

# Research on College Graduates' Employment and Entrepreneurship Strategy—— Taking the Higher Vocational Students in Specialities for Producer Services Sector for an Example

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**Keywords:** producer services; college students; carve out; employment

**Abstract.** According to the research on the employment and carving out situation for students in specialities for producer services sector of some higher vocational colleges in Foshan, Guangzhou, discuss under the status quo in the environment of economic development mode transformation, and the Pearl River Delta integration context, from the sustainable development of individual students ability, social needs, to vocational training and other aspects of local economic development needs to research students employment and carving out strategies, thus to guarantee the provide of labor for relevant industries and the development of local economic.

## Introduction

Since 2003, after the first batch of expansive university students graduate, the employment issues highlighted; college students employment problem is not only related to implement strategy of talent powerful nation and the overall situation of building a well-off society, but also related to the students' interests, the stability of college and society, and the development of higher education. On one hand, the difficult employment of university graduates has become a major social problem, on the other hand, the university graduates do not adapt to the industry's occupation request and it's difficult for his enterprise to recruit qualified personnel. Therefore, relative to the size of expansion, whether the higher vocational expertise can provide qualified high-end skills for economic development is more worthy of attention. This article study on the college students for producer services.

## The Industrial Structure Upgrade and the Talent Demand for Productive Services

International experience shows that, in the takeoff stage of economic development, the manufacturing industry is the leading industry determining the extent and level of service industries development. The service sector play an important role in promoting the development of the manufacturing industry when the manufacturing industry develops to a certain stage. [1] After the financial crisis, the central ten industrial revitalization plans involve traditional industries and emerging services. Industrial transformation is from manufacturing-led industrial structure to a services-led industrial structure.

More than 50% products used in the production of service sector is as producer services, more than 50% of the service sector of the products for consumption is as consumer services. In developed countries, the proportion of producer services in the whole service industry is more than 60%, and its growth rate is significantly faster than the consumer services industry, especially finance, insurance, logistics, transportation, information, business services are the fastest growing. [2][3] In the 1970s, developed countries have transferred the labor-intensive industries, especially manufacturing to the developing countries, while they rapidly develop the producer services in order to gain economic control. At present, the proportion of the services industry of national economy in the Western developed countries accounted for more than two-thirds. The shift of economic focus is from manufacturing to services to enhance the competitiveness of manufacturing industry. [4]

Reform and development Plan of the Pearl River Delta (2008-2020) proposed one of the

strategic positioning is “the world's most advanced manufacturing and modern service industry base”.<sup>[5]</sup>The talent is the foundation for the development of all industries. Related to the construction of world-class manufacturing base, the industrial service center of the Pan-Pearl River Delta region, the demand for qualified personnel for the production of services is great.

## Survey Basic Situation

Through questionnaires, interviews of business experts, professional construction forum to the survey the factors affecting employment and entrepreneurship of the students in vocational colleges in Guangfo Area. Refine the analysis of entry, around these entries to design the questionnaire, and the questionnaire is divided into entrepreneurial intention, venture knowledge, entrepreneurial practice and the employment situation, a total of 53 questions. We made sample surveys by sending electronic questionnaires and on-site survey.

In accordance with the convenient principle, 2010 graduates of Business Administration of producer services of Foshan Vocational and Technical College, Guangzhou Institute of Railway Technology, Guangdong Vocational College of Science and Trade were investigated. Due to difference between samples of each individual is little, we used simple random sampling method, random sample of 400 students conducted a questionnaire survey in June 2010 to July, a total of 388 valid questionnaires, the recovery was 97%.

## Survey Results and Analysis

### (1) Entrepreneurship

1)Entrepreneurial intention, attitude. The proportion of "very interested" and "more interested " in entrepreneurship accounted for 75.7%; “considered” the venture accounted for 80.4%, indicating that entrepreneurship is a hot issue in the survey of graduates, but students start the idea of outside influence ; students have a more positive understanding of the value of entrepreneurship; diverse student entrepreneurial purposes, including "making money", "accumulated experience", "the challenge self", "employment", the students have challenging spirit, and most intend to carve out; but the investigation shows little real action. The students feel the pressure and rational about entrepreneurial outlook .

Those who think that their professionals is not related to entrepreneurship accounted for the majority(73.7%); more students will choose their entrepreneurial direction depending on their own interest. Second, they can combine with their professional. Though professional venture is not a major consideration, but it still makes great influence. When facing the problem how to address their fail in business, the majority of students are national. Though most students show interests in carve-out but less focus on the entrepreneurial information, those who do not take the initiative action accounted for about 40%. Their policy attention and interests in entrepreneurship has been misplaced and out of touch.

