Influence and Enlightenment of University Enrollment Expansion Policy in China—Based on the Coexistence of Labor Shortage and Employment Difficulty

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Abstract. In view of the expansion of college enrollment, the shortage of labor force and the difficulty of employment, the paper shows that the expansion of college enrollment is one of the reasons for the shortage of labor force and employment. The main reason is the supply of the labor market changed for university enrollment expansion, and the lack of the ability to configure labor market human resources, and existing industrial structure solidify. By this revelation, the paper discusses that the adjustment of the higher education policy, need to deal with the relationship between “dynamic” and “fixed”, the scale and structure of higher education and industrial structure, then puts forward the policy should reduce interference of the high-level university and high-level human training, and the scale and structure of higher education should guide the adjustment of industrial structure.

1. Introduction

News from the Ministry of Education pointed out that there are more than 7.7 million college graduates in 2016, not including about 300,000 returned scholars and also those previous graduates who did not find a job. It is expected to have 10 million college students to participate in employment competition, which indicates that the employment of college students that has been concerned by the whole society in recent years is more and more serious. In fact, the labor shortage is also associated with the employment of college students in China. This makes many scholars explore the problem from different angles. For example, some scholars think that the quality of higher education is influenced by the expansion of university enrollment, which causes the individual ability and characteristics of the educated to being dislocated with their educational contents then results in “employment difficulty”. Some scholars have said that the reason for the excess supply of labor is university enrollment expansion, which led to a sharp increase in the number of university graduates, while others have suggested that university enrollment expansion is not the “culprit” of “labor shortage” and “employment difficulty” because employment has always been difficult in China. This raise a question: whether the university enrollment expansion being related to the “labor shortage” and the “employment difficulty”. Therefore, if we had a certain understanding of this issue, we would provide a new perspective to solve the existing problem of “labor shortage”, “employment difficulty” and even to clarify people’s awareness of university enrollment expansion or to rethink about this policy. This should take an important practical value. For this purpose, basing upon verifying the relationship between “university enrollment expansion”, “labor shortage” and “employment difficulty”, this article aims at explore its reason and enlightenment as well as provide reference for the future development of relevant education policy.
2. University Enrollment Expansion is the Reason for the Coexistence of Labor Shortage and Employment Difficulty

Having been committed to the study of higher education stagflation problem, the author pays special attention to the labor shortage and employment difficulty. In addition to the academic debate mentioned in the introduction, this paper also finds that there is a coincidence between the appearance time of the labor shortage, employment difficulty and university enrollment expansion: China implemented university enrollment expansion policy for the first time in 1999 and the problem of “labor shortage” first appeared in 2003, then in the following year 2004 there have been “employment difficulty”. This four-year coincides with the four years of learning delay period in university, which provides us with a reason why we suspect that university enrollment expansion is related to labor shortage and employment difficulty.

Therefore, this paper conducted a statistical analysis. Through the data collection of the number of high school graduates, college enrollment and technical schools enrollment (as the labor shortage is mainly a shortage of skilled workers) in China from 1985 to 2011 (enrollment was basically stopped after 2011), we take the number of college enrollment as the potential population in the main labor market and the number of technical schools enrollment also high school graduates who fail the Entrance Examination as the potential population in the secondary labor market, then calculate each ration of these two potential population in its own marker (Figure 1). It is found that the ratio of the potential main labor market to the total population is increasing, and the proportion of the potential secondary labor market is decreasing. The two curves intersect in 1999. This shows that the policy of university enrollment expansion that began in 1999 may take up potential workers, and the potential population of the main labor market begins to exceed the potential population of the secondary labor market. At the same time, by the impact of the four years of learning delay period, the “labor shortage” phenomenon appeared in 2004.

