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## Universities employment and the using of the mathematical model promote for the development of employment prospects

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### ABSTRACT

With the development of society and economy, the social demand for talents is continuously improving. Accordingly, the social requirements for talents are continuously improving, too. With the social demand for talents, the higher education has become popular now. At present, what is most concerned for higher education in society is the employment issue of college students. According to the employment situation of college students, build a mathematical model and analysis the level of universities employment. According to the universities employment of college students' employment, improve the method of universities employment and present the efficient employment rate to the public accurately and reasonably. In the analysis of universities employment, adopting the mathematical model can push the development of the employment prospects and promote the development of the universities. This article is intended for universities employment, the using of mathematical model and to analysis and study the motivation role of universities employment prospects.

### KEYWORDS

College graduates; Mathematical model; Employment situation; Employment.



## INTRODUCTION

Employment is a topic which gets great concern in present livelihood issues. The important part of college students employment stands in a higher degree. With the development of the state education and the awareness of people education thought, large quantities of students go to higher institutions for study, which enable higher school education become popular. The employment issue of college students at present has got social concern. Put college students employment and the mathematical model together can react college students' employment situation and the strengths and weaknesses which exist in the employment clearly. It can promote the development and the improvement of universities employment rate.

### THE EMPLOYMENT SITUATION OF COLLEGE STUDENTS AT PRESENT

In the process of social development, national education system reforms continually and the talent training pattern is changing as well. To analysis from the education situation of the higher institution, the competition among the higher institution is intensifying continually. The higher institution has increased the enrollment every year. And with the increasing enrollment colleges and universities, the number of the college freshmen and college graduates throughout the country increases year after year.

With the improvement and development of the socialist market economic system, the demand for talents is increasing, which provide good employment prospects with universities employment. Although universities employment has good employment prospects, college students situation is still severe. According to the statistical data, national GDP is increasing at the speed of 1.7 times, while the employment summary of the social employment both increased 9%. A large quantity of students graduate from the colleges and universities every year. The number of the graduates in society increases at the speed of three times, which leads to employment situation of college students can't be overlooked.

Currently, the employment situation research of college students, the major influences can be divided into three aspects. Each of the aspects has a variety of factors. The existence of these factors makes the university graduate problem worse and worse. Now the employment problem of university graduates lies in a crisis state. The factors which affect the college students employment are as following TABLE 1.

**TABLE 1: The factors of college students employment**

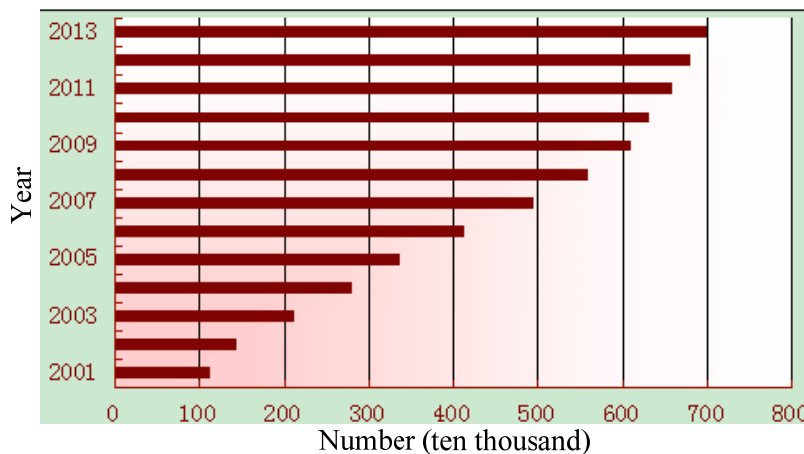
Factors	Concrete Manifestation
State	(1)With the reform of our national education system, the state is increasing the enrollment every year, which make the college students increase at a rapid speed. Underemployed college students has a large group, which make the employment problem of college students become the focus of society.(2)Since the financial crisis which happened in 2009,Chinese economy increased at a low speed, which leads to decrease the demand of the incoming labor force and then affect the economic development and the employment of college students. What's worse, it makes the number of Underemployed college students' increase continually. Although the nation intended for the employment problem of college students has taken some measures and has got some relief, it does not solve the problem fundamentally.
Employer	(1)Since suffered from the effect of the financial crisis, the development of our country enterprise went down, so the economic investment went down, either. Some enterprises called off the recruitment plan and the college professional restrictions, which had a great effect on the universities employment. (2) In current society, the demand of some enterprises and the choice of the college students exist some problems. Some enterprises has a high demand for the educational requirements. What's more, it exists the problem of student genders and the discriminations of student nationalities.(3)The produce of the national labor contract law increases the labor cost of the enterprises and the interest of the employees can be protected. Therefore,when the enterprises choose the labors,they will be more cautious. On the contrary,when the situation is unknown,they will not do the recruitment.
The Students Themselves	(1)If the college students want to find a satisfied job after graduate, they need their own hardware strong. This hardware includes the students' education background, school records, knowledge level and the practical abilities. Currently, among the college graduates, a part of them has a grasp of the specialized knowledge, but do badly in the practical abilities. Because they have no experience of social practice, their employment are affected.(2)After the college students graduate, they go to the society. At this time, his or her adaptability, communication skills and the emotional control ability play an important role in the employment. At present, these software of college students need little and have certain influence on the employment.(3)The employment idea of the college students relatively backward. They have no positive outlook, employment attitude and the value, which, To some extent, has an effect on the employment of college students.(4)After some students graduate, they put off the time of the employment to find a good job. In fact, putting off the employment has a great effect on the employment of college students.

