

Research on the Development Strategy of Campus E-commerce Entrepreneurship



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Abstract: The rapid development of the Internet has promoted the reform and innovation of China's industrial model, and also provided new ways and new methods for college students to start businesses and obtain employment. As a new entrepreneurial platform under the background of the Internet, e-commerce entrepreneurship has built a bridge between college students and the entrepreneurial market and brought convenience to college students entrepreneurs. Based on this, taking campus e-commerce entrepreneurship as the research object, through the quantitative analysis of its development status S (advantages), W (disadvantages), O (opportunities) and T (threats), the SWOT quantitative model is constructed, and four development strategies of campus e-commerce entrepreneurship are analyzed, namely SO (aggressive), WO (reverse), ST (resistance) and WT (defensive) strategies. In addition, the analytic hierarchy process is used to quantify the results of SWOT analysis of campus e-commerce entrepreneurship, analyze the proportion of various factors affecting college students' e-commerce entrepreneurship, and finally locate the development strategy of campus e-commerce. The research results show that the choice of campus e-commerce entrepreneurship development strategy should be based on the SO strategy, that is, relying on college students' entrepreneurial advantages, taking advantage of external development opportunities, building college students' e-commerce entrepreneurship service platform, improving financing channels, and better promoting the sustainable development of campus e-commerce entrepreneurship.

Keywords: Campus E-commerce Entrepreneurship; AHP-SWOT Analysis; Internet; Quantitative Model

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1 Introduction

Innovation and entrepreneurship have played an important role in promoting China's economic development and alleviating employment pressure [1]. College students are new representatives of entrepreneurship. In order to stimulate the entrepreneurial vitality of college students, the country has built new entrepreneurial platforms for college students, such as entrepreneurial incubation bases, industry, education and research, to promote college students to start businesses [2]. It is worth noting that among these entrepreneurial platforms, e-commerce entrepreneurial platforms rely on the development of information technology, and traditional industries have been broken through, which has brought a broader market for college

students to start their own businesses and has shown a good development prospect [3-4].

E-commerce entrepreneurship is an entrepreneurial activity that closely links knowledge with practice [5]. It is a multi-disciplinary entrepreneurial model based on Internet technology [6]. At the same time, e-commerce also has the advantages of low cost and easy operation, which provide opportunities for college students who want to try entrepreneurship [7]. It can be seen that in the Internet era, e-commerce entrepreneurship has become an important way for college students to try and practice entrepreneurship. This paper combines qualitative and quantitative research methods, uses SWOT analysis, an important method of

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research strategy at home and abroad, to analyze the internal advantages, internal disadvantages, external opportunities and external threats of campus e-commerce entrepreneurship development, proposes corresponding development strategies, conducts strategic analysis through analytic hierarchy process (AHP), and constructs a strategic quadrangle to discuss the future development strategic trend of e-commerce entrepreneurship. It is expected to enrich e-commerce entrepreneurship research and provide useful reference for relevant departments to formulate relevant development strategies.