Certainly, we have no evidence to prove that university enrollment expansion is the only reason for the formation of labor shortage, which may be the result of a combination of various reasons. Therefore, the conclusion of this paper is only to discover and prove that the university enrollment expansion is one of the reasons for the labor shortage and employment difficulty then their coexistence.
3. Analysis on the Reasons of Labor Shortage and Employment Difficulty under University Enrollment Expansion

Why is the university enrollment expansion one of the reasons for the labor shortage and employment difficulty then their coexistence?

3.1 The influence of college enrollment expansion on labor market supply

As the “labor shortage” is in essence a shortage of skilled workers and the main training of them is vocational education (including social training), expansion of enrollment has reduced the number of people receiving vocational education when compared with higher education. We can analyze this theoretically (Figure 2). In order to facilitate the study, we can assume that the demand for talents in the main labor market and the secondary labor market is a straight line with a consideration that there will not be any major changes in the industrial structure in a short period of time. As population has been growing in China, the labor supply of main labor market and secondary labor market will be a curve that is inclined to the upper right. If the policy (such as university enrollment expansion) changes, it may result in changes in social labor supply in a short time. Taking 2003 for example, in the normal state, the equilibrium point of supply and demand of the major and secondary labor markets is respectively A and B. As a result of the university enrollment expansion in 1999, the first batch of expensively enrolled students entered the labor market for the first time in 2003. The supply curve of the main labor market shifted to the upper-left and the supply curve of the secondary labor market moved to the lower right, and the new equilibrium point was located in C and D. The line segment AE is the number of graduates in the major labor market who suffer “employment difficulty” due to university enrollment expansion; the line segment BF means the “labor shortage” in the secondary labor market that caused by the occupation of university enrollment expansion.

![Figure 2. Illustration of Labor Market Supply and Demand Changes in 2003.](image)

Furthermore, the hypothesis of data can be used to illustrate the problem: assuming that the number of people employed in the community (decided by the natural birth rate) is 10 million, it will be theoretically necessary for the society to have a population of 4 million in the main labor market and 6 million in the secondary labor market to meet the needs of social development. If the higher education trains personnel in accordance with this data, the job supply and demand could meet it exactly. In reality, it may be assumed that the university makes an enrollment of 2 million students, thus changes the main labor market and secondary labor market supply then results in the main labor market supply reaching to 6 million, the secondary labor market supply reducing to 4 million with a gap of 2 million and leaves 2 million surplus labor force in the main labor market, which forms an unique coexistence of “labor shortage” and “employment difficulty” in China.
3.2 The lack of the ability to configure labor market human resources

Obviously, if the 2 million surplus labor force in the main labor market were willing to fill up the gap in the secondary labor market that mention above, the problem would be solved. However, this is far from the reality.

The labor market division theory can make a preliminary explanation of this phenomenon. It argues that education can determine whether an individual works in the main labor market or in the secondary labor market. According to that, the choice of higher education will let people enter the main labor market while those who do not receive higher education can only enter the secondary labor market. Education, especially higher education, is a channel for children from low-income families to enter the first-class labor market and to connect the dual labor market. The main labor market has the advantages of higher salary and welfare, stable working conditions, more training and promotion opportunities while the secondary labor market turns out to be opposite. The segmentation of the labor market makes it difficult for a person to enter the major labor market once he has been employed in the secondary labor market. Therefore, in China, as long as they have received higher education, the educated are only willing to enter the main labor market. Labors with high educational level and labors with low educational level are in two separate labor markets, and the way for them to gain economic status is completely different. In addition, due to the influence of the traditional Chinese culture, the labor market and the secondary labor market, causing by the segmentation of the labor market, do not have liquidity, which leads to a lack of the ability to configure labor market human resources. In order to further explain this idea, this paper compared the labor market selection of the high school graduates that graduated before and after the university enrollment expansion. We collected data on the number of graduates, the number of unemployed and the employment rate of common universities from 2001 to 2011, and made descriptive statistical analysis, which can be found that with the increase in the number of university graduates each year, the number of university students unemployed and the demand for skilled workers is on the rise, however, the employment rate of university graduates showed a downward trend (Due to space limitations, this paper does not show the data). Besides, research conclusions from some scholars in China also support this analysis. For example, Hu Changbao (2010) believed that the main part of “employment difficulty” (university students) was only willing to work in the main labor market. Xing Chunbing and Li Shi (2011) proved that university enrollment expansion made the probability of getting in to university increased, and the probability of finding a job decreased.

