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Discussion on influence of employment decision of college graduates on labor supply from the theoretical perspective

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ABSTRACT

Employment is the foundation of people's livelihood and a country's stability, employment is the best social security measure, especially the employment of college graduates. Through an objective analysis of the employment situation of college graduates, the deep relationship between the college graduates' difficulty in job search and their decision on employment are studies; and combined with matching theory, the influence of the employment decision of the college graduates on the labor supply is analyzed, in order to explore new ways and methods to improve the talent-post matching efficiency of the college graduates, further clarify the relationship between employment decision and employment results, draw more attention of the college graduates to employment decision, enhance the rationality and level of the college graduates for employment decision and thus make an more efficient talent-post matching of the college graduates.

KEYWORDS

Matching theory; College graduates; Employment decision.

INTRODUCTION

In 2014, there are 7.27 million college graduates, increasing by 280,000 than that of 2013, at the same time, there are huge numbers of unemployed labors. Due to constant adjustment of national economy system, higher education and personnel system, the college graduates will enter the society, make two-way choice and select their own job independently. However, now the foundation of national economy is not solid enough, macro employment pressure of the whole society continues to increase and the posts available can not fully meet the demand of the college graduates, therefore, the college graduates' difficulty in employment has become an unavoidable reality. Under the complicated and grim employment situation, how to free our mind, explore new ideas, make innovations, ease employment pressure and alleviate employment difficulties have become an urgent affair to people's livelihood. Through an objective analysis of the employment situation of college graduates, exploration of the deep relationship between the college graduates' difficulty in job search and their decision on employment and combined with matching theory, the influence of the employment decision of the college graduates on the labor supply is analyzed and some new ways and methods are proposed for the employment of the college graduates, in order to effectively improve the employment rate of the college graduates.

EMPLOYMENT DECISION AND MATCHING THEORY

Employment decision

Employment decision is the behavior that the college graduates take efforts and time intentionally to make decision on the job information collected and implement their decision and a process that a job seeker seeks a proper job in the premise of certain habits and skills. For college graduates, when they make a decision on employment, they will always search several employers in order to find a job with ideal salary, benefits, working environment and development space, working site, unit nature and other factors and make a final decision based on their own requirements.

Employment decision features initiative, enthusiasm and objectiveness. Specifically, the majority of college graduates have this or that requirement for employment. For example, some college graduates want professional counterparts, some college graduates have some requirements for the nature of the unit and some college graduates have some requirements for the workplace. Meanwhile, employment decision is adaptive. Labor supply is the purpose of the employment decision. However, the unilateral employment decision of college graduates may not always achieve labor supply, the employers play a vital role in talent-post matching process. From the perspective of matching theory in this paper, talent-post matching is the result of mutual efforts of college graduates and the employers. Employment decision is made in order to better achieve the matching effect, and the employers' search for college graduates may also contribute to better talent-post matching effect. Akio Morita, Sony's leader once vividly compared "wall building" to talent-post matching and compared the labors to stone, because the stone was originally with various shapes and clear appearance, the stone shall be put at a more suitable place according to its shape. So does the talent-post matching effect. Each employee shall be matched with a proper post according to his own characteristics so as to optimize the talent-post matching.

Matching theory

Due to private property and heterogeneity of products or services, the market is a market with incomplete information rather than "Walrasian"[1] market. People will make interactive matching through interactive transactions in the market with incomplete information. For the labor market, the college graduates often encounter various difficulties or resistances in the process of job seeking, so that they must pay a lot of search costs in order to find a suitable job. Search and matching theory, which began in the 1970s, may make a good explanation of this phenomenon and offer a suitable theoretical framework. Key scholars, including Butter (1977), Pissarides (1979), Hall (1979), Mike Nan (1987), have made many studies on such issues and explained the employment decision, job vacancy, job vacancies, unemployment and other problems existing in the labor market theoretically. However, the matching theory still has not given attention by us.