2) Entrepreneurial knowledge. The popular way of acquiring entrepreneurial knowledge and skills is the "hands" and "activities and training”; entrepreneurship education method selected" visit to the successful enterprise ", " business simulation training” accounted for 74.3%, focusing on practicing; those who think that school entrepreneurship education is not good enough accounted for the majority part. Most school entrepreneurship education in general failed to meet the needs of the students; Venturing guidance programs should focus on the interpersonal communication skills (35.3%), marketing (18.6% ), individual counseling (17.8%), emotional intelligence training is more important than knowledge; schools should strengthen "Practical Ability" of their own business (42.5%), "Teamwork culture (18.8%)," “Innovative Education "(16.8%)”, “Psychological Education” (14.2%),etc. Active cooperation of team will incent team members and constraint each other. Team members can complement their advantages, foster strengths and circumvent weaknesses, polymerized to form a force to improve the efficiency and quality of work.

3)Entrepreneurial practice. College students should have the quality to make a clear understanding of their own businesses. Students mainly choose "professional background" (55.7%), “a strong spirit of challenge "(42.5%),“psychological quality and adaptation”(39.9%), “communication and interpersonal skills” (26.5%), “good social relations "(21.4%); the advantages

of college students are" young, brave to struggle" (68.0%), "learning ability, the spirit of innovation"(62.9%), "high professional quality "(49.2%), "strong network ability" (32.0%),etc; Entrepreneurship mostly needs "a strong personal values ambition"(55.7%), "individual or team research or patent"(38.4%), "Students Technology Ventures Fund supporting"(30.4%),"social and specific management services" (28.9%), "schools of Incubation and services"(20.9%). "Practical capacity"(74.7%), "market environment" (43.3%), "the policy environment"(40.2%),"the expertise knowledge "(38.9%), "financial conditions"(38.7%) are the major factors affecting college students venture; "Insufficient funds" (79.1%), "not enough experience, lack of social relations" (70.6%), "lack of business opportunity, have difficulties to open up the market"(46.4%) are the main obstacles in college students' business.

4)Entrepreneurial supporting. The entrepreneurial help provided mostly by colleges and universities are "establishing entrepreneurial practice base"(64.9%), "inviting the entrepreneurs or entrepreneurial experts to give lectures" (37.1%), "organizing the Entrepreneurship Competition" (33.8%), "creating the entrepreneurial education programs" (18.8%); For entrepreneurial environment, they hope to improve "Students Technology Ventures Fund supporting" (59.0%), "the free training for entrepreneurship policy" (56.4%), "the professional management of the social service agencies to provide services "(52.1%), "policy supporting and broadness of the financing channels" (44.8%), "tax incentives" (22.2%),etc; The most favorable sources of venture capital is " a venture special fund established by the Government" (53.4 %), "bank loan discount" (29.9%),etc. Before they venture, they mainly choose "practicing in enterprises" (52.1%), "reading entrepreneurial books" (29.4%), "participating in the Business Plan Competition "(21.4%), "asking help of start-up entrepreneurs" (6.7%) and so on.

#### (2)Employment

The types of student employment enterprises include "private enterprise" (47.3%), "foreign-invested enterprises"(18.0%), "the state-owned enterprises" (16.8%), "joint venture" (15.5%), "organs, institutions "(2.5 %)and so on; The job positions include "management positions" (40.9%), "the other job positions" (32.6%), "technical positions" (16.3%) and "production jobs" (10.2%); The students' jobs have a considerable portion having nothing to do with their specialties. The choice of "whether your professional skills are applicable to the actual work or not" are mostly selected" normal "(41.7%). The insufficiency of students' professional competence mainly reflected in that their structure of knowledge is imperfect, their professional knowledge is not solid, their comprehensive skill level is not high, their designed multi-energy level is low and their professional competence is insufficient.

Job hunting considers more "stability" (66.5%), "wages" (63.7%), "labor and social security "(45.1%); Students who choose to work in the Pearl River Delta region accounted for 95.0%, especially in Guangzhou and Foshan. This is associated with the location of the school. Students' career ability levels are not high, but their career expectations are high. They are unwilling to bear the hard work and unwilling to work in economically underdeveloped areas and grass-roots.

When choosing companies, students are passive and casual, lacking scientific and initiative; they are lacking in career planning ability and do not have a correct understanding of their career interest, expertise, practical ability, characters and temperament, etc.; the conditions have been reflected in their professional choices. When choosing professional choices, some students select them depending on recommendations by friends and family and subject to distribution.