The above analysis shows that labor market in China lacks the ability to configure labor market human resources.

3.3 Industrial structure cannot be coupled with the scale of higher education

The analysis of section 3.1 above takes it as a premise that there has nothing changed in the industrial structure in China. In other words, if the industrial structure had coupled with the changes in labor supply structure, there would not be labor shortage and employment difficulty.

This point corresponds with the viewpoints of a lot of scholars in China. Wang Qinmei and Zhang Yong (2011) held that the basic reason of the contradiction between “labor shortage” and “employment difficulty” was that education system and industrial structure in China cannot be well connected. Yu Donghua and Fan Siyuan (2011) thought that the origin of this issue was employment structure cannot be coupled with industrial structure. Scholars, including Gu Shengzu (2013), also pointed out that the supply structure of human resources and employment demand did not match the “employment difficulty” of university graduates and “labor shortage” of peasant workers, reflecting the current economic restructuring and industrial upgrading was facing serious employment structural contradictions. Therefore, one of the ways to solve this problem is to make industrial structure adjustment and promote the transformation and development.

It should be said that these related studies have all mentioned an important aspect, namely the industrial structure. So the essence of the coexistence of the “labor shortage” and “employment difficulty” is the structural unemployment that directly caused by the mismatch between human
capital structure and industrial structure. If the industrial structure had matched the structure of highly educated talent supply, the labor shortage and employment problems would not appear. Inevitably, according to the “Lewis turning point”, labor shortage and employment difficulty will sooner or later appear in China in the process of industrial restructuring, however, we must acknowledge that university enrollment expansion policy accelerate the emergence of these problems in China.

3.4 Enlightenment from university enrollment expansion

The analysis above shows that labor shortage, employment difficulty and their coexistence problem is related to university enrollment expansion. University enrollment expansion is one of the important policies of higher education in China. Since the founding of the PRC, adjustment of higher education policy has been made frequently in China. Civil and academic circle have been considered it to be “hassle”.

As an important educational policy, university enrollment obviously has an important impact on the higher education and even social and economic development in China. It is more important to examine what kinds of higher education policies should be formulated in the future according to the problems caused by the implementation of these policies rather than to discuss whether the advantages outweigh the disadvantages. The purpose of this paper is to explore university enrollment expansion, which is only a part of higher education expansion in recent years in China, including the emergence of universities. This is a problem that related to the scale of higher education and even the structure of education. Therefore, the paper holds that the policy-making of the scale and structure adjustment of higher education should address the following two issues:

3.5 Problem about “dynamic” and “fixed” in higher education policy

The reason why higher education policy changes frequently is that there is misunderstanding of the role of higher education, looking on higher education in an unscientific way or lacking a grasp of reality and development trend. What is the role of higher education? Common understanding is that education is activities that train people. It imparts knowledge and skills, serve economic development and promote human development, social equity and progress of social civilization through educational activities. As the relationship between education and social development mainly shown as the relationship between education and productivity and production relations, the level and nature of educational development depend on productivity and production relations. At the same time, education serves productivity and production relations in reverse. However, education does not have the production capacity itself. To play its role, education must rely on external conditions. And because of this kind of dependence, there is a certain state of confusion in practice whether in government departments or in universities, resulting in the “hassle” in reality. Actually, to make this “hassle” disappeared, it is necessary to deal with the problem about “dynamic” and “fixed” in higher education policy. “Dynamic” means to change the form, content and scale structure of higher education on the basis of the situation of social development while “fixed” advises to stick to a clear direction of running a school, keep the characteristics, spirit and nature of the university in accordance with the characteristics of higher education. To be more specific, it replies to uphold the spirit of the university, to spread scientific and free thought, to help solve practical problems and to discover and create knowledge. Since there has no proper solution to this problem with higher education in China at present, there is only the emergence of the “dynamic” without “fixed”. So the creativity of the university plays a limited role, thus has the famous “the Qian’s Doubt”. If we took emphasis on practical ability as being professional and general education as giving students a lot of courses as if they can learn everything, which actually caught them in heavy pressure and being tired of struggling to deal with examination, besides qualifications of teachers is limited, it would be inevitable that the quality of many courses cannot be guaranteed as well as weaken the quality of higher education.