**THE EMPLOYMENT PROBLEM OF THE COLLEGE GRADUATES**

Economic development has a close relationship with the education system. With the development of the Chinese economy, the socialist market's employment competition is intensifying continually. And with the reform of the Chinese education system, the number of new students enrollment is increasing continually, which increase the number of the college graduates and increase the employment pressure of the college graduates. TABLE 2 shows the number of Chinese college graduates statistical analysis. Figure 1 shows the number of college graduates development tendency mathematical statistical analysis.

**TABLE 2 : The number of Chinese college graduates statistical analysis (unit: ten thousand)**

Time	2001	2002	2003	2004	2005	2006	2007
Population	114	145	212	280	338	413	495
Time	2008	2009	2010	2011	2012	2013	
Population	559	611	631	660	680	700	



**Figure 1 : The number of college graduates development tendency mathematical statistical analysis**

From TABLE 2 and Figure 1, we can know that the number of Chinese college graduates shows the tendency of increase. The growing team of college graduates have severe employment situation. College graduates are the important part of the social human resources. The employment of college students become the social concerned problem. The employment of college students also become the important part of national talent reservation.

The number of Chinese college graduates has reached 7,000,000 in 2003, which became a high-impact number in the universities employment. At the current problem of universities employment, it's hard to find a job. And the main reason is the oversupply and the increasing enrollment, which may against the talent demand of economic market. Because of the effective post and the large quantities of employment, it's difficult for the college graduates to find a satisfied job.

With the increasing number of the college graduates, the post structure of socialist economic market has changed a lot and the number of technique talents is increasing. The corresponding college graduates are few. The problem of college students' own quality is a major factor to affect the employment. According to Chart 1, the factors of college students' employment situation which they are facing, we can know that the college students' own quality is also a major factor to affect the employment.

At present, aiming at the employment of college students to statistic. There are some problems existing in the statistics of college employment rate. First, the body of the statistics is very single, which makes the credibility of the statistical results low. Because the definition of scope of college students employment is narrow and the method of employment statistics is different. In the employment statistics, paying attention to the college students' employment number, while ignoring the college students' employment quality, which is also a major factor to affect the employment rate of college students at present.

In the research of college students' employment problems, there are three aspects affecting the college students' employment. Then from the statistical analysis of mathematical model, we find that the number of the college graduates is increasing every year, which increase the employment pressure.

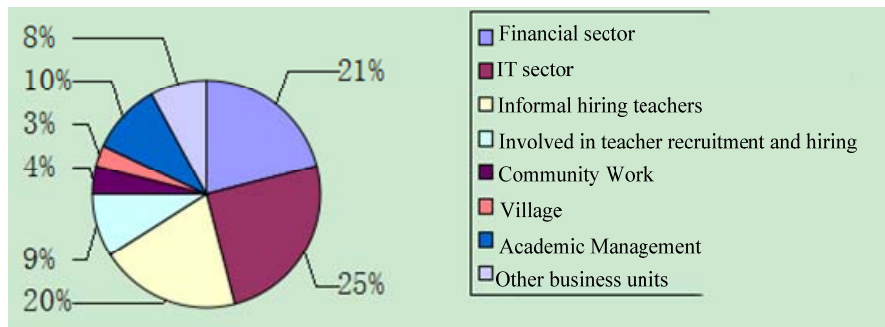
### MATHEMATICAL MODEL’S PROMOTING ROLE IN THE COLLEGE GRADUATES’ EMPLOYMENT PROSPECTS

In the employment problems of college students, adopting mathematical model and according to the mathematical model that is built to analysis the college students’ employment situation exactly. What’s more, according to the college students’ employment situation to take the corresponding measures, promote the college students’ employment and push the development of college graduates’ employment prospects.