The effective way to solve the employment is "the development of employment capacity" (38.1%), "tax relief, small loans, social insurance premium subsidies "(29.9%), "vocational training" (21.4%), "capital, technology and other aspects of supporting"(16.5%), "the development of public service positions" (11.9%), "government housing" (1.5%); Studying in university for three years plays an important role in "learning, thinking skills" (34.5%), "lifestyles and ways of doing things "(24.7%), "professional knowledge and skills" (24.0%), "quality" (22.9%) and "problem-solving skills" (21.4%); They hope that the government can provide help in "increasing jobs" (66.0%), "providing professional skills training" (60.8%), "providing timely information on employment" (54.1%), "social security" (40.5%) and so on. This should be improved by schools, governments and the whole society.

## Analysis of Factors Affecting the Entrepreneurship of College Students

According to the survey and analysis, we can have cluster analysis on the factors affecting the entrepreneurship of college students. We can select the quantification of the 25 factors (Table 1), using MATLAB software operations to identify the representative affect factors of college students for employment and entrepreneurship, and to find out key factors on the basis of comparative analysis.

First, we extract the data characteristics using the known data, and then classify these characters with the help of computer based on these features. The base on cluster categories is how to measure their approximation between each of the categories. And we usually measure it by taking the distance and similarity coefficients; we define the distance between the samples and define the similarity coefficient between the similarity coefficients. The distance between the sample showed the similarity between the samples while the similarity coefficient between the similarity coefficients portray the similarity indicators. Samples (or variables) to each according to the size of the similarity classification, close to the aggregation of smaller, estranged gathered in a large class, cluster analysis is usually hierarchical clustering, rapid clustering fuzzy clustering, using MATLAB hierarchical clustering.

Table 1 Students' employment and entrepreneurship influencing factors table

Factor number	Factor contents
1	Are you interested in entrepreneurial
2	Are you going to begin your entrepreneurial
3	What do you think is the relationship between your professional and entrepreneurial
4	The prospect of the future of your entrepreneurial
5	Understanding of related policies, regulations promulgated by the state to support college students start their own businesses
6	The initiative of entrepreneurship, information obtained from the living environment
7	The effect and enforceability from classroom teaching entrepreneurial
8	The effect and enforceability from expert forums, seminars entrepreneurial
9	The effect and enforceability from the information of entrepreneurial competition
10	The effect and enforceability from the entrepreneurial information of school entrepreneurial club
11	The effect and enforceability from the entrepreneurial information of internships or work-study
12	The effect and enforceability from the entrepreneurial information of newspaper, television, internet and other media
13	The effect and enforceability from the entrepreneurial information of relatives, friends and colleagues.
14	The effect and enforceability from the other entrepreneurial information
15	Have you ever do part-time jobs
16	The degree of influence of family factor on college students starting their own businesses
17	The degree of influence of self ability factor on college students starting their own businesses
18	The degree of influence of educational factor on college students starting their own businesses
19	The degree of influence of economic factor on college students starting their own businesses
20	The degree of influence of social factor on college students starting their own

	businesses
21	The degree of influence of social environment factor on college students starting their own businesses
22	What's your opinion about the failure of students' entrepreneurial
23	What's your attitude toward the failure in your own business
24	The consideration of their professional choices
25	The degree of demand of the job market on your professional

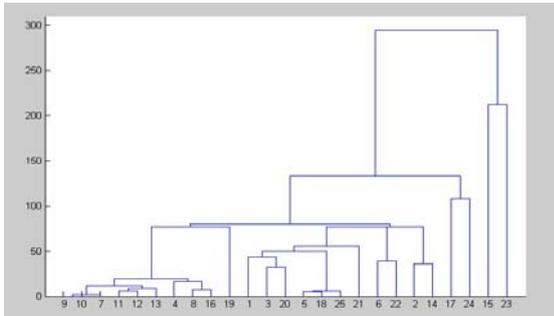


Fig. 1 The pedigree dendrogram of the influence factors of Students' employment and entrepreneurship

With  $n$  samples of  $p$  observations:  $x_1, x_2 \dots x_n$

At this time, each sample can be regarded as a  $p$ -dimensional space, the distance between two points sign:  $d(x_i, x_j)$  It should satisfy the condition:  $d(x_i, x_j) \geq 0$ , and  $d(x_i, x_j) = 0$ , only if  $x_i = x_j$

$$d(x_i, x_j) = d(x_j, x_i) \tag{1}$$

$$d(x_i, x_j) \leq d(x_i, x_k) + d(x_k, x_j) \tag{2}$$

For an indicator, the Euclidean distance  $d(x_i, x_j) = |x_i - x_j|$  is used to make the hierarchical clustering diagram (see Fig. 1).