Generally speaking, the factors that influence the change of higher education policy in China are mainly social, political, economic and cultural changes. As the policy affected university and college students the most in recent years, we mainly make investigation on two factors, including the level of
higher education (such as research university, teaching-oriented university and higher vocational school, among them the research type is a high-level university) and academic credential (such as degree of specialist, undergraduate, master and doctor). In this way, the “dynamic” and “fixed” that should be adhered to in the policy adjustment of higher education can be analyzed through the following models:

![Matrix Analysis Model](image)

**Figure 3. Matrix Analysis Model of the Influence of Higher Education Policy Adjustment.**

Taking the horizontal line in Figure 3 as a dividing line between research university and teaching-oriented university and the vertical line as graduate, the personnel training in university will be able to divided into four regions. Then point O will become the key point of the policy influence and the dotted line in the figure will become the trajectory of the higher education that affected by the changing higher education policy. This paper considers that the more research-oriented the university is, the more its personnel training of graduate should not be affected by the policy and social changes. It should become a principal part that leads social development and reflects the nature of university. Under certain conditions, these universities can independently determine their cultivation scale, quality, structure and make basic learning and research with a consciously grasp of the social direction moving forward and the most frontier knowledge. That is to say the higher the level of the university is, the higher the level of its personnel training will be. The policy adjustment should minimize its impact on this. Combining the research theme of this article, if the level of university and academic credential are taken as scale and the social changes are taken as industrial structure, the significance of this model will be as follows: the upper right area indicates that the scale of cultivation of postgraduates in research universities should not be influenced by policies, and that the universities themselves should adapt themselves to change; the lower left area indicates that the following types of talent cultivation can change with the change of industrial structure, that is, to cultivate much-needed talent for the society when the policy can make corresponding guidance. Therefore, according to the model analysis, higher education enrollment expansion in China will be scientific and reasonable if it is based on industrial restructuring.

4. The Relationship Between the Scale of Higher Education and the Change of Industrial Structure

According to the idea of “dynamic” and “fixed” that mentioned above, the university enrollment expansion policy is not completely failed. However, why does it still bring negative problems? This requires us to think about an important theoretical problem: how does the scale of higher education adapt to social and economic development? To put it more specifically, should the industrial structure drive the scale of higher education to change or the scale of higher education drive industrial restructuring? One of the reasons for the coexistence of employment difficulty and labor shortage is the adjustment of the scale of higher education in the absence of changes in industrial structure. Of course, we can say that this may force the industrial structure to make adjustment and is conducive to the healthy development of social economy. But to judge it from economics, is this Pareto
Optimality? We can be skeptical of it because it is more difficult to make adjustment of industrial structure than to adjust the scale of higher education. Adjustment of industrial structure involves all aspects of society. To be compared with the scale of higher education adjustment, it has a more complex systems engineering with hysteretic nature; industrial structure is mostly the materialized element when the scale of higher education is basically decided by human, therefore, the industrial structure is intractable and the scale of higher education is free. In this sense, it is easy for us to adapt to the industrial structure but difficult to let the industrial structure coupled with the scale of higher education. Furthermore, human resources, as a system factor, is only one aspect in the process of industrial restructuring while the industrial structure is the most important factor that determine the employment of higher education. There is an unequal relationship between them. So this paper puts forward the following three points:

First, the scale of higher education can try to match the needs of the labor force in the industrial structure adjustment but not to be forced to do so. In other words, as soon as the industrial structure makes adjustment, demand information of labor force will be sent out in the labor market so that the higher education will be able to adjust its size in time to meet the needs of industrial development. Although it may temporarily affect the development of social economy, it still brings less loss than employment difficulty and labor shortage. Moreover, we also have other ways to enhance human capital such as training, except higher education, and other emergency response.