For example, 300 college students who is major in Math and in the employment situation analysis in 2013. According to the statistical results, the created mathematical statistics is as followings TABLE 3.

**TABLE 3 : The graduates’ employment analysis of a university who is major in Math in 2013**

Employment option	population	proportion
Financial industry	63	21%
IT industry	75	25%
Informal hiring teachers	60	20%
To participate in the teacher recruitment and employment	27	9%
Community work	12	4%
Village official	9	3%
Educational administration staff	30	10%
Other business units	24	8%



**Figure 2 : The graduates’ employment analysis of a university who is major in Math in 2013**

From Figure 2, we can know that the college graduates of Math majors, when they graduate to choose the job, the employment option of financial industry, IT industry, to participate in the teacher recruitment and employment have a high proportion. The picture also shows that the students of Math majors’ have a wide number of jobs available and their options do not limit in Math major.

Using the mathematical statistics model, it can clearly shows that the current employment situation and the option of employment direction of college graduates. To some extent, the using of mathematical model in the college graduates’ employment analysis has a great promotion in the employment prospects analysis of college graduates. Taking figure 2 as an example to analysis, college graduates possess strong professional facilities, higher thinking abilities and calculating abilities. In the practical work, it can transport mathematical thinking, mathematical model and computers and etc. To analysis from the college graduates’ personal factor, it shows that college graduates have a bad grasp of the specialized knowledge that they have learned. What’s more, the knowledge they learn at school is shallow. There exist unskillful and learning shallow problems. From figure 2, the examples of mathematical statistical model, we can know that the students of Math majors have a wide number of jobs available and their options do not limit in Math major. Therefore, when the college graduates choose their jobs, they don’t focus on the professional direction. Instead, they have lots of employment choices. In order to enhance the college graduates’ employment rate, increase the quantities of employment and improve the students’ quality of employment, the college graduates need to according to their own conditions to analysis their own advantages and then locate their own employment direction. When they choose the employment direction, you should choose direction that you are interested. And you should also have a comprehensive and deep understanding of the employment system which you choose. What you should do is to highlight your advantages.

In the vector space method, the goal of education was turned into a point in the multidimensional space; defined the education factor as a vector to the real number field, which is able to use pattern recognition or model to take calculations and greatly enhance the computability and adjustable resistance of employability. Self-perception point of view is always the bottleneck of conduct sublimation, especially the awareness process, the concept of choice, behavior, habits generation

problem when take the self as the goal is the regulation of the handle. The biggest advantage of the vector space model is the data calculated from the difference to agree, from accept data, identity to development. First, put some "hidden" factor into "dominant" indicator. Second, the vector algorithm weights prompted the regulation point from differences to identify of awareness, concepts and behavior. Third, part of the matching strategy makes the structure of education closer to the needs of humane education. Fourth, the structure can take the perspective and calculations for the related degree of recognition and acceptance of college students. Regular assessment or perspective of status of university students' employability is important areas of modern education. Explore the development of the law college students' employability, seeking to improve the employability of university students, study the ability of college students to help secondary forms of employment and mental activity intervention strategies are full of vitality forms of education. Application of vector space model can make education guidance more humane, so college students more easily from the difference to identify, more smoothly from acceptance to develop. More importantly, the process of university students' employability vector model is just as fountainhead, moist growing aspirations of college students' fields.

We can conclude from this research result. In the college graduates' employment, using the mathematical model to analysis is the current employment situation. It's really a good way to promote and push the employment prospects of college graduates. In order to enhance the college graduates' quantities and qualities of employment, according to the mathematical model which is set up to analysis the students' employment demand, enhance students' practical ability and improve the students' personal employment advantages. In the college graduates' employment prospects analysis, the using of mathematical model helps to master and understand the choice of students' employment direction. It's also a good way to know what do they think of the employment and then promote the employment development of college graduates.

### CONCLUSION

With the development of socialist economic society, the reform of national education system enhances the competition among colleges and universities. Because the colleges and universities increase the enrollment, it increases the number of college students and college graduates. At present, the college graduates' employment problem becomes focus of society. When analysis the universities employment prospects, we can clearly know the students' employment options and situations, which helps to promote the change of universities employment policy, and the employment development of college graduates. The mathematical model has so many advantages that it should be widely used in the universities employment analysis.

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