the infection of entrepreneurial culture. The number of entrepreneurial education has a positive effect on entrepreneurial intention, but it fails the significance test. So hypothesis 4 is verified.

5 CONCLUSIONS

Through argumentation and analysis, from the perspective of individual characteristics, the entrepreneurial willingness of male college students is significantly higher than that of female college students, and the entrepreneurial willingness of extroverted college students is significantly higher than that of introverted college students. From the perspective of entrepreneurial self-awareness characteristics, entrepreneurial interest, entrepreneurial experience, entrepreneurial activities,

and familiarity with entrepreneurial policies are positively related to entrepreneurial willingness. From the perspective of family environment, family support and family and friends are positively correlated with entrepreneurial willingness; From the perspective of the school environment, the form and frequency of entrepreneurship education and the innovation and entrepreneurship atmosphere of the school are positively related to the willingness to start a business.

6 COUNTERMEASURES AND RECOMMENDATIONS

6.1 *Cultural Nurture and Create an Entrepreneurial Atmosphere*

Campus innovation and entrepreneurship culture is a special cultural atmosphere and ideology, with inheritance and penetration, leading the way of thinking and behavior of college students, and an important means of cultivating college students' entrepreneurial awareness. Colleges and universities should cultivate the culture of innovation and entrepreneurship as an important part of the construction of campus culture, respect innovation, respect entrepreneurship, and form a campus cultural atmosphere of daring to be the first and to be innovative. Internalize the entrepreneurial culture in the heart, solidify it in the system, externalize it in the form, and implement it in the practice, starting from the three levels of "entering the eyes", "entering the brain" and "entering the business" of entrepreneurial culture, and based on "entering the eyes", sort out Condensing the school's entrepreneurial culture concepts and values, popularizing entrepreneurial knowledge through online and offline platforms such as cultural walls, showcases, WeChat, Weibo, etc., publicizing entrepreneurial models, promoting entrepreneurial spirit, and allowing students to perceive and understand innovation and entrepreneurship. The key is to set innovation and entrepreneurship ability training as an important assessment module of the "Second Class Transcript" system. By setting up basic courses on innovation and entrepreneurship, conducting entrepreneurship training lectures and training, and incorporating innovation and entrepreneurship elements into daily student management and professional teaching work, Strengthen students' understanding and understanding of innovation and entrepreneurship. With "entering the industry" as the core, students are encouraged to participate in innovation and entrepreneurship practice activities through project setting up, competitions and other methods.

6.2 *Demonstrate and Lead, Cultivate Entrepreneurial Interest*

Schools should give play to the exemplary and leading role of entrepreneurial role models, influence the thoughts and behaviors of college students with the

entrepreneurial behavior, entrepreneurial spirit, and outstanding achievements of successful entrepreneurs, and infect, attract and encourage college students to put them into the practice of innovation and entrepreneurship. The first is to "select out", excavate, cultivate and select peers to set up entrepreneurial models, and give full play to the role of peers' role in radiating, driving and motivating. Through the establishment of peer assistance mechanisms, colleges and universities have established peer entrepreneurial mentor groups, and held entrepreneurial story sharing sessions to promote the transmission of entrepreneurial invisible knowledge. The second is to "please come in", inviting successful entrepreneurs to come to the school to carry out entrepreneurial policy presentations, share entrepreneurial experience, demonstrate the entrepreneurial ideas of college students, guide entrepreneurial incubation projects, and carry out entrepreneurial information exchange and resource docking activities. The third is to "go out", give full play to the resources of outstanding entrepreneurial alumni, lead students out of school, enter enterprises, and visit outstanding entrepreneurial alumni, provide opportunities for students to have zero-distance contact with role models, and allow students to listen to the entrepreneurial deeds and experiences of alumni. Resonate, stimulate the enthusiasm and initiative of students to start a business.

6.3 *Project-driven, Improve Entrepreneurial Ability*

The core of project-driven is to carry out innovation and entrepreneurship training and entrepreneurial practice projects. Students experience innovation in practice, experience entrepreneurship, inspire entrepreneurial inspiration, and summarize entrepreneurial experience, so as to achieve the goal of consolidating entrepreneurial ability and improving entrepreneurial passion. In this process, colleges and universities should attach great importance to the organization and implementation of innovation and entrepreneurship training and entrepreneurship practice projects, establish rules and regulations, and establish a guarantee mechanism from the level of top-level design and rules and regulations, with students as the main body, teachers as the leading, and project-based Teaching mode, introducing entrepreneurial cases for brainstorming; using the on-campus entrepreneurial incubation base or entrepreneurial nursery as a platform to provide accurate services such as entry, tracking, and guidance of entrepreneurial projects, and open professional experimental training venues simultaneously, allowing students to carry out innovation and entrepreneurship in combination with their majors Practical activities; take the school-enterprise cooperation base as the carrier to promote school-enterprise cooperation, integration of production and

education, make full use of social and corporate resources, arrange students to visit companies, do post-job internships, and participate in corporate practice projects with classmates, so that students can experience the real environment of corporate operation and management; take the Internet + Innovation and Entrepreneurship Competition, the Challenge Cup College Student Academic Science and Technology Works Competition as the starting point, and promote learning through competitions, so that students can tap their potential in the training and practice of innovation and entrepreneurship projects, and accumulate innovation and entrepreneurship knowledge and skills.

6.4 Multi-party Collaboration to Provide Entrepreneurial Support

Establish a four-way linkage, cross-training, and collaborative education mechanism for "political school entrepreneurs", and improve the integrated entrepreneurial support system of continuous assistance and full guidance. Take the government as the leading role, give full play to the functions of government social organizers and the advantages of social resources, establish youth entrepreneurship parks or science and technology parks, introduce incentive policies for innovation and entrepreneurship, consolidate entrepreneurship carriers, and provide financial support. Taking schools as the main body, deepening the reform of innovation and entrepreneurship education, clarifying the position of innovation and entrepreneurship education in talent training, integrating entrepreneurship and innovation education throughout the entire process of talent training, realizing the combination of entrepreneurship and innovation colleges and professional colleges, and the combination of entrepreneurship and innovation education and professional education, the combination of mass entrepreneurship education and ideological and political education, and the combination of mass entrepreneurship and innovation practice and industrial transformation. Explore the reform of the teaching organization model in a smart environment, innovate the interaction mechanism between teachers and students inside and outside the classroom, and formulate a system for the accumulation and transformation of innovation and entrepreneurship credits. Taking enterprises as participation, "introduce enterprises to the school", build entrepreneurship incubation bases, and encourage enterprises to participate in student entrepreneurship projects in the form of equity or equity participation; "introduce enterprises to teach", support and guide enterprises to participate in innovation and entrepreneurship education and teaching reform, and hire enterprises. The backbones also serve as school entrepreneurship tutors; "introduce schools into enterprises", establish a practice base for innovation and entrepreneurship education integrating production and education, and promote the deep integration of student

entrepreneurship projects and enterprise projects. With the support of family, focus on cultivating students' innovative spirit and creative ability in daily life and behavior habits, support and encourage college students' entrepreneurial behavior, demonstrate and guide entrepreneurial projects, and raise and support entrepreneurial funds.

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