The matching theory gets more attention in the field of labor economy, which shall be attributed to the three 2010 Nobel laureate in economics, Peter Diamond, Christopher Pissarides and Dell Mortensen. Ge Yuhao (2010) once said that the best starting point to understand the important contributions of these three economists is unemployment. Over the years, the unemployment problem has plagued everyone, especially, the problems coexisting in job vacancies and unemployment have not been properly explained. However, after the study made by these three economists, Peter Diamond, Christopher Pissarides and Dell Mortensen, this problem is resolved. They pointed out that unemployment is only a natural state, economic development may not result in unemployment in nature. They built DMP model and hope to find better ideas, better improve search efficiency and solve the problems coexisting in job vacancies and unemployment with this model. Diamond (1982) pointed out the transaction is made based on the existence of a transaction opportunity, similarly, the employment shall also have employment opportunities and it is required to search the employment opportunities available. He believed that search is made for matching and search is also a process of matching.

In 2012, two economists Lloyd Shapley and Alvin Roth won the Nobel Prize in economics due to their outstanding contribution to the stable matching theory. They made an in-depth study on the matching among various economic entities. Their study shows that in the labor market, the employers offer a relatively low wages to the college graduates they plan to hire at the beginning, while the college graduates will apply for different posts based on their own employment decision and may get many offers, and then compare wages of these offers, keep the offers with a relatively high wage and abandon the

offers with a relatively low wage; therefore, there are two options for the employers whose offers are rejected, to increase their wages for the college graduates to be hired or re-employ other college graduates. So after the repeatedly mutual selection process, the employment market of college graduates may reach a stable talent-post matching effect.

Matching function

Matching function describes market friction with concrete mathematical methods and is a central part of matching theory. Matching function also describes the process of search and recruitment, indicating that input factor is the search activities of the college graduates and the employers and the output factor is the efficiency of matching between job vacancies in the employment market of the college graduates and the college graduates. Marshall once said, "Though some brief process of economics theory and some general relationship may be expressed with daily language, this kind of expression is not clear; however, through mathematical training, they may be expressed with relatively concise languages. And more importantly, the experience in dealing with physical problems with mathematical methods may help us better understand economic change interaction than any other methods."[2]. The application of matching function contributes to better understanding the employment decision and unemployment phenomenon in the employment market of college graduates and the study result of relevant experts of matching function proves in a relatively sufficient way that matching function is important for explaining various frictions in the labor market (Hall, 1979; Diamond, 1979; Pissarides, 1979; Riger, 1980). In general, the matching function may be mathematically expressed as follows:

$$M = m（U,V）$$

Where, U stands for the number of the college graduates, and when not considering the in-service job seekers, it stands for the number of the unemployed college graduates; V stands for the number of job vacancies. Based on the meaning of the matching function and its specific pattern of manifestation, we believe the matching function may have the following features: (1) In general condition, the matching function is a linear homogeneous function; (2) When U or V is 0, M is 0, namely, $m（U,0）= m（0,V）= 0$; (3) M is not a non-decreasing function. According to the matching function, the probability of the college graduates to get a job through employment decision and job seeking is M/U and the probability to make up the job vacancies is M/V.

Pissarides (1986), Diamond and Blanchard (1990), Yashiv (2000) and other scholars have made lots of empirical studies in order to verify the parameters and pattern of the matching function more sufficiently. And it is concluded as: (1) The matching function is mainly in a logarithm linear pattern and manifests as constant returns to scale; (2) The number of job vacancies and the number of job seekers are directly contrary to each other; (3) The elasticity of job vacancies to the job seekers is from 0.5 to 0.7.

Diamond (1979) pointed out that the pattern of the matching function is quadratic function or linear, in fact, it reflects the search skills in certain friction conditions. For the employees, their search skills and efforts are all taken to make labor supply; for the labor market, recruitment of the employers and search of the employees are made in order to optimize talent-post matching.

EMPLOYMENT DECISION OF COLLEGE GRADUATES FROM THEORETICAL PERSPECTIVE

From the theoretical perspective and based on the matching theory, the matching between the college graduates and the job vacancies may be better enhanced from the following aspects: (1) For each graduate, suitable search strength, search skills, reasonable costs and retained wages, etc., may be more helpful for making talent-post matching in the employment market of the college graduates; (2) For the employers, effective recruitment activities and relatively high wages may also improve the talent-post matching efficiency; (3) For the employment market of the college graduates, a more perfect information transfer mechanism can provide sufficient information guarantee for the talent-post matching. From the matching theory perspective, the employment decision of the college graduates is made for matching and labor supply, and the employment decision of the college graduates is made under the influence of each factor group (as shown in Figure 1).