2 SWOT Analysis of Campus E-Commerce Entrepreneurial Development

2.1 Analysis of Internal Advantages

- (1) Strong entrepreneurial learning and adaptability. As a group with high-quality and high knowledge reserves, college students often have the ability to quickly learn new knowledge, which provides a capability guarantee for e-commerce entrepreneurship. Secondly, college students have significant age advantages, have high entrepreneurial alertness and cognitive flexibility, and can urge college students to think about problems with a unique and innovative spirit so as to quickly gain cognition and adapt to the complex and changing entrepreneurial environment [8].
- (2) High entrepreneurial passion. Entrepreneurship passion consists of self identification on the cognitive level and positive emotions on the emotional level [9]. Entrepreneurship is a long-term and constantly changing process. Only high entrepreneurial passion can support the continuous development of entrepreneurship. E-commerce entrepreneurship has the advantages of low cost and easy operation, and has a high success rate. These characteristics can effectively enhance students' sense of self-efficacy, achieve their own identity, and then obtain the corresponding entrepreneurial passion. At the same time, passion is contagious, and entrepreneurial college students have close contact in the process of entrepreneurship. Entrepreneurship enthusiasm will affect the actions of other entrepreneurs, and will also subtly affect this positive emotion [10].
- (3) The professional knowledge structure of the system. With the support of the government and enterprises from all walks of life, colleges and universities can continuously and frequently provide specialized specialized courses, organize entrepreneurship lectures, and build entrepreneurship incubation platforms, which can provide students with the most cutting-edge entrepreneurial dynamics and industry dynamics, and constantly improve and systematize the entrepreneurial knowledge structure of college students. College students can quickly obtain information related to e-commerce entrepreneurship and quickly identify opportunities for entrepreneurship [11].
- (4) "Three low" characteristics suitable for college students. As a non entity business, e-commerce entrepreneurship is a low-cost, low threshold, low-risk electronic business model. Students can use the Internet to quickly obtain business information, and then find relevant consumers. At the same time, compared with offline operation, the advantages of non entity economic form in leasing, decoration, inventory and other aspects reduce the threshold for e-commerce entrepreneurship and the risk of entrepreneurial failure, which is a very suitable entrepreneurial choice for college students.

2.2 Internal Disadvantage Analysis

- (1) Lack of practical experience. Although college students' e-commerce entrepreneurship is an attempt to start their own businesses, in this process, students' entrepreneurial ability and relevant entrepreneurial knowledge are limited, and it will be difficult to solve some problems without relevant entrepreneurial experience. As the main business of e-commerce, college students receive more education in theoretical knowledge on campus, and have fewer opportunities for practice [12]. The lack of practice will lead to a serious disconnect between the theory and the actual situation of entrepreneurship, so that the actual market demand cannot be fully recognized, and ultimately it is difficult to find an e-commerce entrepreneurial path suitable for their own entrepreneurial development.
- (2) Conformity mentality. College students who participate in entrepreneurship are a group with

similar characteristics. They have close communication and are easy to influence each other. In the process of college students' e-commerce entrepreneurship, it is easy to create a phenomenon of blindly following the trend of entrepreneurship, which causes some college students' entrepreneurs to invest in the e-commerce entrepreneurship process without sufficient preparation, lacking purpose, and ultimately leading to the failure of entrepreneurship activities.

- (3) Financing difficulties. Due to the special identity of college students, few can borrow funds from financial institutions in the form of mortgage or guarantee. In addition, the financing system of universities and the government is not perfect, such as the student loan process is cumbersome and the loan hardware requirements are high, which increases the difficulty of student financing. Financial obstacles will not only delay the opportunity of starting a business, but also kill the enthusiasm of students for starting a business [13], hindering the development of entrepreneurship in the later period.
- (4) Lack of professional guidance. The entrepreneurial process is dynamic and complex, often requiring targeted guidance from experienced teachers or professionals outside the school [14]. At this stage, entrepreneurship education and e-commerce entrepreneurship courses are too theoretical and not closely connected with practice, which can not effectively help students' entrepreneurship. This will lead to the lack of standardized choices for college students' entrepreneurship, which is not conducive to finding their own entrepreneurial direction and solving entrepreneurial problems.

2.3 Analysis of External Opportunities

- (1) National government policy support. The Internet era provides a variety of channels and methods for e-commerce entrepreneurship, especially in the context of "Internet+", the establishment of entrepreneurial integrated application platform has brought new communication channels to entrepreneurs. At the same time, in the context of "mass entrepreneurship and innovation", since 2015, the State Council has also issued a series of documents supporting e-commerce entrepreneurship, including the Opinions on Vigorously Developing E-commerce and Accelerating the Cultivation of

New Economic Drivers, which provides strong support for the sustainable development of college students' e-commerce entrepreneurship.

- (2) China's network infrastructure covers a wide area. According to the Statistical Report on the Development of China's Internet, by August 2021, the number of Internet users in China has reached 1.007 billion. The rapid development of the Internet has changed people's living habits, and also brought a certain scale of customer groups to e-commerce. The scale of network foundation is the premise of e-commerce entrepreneurship, and also an important foundation to support the development of e-commerce [15].
- (3) Information technology support. With the rapid development of the Internet, the maturity of information technology can promote college students to directly face customer groups, more easily obtain market demand information, and explore new ways of entrepreneurship. On the one hand, it can provide college students with technical support on e-commerce entrepreneurship, facilitate them to collect market data, process and analyze, so as to make correct decisions and achieve entrepreneurial success; On the other hand, the development of technology can help college students contact more potential users, obtain real-time entrepreneurial information, create new entrepreneurial models, expand the market, and thus improve the success rate of entrepreneurship.