According to the results of the hierarchical clustering diagram, these factors can be divided into eight categories representative as follows: factors 23,15 for Class 1; factors 17,24 for Class 2; factor 19 for Class 3; factors 7,10,13,12,11,8,4,16 such as class 4; factors 1,3,20 for the class 5; factors 5,18,25 as class 6; factor 21 for class 7; factors 22,6,14,2 for Class 8.

If we consider according to the combination of score of each factor, we can list the following factors as representative and the more important factors: the compact degree of personal ability factors on their own businesses, the choice according on professionals; the degree of impact of financial factors; predication of the future of their business, family conditions factors; whether be interested in entrepreneurship or not; academic factors; and social environmental factors.

Overall, the key factors of college students venture can be attributed to venture interest, entrepreneurship forecast, personal capacity, capital, education, social environment, choices of professionals and so on. The key factors involve individual level of students, school level, the social dimension, etc. We should strengthen entrepreneurship education, government policy orientation, and social support to enhance students' success and probability.

### Vocational Colleges Must Adapt to the Development of Regional Industrial Structure and Promote Graduate Employment and Entrepreneurship

National long-term education reform and development planning framework put forward that higher education enrollment rate have been increased from 24.2% to 40% and higher education will reach to 3550 million people. [6]In the case that the growth rate of college graduates is much higher than the rate of growth of new jobs and employment trend towards experience and diplomas, vocational college students are faced with greater pressure on employment than graduate students and undergraduates.

Prosperity and development of the service sector is an important symbol of modernization. It is also an important part of the optimization and upgrading of industrial structure. Accelerating the development of logistics, business, finance, insurance, research and other producer services has

great potential. [7]It will have important strategic significance in improving the supply, expanding employment, broadening the consumption of services and reducing the pressure on resources and environment. Pearl River Delta is an important manufacturing base, demanding lots of people in production services. Vocational colleges must adapt to the development of regional industrial structure, strengthen the culture of professionalism and skills through different levels of school-enterprise cooperation, and improve the core competitiveness of the staff talent.

1) Speciality setting should fit with the talent demand of the community. The dislocation of specialties in universities and the changes in market demand have brought pressure on employment. Higher vocational education regard cultivating skilled expertise for social and the first line of production services as its purpose. [8]Thus, the principle of employment-oriented personnel training should be implemented. Speciality setting should give more consideration to the employment in industry and occupational status group of students. Speciality structural adjustment optimization should be consistent with the optimization and upgrading of industrial structure in order to make the employment structure be optimized.

2)Reasonable set of personnel training objectives and teaching reform are both needed. We should implement teaching mode of combining theory and practice, establish internal and external training base, strengthen the school-enterprise cooperation, and integrate learning, capacity building and quality education. When we cultivate talented people for logistics, business and other commerce and business administration professional of productive services, we should focus more on cooperation with relevant enterprises to play the role of leading enterprise to the entire industry in personnel training demonstration radiation.

3)Great attention should be paid on the combination of humanities and professional disciplines for quality education. [9]Thus, it will help students to form a harmonious psychological atmosphere, promote physical and mental health, and to develop correct values and career outlook.

4)And employment guidance and the training of students' self-development capabilities should be strengthened. The concept of lifelong education has changed the end, one-time vocational education concept. Only lifelong learning and education can help us get lifetime employment.[10] Vocational colleges should began to guide students from freshmen to determine career strategies as soon as possible, guiding them to make a combination of academic career planning and career planning, and to establish a scientific job concept and talent concept.

5)Combining with professional features for producer services in order to vigorously carry out entrepreneurship education

As an entrepreneur groups, College graduates have more human capital and potential for development. College graduates should become the main force of China's entrepreneurs. From the survey, we can also find that, most students have recognized the value of college students venture, but the real proportion of entrepreneurship is very low. The lack of college students venture largely results in the low overall level in venture. It is difficult to implement the strategy "promote employment by carve-out". College students are in a great need of guidance of the entrepreneurship education and a richer, practical entrepreneurship education environment created by colleges so as to get more intellectual support for their venture.

If the vocational colleges want to adapt to the development of regional industrial structure, they must rely on the industry and service enterprises, promoting entrepreneurship education at different levels and content features to improve the core competitiveness of higher vocational talents.