As shown in Figure 1, the talent-post matching is mainly influenced by two factors. For the employer, they may need more college graduates in order to make more profits and generate job vacancies and job requirements based on job analysis and other links. The employers will search proper college graduates in the form of recruitment and screen and select college graduates in accordance with the requirements of job vacancies. For college graduates, their employment decision is driven by the will of labor supply, which shall be achieved with the help of employment decision. Driven by the will of the supply, the college graduates will enter the labor market and look for a post consistent with their own needs based on employment decision.

In matching perspective, talent-post matching is vital to employment decision and recruitment. Both the college graduates and the employers have two options: Firstly, upon successful talent-post matching, the college graduates will realize labor supply and the employers will find proper workers and their job vacancies will be filled; secondly, upon unsuccessful talent-post matching, the college graduates will need to make another employment decision until a successful match is made. The employers need to make re-recruitment, until they hire the college graduates that meet the post requirements.
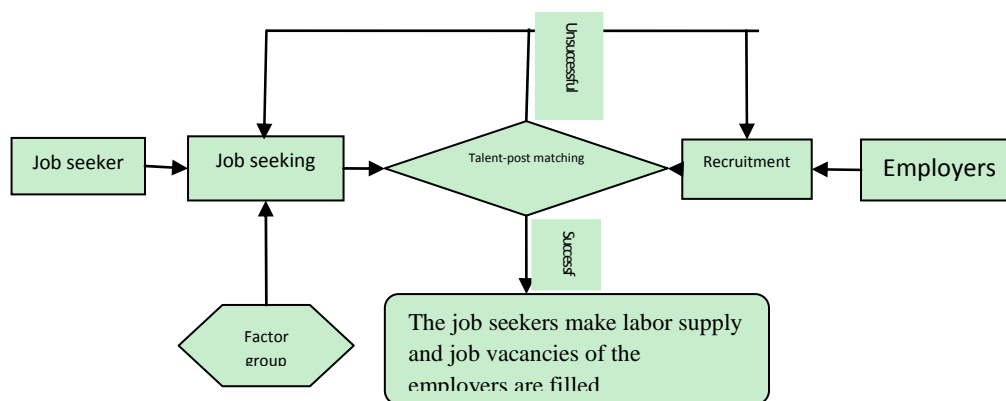
Figure 1: Employment decision and labor supply based on matching

In reality, the talent-post matching not only includes the above details, but also is a very complex process. The college graduates may encounter many obstacles in order to make labor supply, mainly including friction and search costs, low matching efficiency of the employment market of the college graduates, and so on. For example, Diamond (1982) built a search equilibrium model and his study shows that the employers are more likely to hire the college graduates with a short unemployment time in recruitment, namely, there are many phenomena of preference in the employment market of the college graduates. Thus, it is much easier for the job seekers to find a job than unemployed workers, which accordingly lowers the matching efficiency of the unemployed workers and the posts; Wolpin and Eckstein (1995) build a "search-matching-wage bargaining" model based on US statistics from 1979 to 1986 and their studies show that the ability of the college graduates (including education background) influences the talent-post matching efficiency to a large extent; Pissarides (1990) drew a conclusion based on some of his own studies that the increase of family security, unemployment insurance and other social security benefits will result in fewer jobs generated, more jobs destroyed and more time spent by the college graduates in job seeking and employment decision as well as lower matching efficiency of talent-post matching.

CONCLUSION

When applying the matching theory to guide the employment of the college graduates, it is important to note that: First, the college graduates shall have their own values, search for a suitable job more calmly and objectively and make a scientific employment decision; secondly, they shall specify their own quality, properly evaluate their own ability according to their interests, temperament, personality, skills, hobbies, IQ, EQ and professional skills, including psychology, ideology, organizational management and coordination, and they shall be objectively and clearly aware of their employment environment, deeply understand the needs of the society for the talents similar to themselves and make a good career planning according to their own situations; thirdly, they shall, based on their own values, set their initial career objectives in order to adjust and position their own careers based on their constant understanding of themselves and the society.

In summary, the flexible use of matching theory is a new method and new way to guide the employment of the college graduates work under the new situation, which is helpful to college graduates to make their own career planning, helpful to improve talent -post matching efficiency and helpful to the college graduates to find a suitable job.
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