2.4 External Threat Analysis

- (1) The way is popular and the competition is fierce. Although college entrepreneurs have certain advantages, e-commerce entrepreneurship changes dynamically with the trend of market demand. Moreover, college students' e-commerce entrepreneurship has the phenomenon of blindly following the trend, lacking social research, and easy to make homogeneous choices, which will lead to fierce competition with e-commerce entrepreneurship inside and outside the school, thus increasing the probability of entrepreneurial failure. At the same time, popular entrepreneurial choices are also likely to lead to students' own entrepreneurship being replaced by new entrepreneurial methods or products, thus killing entrepreneurial passion, which is not conducive to

the sustainable development of entrepreneurship.

- (2) The entrepreneurial service institutions have not been improved. The main place for college students to start their e-commerce business is on campus, and the campus cannot provide corresponding supply chain and logistics support for students' e-commerce business at this stage, which will lead to a single purchasing channel and low commodity quality. Secondly, the lack of supervision by the relevant departments of the school will directly affect customer satisfaction, but also indirectly affect a series of problems in the later stage of operation, such as income and after-sales. Finally, the campus lacks special management personnel to publicize and implement policies, and relevant implementation departments also have insufficient communication with superiors in the implementation process, resulting in policy conflicts [16]. The imperfection of these service institutions will have a negative impact on university e-commerce entrepreneurship.
- (3) The network marketing ability is insufficient and lacks competitiveness. E-commerce entrepreneurship is a non entity economic form. College students lack diversified marketing awareness and marketing means in the process of marketing their own products or

services, and are also at a disadvantage in terms of marketing funds [13]. At the same time, due to the homogenization of channels, college students' e-commerce entrepreneurship is small in scale, poor in risk tolerance, and seriously divorced from market demand.

3 SWOT Analysis Matrix for Campus E-commerce Entrepreneurship

By analyzing the advantages S, disadvantages W, opportunities O, and threats T of campus e-commerce entrepreneurship, we can find that advantages and difficulties coexist in campus e-commerce entrepreneurship at this stage. According to SWOT analysis, matrix models can be cited to effectively combine internal and external strengths and weaknesses with external opportunities and threats, analyze the competitive environment of campus e-commerce entrepreneurship, and further formulate corresponding strategic decisions based on different scenarios. See Table 1 for details.

Table 1 SWOT analysis matrix of campus e-commerce entrepreneurship

	Inside	(S)	(W)
External		S1 has strong learning adaptability; S2 High passion for entrepreneurship S3 system professional knowledge structure S4 Low cost, low threshold and low risk	W1 lacks practical experience W2 Conformity W3 financing difficulties W4 Lack of professional guidance
(O)	O1 National government policy support O2 Wide coverage of network infrastructure in China O3 Information technology support	SO (Aggressive) (1) Pay attention to practice and construct a three-stage training program for cognitive training practice (2) Pay attention to the development direction of information technology and build a mass entrepreneurship and innovation service platform (3) Establish e-commerce entrepreneurship competition based on network foundation (4) Rely on government support to expand financing channels	WO (Orsional) (1) Build a school enterprise cooperation platform to provide practical opportunities (2) Update technical information in real time to stimulate students' innovation ability; (3) Strengthen the construction of the teaching staff and enrich the practical ability of teaching resources; (4) With the help of government policies, actively publicize financing channels, and build a new financing mode with the combination of government and school
(T)	T1 Popular channels and fierce competition T2 Entrepreneurial service institutions have not been improved T3 Inadequate network marketing ability and lack of competitiveness	ST (Resistance) (1) Build a practice platform, improve information technology learning, and obtain innovation awareness; (2) With the help of students' entrepreneurial passion, jointly build mutual entrepreneurial service institutions (3) Offer marketing ability promotion courses and gain insights in practice	WT (Defensive) (1) Practice and knowledge are updated in real time to obtain the latest information and achieve innovation (2) Strengthen the professional teaching staff, seek full-time tutors and train entrepreneurial teachers (3) Simulate actual teaching to improve students' creativity and marketing ability

