

Research Article

Study on Rural Labor Surplus: Estimates of Its Number, its Impact Factors and Development Trends

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Abstract: In this study, based on the status of systematical research both at home and abroad, the surplus of rural labor, which needs to be transferred in Anhui before 2020 and during the Twelfth Five-Year-Plan, is calculated according to the proportion between the labor and cultivated labor, as well as the population fluctuation. This study also makes further analysis on the transference of rural labor surplus, along with the impact factors related to that. Meanwhile, the development trends of the surplus of rural labor in Anhui are discussed.

Keywords: Development trends, Estimates of its number, Impact factors, Rural labor surplus

INTRODUCTION

As a big agricultural province, Anhui has developed very fast in agricultural economy and social development in recent years while it is obvious that the rural labor surplus needs to be transferred. The Sixth National Population Census shows that the rural population in Anhui is as large as 33910000, taking up 56.99% of the total in Anhui. The number of rural labor force is about 27000000, which lies in the way of Anhui's great-leap-forward development.

What is rural labor surplus? It is usually confused with rural labor force. Thus, misunderstanding exists. So it is in great necessity to do such research in order to define it, calculate the number of that in certain rural areas and finally find the way to transfer it after analysis, which encourages solutions to be found. It is very creative to analyze the impact factors and relevance which influence the transference of the rural labor surplus with quantitative model and empirical evidence.

Great value both in practice and theory can be possessed if reference solutions and strategies are provided for Anhui's Rural Surplus Labor Transference during the Twelfth Five-Year Plan and before 2020, by comprehensive and accurate understanding of the employment of the transferred labor, the facing problems and difficulty and the causes, which can be analyzed in the perspective of estimates of the number of rural labor surplus, its impact factors on its transference and the influence caused by the urbanization, the transformation of economic development, the optimization and upgrading of the industrial structure, the education of the labor and the

regional culture. At the same time, the great benefits brought by the social security, the vocational education and training can foresee the tendency and trend of the transference of rural labor surplus.

In this study, we calculate the surplus of rural labor according to the proportion between the labor and cultivated labor, as well as the population fluctuation. This study also makes further analysis on the transference of rural labor surplus, along with the impact factors related to that. Meanwhile, the development trends of the surplus of rural labor in Anhui are discussed.

THE STATUS OF RESEARCH AT HOME AND ABROAD

The status of research abroad: Lewi (1954), considers the capital accumulation by the non-agricultural sectors rather than the expanding investment as the driving force to transfer the surplus labor of agricultural sectors. The reason lies in that the combination of the increased capital and the plenty labor force can prevent the decrease of capital marginal productivity. However, changes on the cost of labor force have an effect on the labor investment caused by the capital increment. The capital will sever as a substitution for the labor after the increase of the labor cost.

Ranis and John (1961) make the process of surplus labor transference biochemical. Once the marginal output of labor by the agricultural sectors is above Zero, the transference of the rural labor surplus will cause the shortage of agricultural labor. Thus the actual prize of the labor force in industrial sectors will be increased

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during the exchange between the agricultural products and the industrial products for the shortage of agricultural labor force, which hinders the transference of the rural surplus labor.

Eswaran and Kotwal (1993) analyze the impact factors on the transference of rural labor surplus caused by the needs of agricultural products. Eswaran and Kotwal (1993) Model supposes that the strict Engel Theory exists that peasants and landlords will not consume the industrial products until they meet the lowest requirement on the consumption of agricultural products and they will spend all the income by agricultural products on the industrial ones after their lowest requirement is satisfied and that the capital accumulation will not take place for the technology decides the output level of the agricultural products which cannot be replaced by the industrial ones.

Todaro (1969) and Harris and Todar (1970) contribute the transference factors to two aspects: One is the actual difference in income between the rural areas and the urban areas, (Transference will happen if the wage in the urban area is higher than that in the rural area and transference is hardly to happen if the wages are equal); the other is the chance of getting a job in the urban area. The higher the rate of the unemployment is, the less the motivation of the transference will be.