Second, the demand for highly educated talent in changing industrial structure can only be supplied in advance slightly. Changes in industrial structure can be grasped by the forecast as it has a certain trend and direction with a regular demand for the structure of the labor force. On this basis, a slightly pre-adjustment of the scale of higher education will help to optimize the industrial structure. There are many factors to promote the optimization of industrial structure, in which human capital can play a major role. Therefore, making supply in advance properly and exert the effectiveness of competition not only benefit optimizing the talent team, but also provide intellectual support for the industrial structure optimization. In this opinion, university enrollment expansion in China was carried out so impetuosity that the community could not digest it at once, which led to the coexistence of “labor shortage” and “employment difficulty” and other negative effects.

Therefore, in a sense, the understanding that suggests changes in industrial structure lead to higher education scale adjustment is scientific.

Third, the coupling of industrial structure change and the demand for highly educated talents needs to subdivide the supply structure of highly educated talents. We cannot generally consider the coupling problem between industrial structure and the scale of higher education because the demand for talent in the three industries corresponds to the level of supply of talent in higher education. This paper discusses the difficulties of employment and the emergence of labor shortage is due to the different needs of different levels of talent. In general, the second and tertiary industries need more high-level talents.

5. Summary

In this paper, the author analyzes the problems of labor shortage, employment difficulty and their coexistence in China. It is concluded that university enrollment expansion is one of the reasons which leads to labor shortage, employment difficulty and their coexistence. Certainly, we have no evidence that university enrollment expansion is the only reason why labor shortage, employment difficulty and the coexistence appeared. The main reason why the university enrollment expansion led to this situation is that it has changed the supply of the labor market as well as the labor market lacks the ability to configure labor market human resources and there is a solidification of current industrial structure. This paper argues that policy impact on high-level universities and highly educated talent should be reduced; and changes in the size of higher education should be driven by industrial structure during making adjustment on the scale of higher education. Based on these understanding, attention should be paid to the following questions after the introduction of higher education policy:
First, universities or research institutions should autonomously grasp the cultivation of top-level talent in accordance with the law of academic research. Top-level talent engages in frontier or basic research with the most accurate understanding and control of the social development context. They can decide the size of the team according to the needs of research. The results and level of the research is the determinant of its vitality.

Second, the scale and structure of higher education personnel training need to obey and serve the optimization of industrial structure. Labor supply and demand in the labor market will be an eternal phenomenon. The only problem is whether it is going to be a big issue. To solve the contradiction between supply and demand in the labor market and alleviate the possible imbalance of labor supply, it is necessary to fundamentally reform the talent cultivation mode, to give the university the right to cope with the labor market, to optimize the personnel structure in higher education and to adapt to the need of industrial adjustment in deed. For example, to solve the problem of current labor shortage and employment difficulty, we need to promote industrial upgrading and change the demand for human resources structure. What is more, we should train teams with multi-level and different specifications through education reform, which meets the need of industry development, thus to meet the different needs of business transformation and upgrading, so that education can truly adapt to economic restructuring and industrial upgrading. In short, the industrial structure should play a leading role of the scale and structure of higher education.

Third, we should correctly understand the role of higher education in industrial structure optimization. On the one hand, the function of higher education depends on external conditions. On the other hand, the optimization of industrial structure is a systemic problem, which involves all aspects of the country and the supply of talent is only one of the factors affecting it. We cannot simply rely on higher education to change it but to consider it systematically and avoid the “hassle” of higher education.

References