4 Construction and Analysis of AHP Quantitative Model

4.1 Establishment of Judgement Matrix and Consistency Test

Through the analysis of SWOT factors of college students' e-commerce entrepreneurship, the expert evaluation method and 1-9 scale method are used to evaluate e-commerce entrepreneurship, and a judgment matrix $A=\{a_{ij}\}$ is constructed to compare element i and element j in pairs, and then the judgment matrix of corresponding SWOT groups, advantages and disadvantages, opportunities and threats groups is constructed, and the proportion of each indicator layer to the target layer, W_i , is obtained for further judgment.

1. Calculate weight and conduct consistency test

The first step is to calculate the geometric mean value W_i of each line in the judgment matrix by the product square root method, and further normalize it to obtain the eigenvector W_i .

$$\bar{W}_i = \left(\prod_{j=1}^n a_{ij} \right)^{\frac{1}{n}} \quad i, j = 1, 2, \dots, n ;$$

$$W_i = \frac{\bar{W}_i}{\sum_{j=1}^n \bar{W}_j} \quad i, j = 1, 2, \dots, n$$

Step 2: calculate the maximum eigenvalue of each judgment matrix according to the calculation results in step 1 λ_{\max} , and calculate the consistency index CI and consistency ratio CR according to the calculation results, where $CR < 0.1$ means passing the consistency test, otherwise, failing.

$$\lambda_{\max} = \frac{1}{n} \sum_{i=1}^n \frac{\left(\sum_{j=1}^n a_{ij} W_j \right)}{W_i} \quad i, j = 1, 2, \dots, n ;$$

$$CI = \frac{\lambda_{\max} - n}{n - 1}$$

According to the above judgment matrix consistency test method, the weight and consistency test results of each indicator in each group are shown in Tables 2-4.

Table 2 Weight and consistency test of each index between groups

Group	S	W	O	T	Wi	Consistency inspection
S	1	2	0.5	3	0.302	$\lambda_{\max}: 4.2172$ $CR=0.0813$
W	0.5	1	0.5	0.5	0.1376	
O	2	2	1	2	0.3788	
T	0.3	2	0.5	1	0.1816	

Table 3 Weight and consistency test of various indicators between groups S, W

S	S1	S2	S3	S4	Wi	Consistency inspection	W	W1	W2	W3	W4	Wi	Consistency inspection
S1	1	2	0.3	0.3	0.156	$\lambda_{\max}: 4.1450$ $CR=0.0543$	W1	1	2	0.5	0.5	0.1981	$\lambda_{\max}: 4.1217$ $CR=0.0456$
S2	0.5	1	0.5	0.3	0.119		W2	0.5	1	0.5	0.5	0.1397	
S3	3	2	1	0.5	0.2854		W3	2	2	1	2	0.3873	
S4	3	3	2	1	0.4396		W4	2	2	0.5	1	0.2748	

Table 4 Weight and consistency test of indicators between groups O, T

O	O1	O2	O3	Wi	Consistency inspection	T	T1	T2	T3	Wi	Consistency inspection
O1	1	2	2	0.4905	$\lambda_{\max}: 3.0537$ $CR=0.0517$	T1	1	0.5	2	0.2973	$\lambda_{\max}: 4.1217$ $CR=0.0456$
O2	0.5	1	0.5	0.1976		T2	2	1	3	0.539	
O3	0.5	2	1	0.3119		T3	0.5	0.3	1	0.1638	

4.2 Hierarchical Sorting

According to the weight calculated by each indicator and the consistency test, we can draw a hierarchy ranking that affects college students' e-commerce entrepreneurship,

as shown in Table 5. Among them, national government policy support (O1) > low cost and low threshold (S4) > information technology support (O3) > entrepreneurial service institutions are not yet complete (T2) > system professional knowledge structure (S3) > China's network infrastructure coverage (O2) > channels are popular,

Fierce competition (T1) > financing difficulties (W3) > strong learning adaptability (S1) > lack of guidance from professional tutors (W4) > strong entrepreneurial passion

(S2) > insufficient network marketing ability and competitiveness (T3) > insufficient practical experience (W1) > conformity psychology (W2).