With the development and innovation of the Internet, opportunities of online business become more than that of a traditional business model. According to a survey by the Alibaba Business School Network Center for Entrepreneurship, in College Students' Internet entrepreneurs, 71.6% of the students' professional backgrounds are economics, management science, industrial and commercial management, business management, international trade, e-commerce and other management specialties; more over, higher vocational college-level school students accounted for 62.23% of the network and business groups of college students. [11]Also, according to CNNIC's survey, we can know that about 70.75% of College Students' Internet entrepreneurs have the venture start-up capital less than 1000 yuan. Most of them just have several hundred yuan and some even just have a few dozens of yuan. [12] Because online business has the low threshold, low cost, and the small risk, it is an important way for college students to select venture.

The entrepreneurial theory of knowledge, entrepreneurship capacity, entrepreneurship integrity,

and entrepreneurial method skills constitute the basic framework of entrepreneurship education system. Acceptance of entrepreneurship education can reduce the risks due to business management capabilities in entrepreneur and entrepreneurial team in the entrepreneurial process. When starting up entrepreneurship education among vocational students of production services fields,[13] a combination of their professional characteristics and their entrepreneurial potential direction should be made. And we should increase the content of entrepreneurial knowledge and skills of the network in entrepreneurship education courses. We should design their entrepreneurial abilities structure in a proper way and develop students' entrepreneurial spirit and comprehensive capacity in the industrial and commercial activities.

In addition, we should widely connect with affiliated enterprises, explore alumni resources, establish the Graduate Employment Information Platform and actively expand employment channels; we should also implement the "one-on-one" help for graduates with difficulties in career and establish a special employment assistance funds to promote employment.

### **Multi-channel Promotion of Graduate Employment and Entrepreneurship**

Graduate Employment is a complex social career of political, economic, social, cultural and other fields. The problems of Graduate Employment are interwoven by a large number of complex and interwoven factors. The government's consideration of the linkages between the various factors and constraints are needed. And the development of policy, system, regulations, and normative documents to promote employment and entrepreneurship of college students are also needed. Both of the two methods can protect the social and public interests.

1) We should correctly handle the economic growth and expanding employment relations, adhering to the employment-priority economic development strategy. 2) The Government should increase the propaganda of Students Venture to form the social atmosphere of identity entrepreneurship and respect for the entrepreneurs. 3) The Government has an important function to regulate the labor market and provide public services, so it should take more active employment policy to promote university graduates. 4) College students venture special supporting policies should be made. So that graduates can be helped to reduce the risk of business failure in business management, business funding and marketing. 5) The construction of college graduates in the business service system and service platform should speed up. Main types of university graduates venture at present are that team of entrepreneurs, franchisees, technology transfer venture, project incubator entrepreneurial, creative entrepreneurs, network marketing, entrepreneurship, etc. According to the surveys of three schools entrepreneurs, we can know that the main venture ways are team business, network marketing, and entrepreneurship. Those who constitute the main body of the current Students' entrepreneurs are college students who have work experience; work experience has a major impact on the venture. To most students, they should after get first employment after graduation and improve their own entrepreneurial qualities in the work. The construction of college graduates in the business service system and service platform is beneficial to improve the success rate of college students venture. 6) And we should give full play to the positive role of the Communist Youth League organizations in the work of college students finding jobs or starting their own businesses. The operation mode of the organization of the Communist Youth League work and the economic business mode of using the conditions of marketing economy to promote college students to find jobs or to start their own businesses should be well combined. [14][15] We should build up systems to promote Graduate Employment entrepreneurial. The systems include awareness training, the concept of change, quality development, skills enhancement, practice exercises, and other aspects; the training base, the social practice, the quality of development, technological innovation, volunteer service, and campus culture should be re-combined and re-ordered to effectively enhance the employability of entrepreneurship competitiveness.

### **Conclusion**

The key in solving the difficult employment of students is that the government, society and schools should carry out their duties, know their positions, play the appropriate role, and form

coordination of employment, entrepreneurship system and security system. Encouraging entrepreneurship means not only to solve the employment issues, but also to establish an entrepreneurial economy in order to promote the rapid development of China's sustained economic foundation.

## Acknowledgement

Funded by "Research on College Graduates' Employment and Entrepreneurship Strategy——Taking the Higher Vocational Students in Specialities for Producer Services Sector for an Example"2012 Philosophy and social sciences project of Foshan City. ID: 10-q11.

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