Table 5 Overall ranking of campus e-commerce entrepreneurship strategy

Arrangement	S1	S2	S3	S4	W1	W2	W3	W4	O1	O2	O3	T1	T2	T3
Total sorting weight	0.047	0.036	0.086	0.133	0.027	0.019	0.053	0.036	0.186	0.075	0.118	0.054	0.098	0.030

4.3 Strategic Positioning of College Students' E-commerce Entrepreneurship Development

According to the weight of the total ranking of the above levels, calculate the vector of each strength of swot. Including:

$$S' = \sum_{i=1}^n Si/n = 0.0755 \quad W' = \sum_{i=1}^n wi/n = 0.0344$$

$$O' = \sum_{i=1}^n Oi/n = 0.1263 \quad T' = \sum_{i=1}^n Ti/n = 0.0610$$

The coordinate system is formed according to the overall proportion strength of each factor. The coordinate axes

correspond to S', W', O' and T' respectively. Thus, the campus e-commerce entrepreneurial strategy quadrangle is constructed, as shown in Figure 1. The center of gravity for calculating the strategic quadrangle is:

$$P(X, Y) = \left(\frac{\sum_{i=1}^4 X_i}{4}, \frac{\sum_{i=1}^4 Y_i}{4} \right) = (0.0103, 0.0163)$$

It can be observed from the strategic quadrangle that the center of gravity P is located in the second quadrant. Therefore, the development strategy of college students' e-commerce entrepreneurship should focus on the SO strategy, that is, the developmental strategy, seize the opportunity and give play to their own advantages to develop.

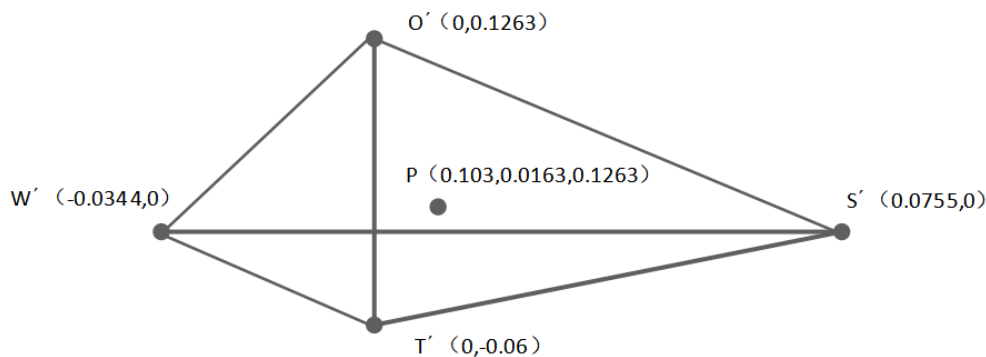


Figure 1 Campus e-commerce entrepreneurship SWOT strategy quadrangle

5 Conclusion

In the context of the rapid development of the Internet, e-commerce provides a new type of entrepreneurial attempt for college students, which can effectively improve their entrepreneurial practice ability. In the process of the development of campus e-commerce innovation and entrepreneurship, it needs not only the support of relevant policies and regulations, but also the help of school enterprises and other aspects of entrepreneurship, so as to jointly solve the operational problems in e-commerce entrepreneurship

and provide continuous protection. Through SWTO analysis and analytic hierarchy process, this paper analyzes the current situation and development strategies of college students' e-commerce entrepreneurship at this stage, and makes strategic positioning for future development. At the same time, in the process of actual e-commerce entrepreneurship, there are many aspects not covered in this paper, such as the after-sales problems of operating goods, e-commerce management communication and other issues, which need to be discussed in depth and put forward reasonable solutions to further promote the development of e-commerce entrepreneurship platform.

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