The status of research at home:

- **Research on the calculation to estimate:** Angang (1997) put forward a calculation between the cultivation and the labor in his *The Status of Employment in China*. He estimated the labor force in proportion to the cultivation. In the calculation, R stands for the rate of efficient labor, which is defined as the number of the productive labor for surplus agricultural products compared to the size of the land; S stands for the rate of actual efficient labor, which is defined as the number of the actual labor force in the agricultural sector compared to the size of the land. If R is bigger than S, there will be no surplus of rural labor; if R is smaller than S, surplus of rural labor will exist. The rate of R compared to S can be replaced by T and the rate of the rural labor surplus can be represented by K. Then a conclusion can be drawn that $K = 1 - T$.

Jiangui (2005), put forward a calculation in perspective of classical economics, that is the rate of rural labor surplus = $1 - \frac{\text{actual average working days a year}}{270}$, (270 refers to the supposed average working days a agricultural labor can afford to cultivate in a year.)

Cheng (1996) put forward a calculation by dividing the surplus of rural labor to estimate the number of it in the rural area directly. The formula of the calculation is $RDU = RE - TVE - PE - IE - FE - CE$, here the RDU stands for the number of the surplus of rural labor; RE

stands for the total employment of the labor in the rural; TVE stands for the employment in the town while PE stands for the employment of the private enterprise and IE stands for the employment of the individual; FE stands for the employment flowing into the urban areas and CE represents the needing employment of the agricultural resource.

The National Statistics Bureau adopted the Cobb—Douglass Production Function in the Strategic Issues on the National Economy and Social Development. The Function $\ln Y = \ln A + a \ln L + (1 - a) \ln K$ takes the labor and the cultivation into consideration. Here the function model is drawn by many statistics of many years' calculation in aspects of the gross agricultural output, the agricultural labor and the size of the cultivation.

Anhui Farming Research Group concluded in *The Estimates of the Surplus Rural Labor and Its Methods* that the dominant surplus rural labor plus the recessive one is the surplus of the rural labor. Here the dominant surplus rural labor refers to the number of the labor at the age of working minus 4%-6% of the total number of the people minus the actual number of the working labor; The recessive surplus rural labor can be decided with two ways. One is: what is the right distribution of rural labor for the highest income for the peasants? The other is: what is the right proportion of the labor compared to the size of the land on the condition of right distribution?

- **Research on the impact factors:** Jie (2009) gave 4 typical models of the transference of the surplus rural labor concerning the labor division in the perspective of efficiency of it and the technical development.

Jianmin and Rui (2011) indicated that the export by the private enterprise has positive effects on the transference of the surplus rural labor. The surplus of the rural labor can be transferred into the catering and the retail but there is little transference into the computer and the financial industry. They drew the conclusion by the distribution of labor transference with the statistics from 2001 to 2008.

Qiong and Chunyu (2011) laid emphasis on the government's involvement in the transference. They stated that the government should make long-term plans, speed up the construction of the urbanization and give more financial support and so on in order to transfer the surplus labor effectively.

THE ESTIMATES OF THE RURAL LABOR TRANSFERENCE DURING THE TWELFTH FIVE-YEAR AND BEFORE 2020

Generally speaking, various methods of estimates in the academic field can calculate the number of the surplus of rural labor in some way. However, some

defects and difficulty also exist. Some neglect the influence by agricultural conditions, the management and the multiple crop indexes. Some neglect the relevance between the increase of the agricultural output and the changes in the year. In some special time, great changes take place on the increase of the agricultural output and the difference exists on the estimates of the need of labor. Some calls for high requirements of the estimates and the process. Some methods of the estimates are just fit for some areas having a lot in common, for the ignorance of the difference and specialty. Some calculating methods stress too much on economic and political factors but little consideration to factors from the social ones and management and others. Some methods lay emphasis on the analysis of the data neglecting the dynamic analysis.

27000000 rural labor surpluses in Anhui can be divided into the following types, some are engaged in the agriculture and the industry related to agriculture; some are stable after transference; some are heading between agriculture and non-agriculture. According to the data by Anhui Statistics Bureau (2011) and some academic analysis (National Statistics Bureau, 2002), the number of people working for more than half a year in other provinces is about 10000000; the average cultivated land in rural areas is 4.2-6.4 acres per person while the actual average cultivation is 10-15 acres per working labor force. Concerning the actual size of the cultivation, the rural total labor, the number of the transferred labor and the average of the cultivation by a person, along with the population growth, the surplus of rural labor in Anhui is 400-500. As we can see, the estimate method is simple but cannot calculate the number of the surplus accurately. As a result, scientific and suitable estimate methods, which are also easy to use, are in need to calculate the surplus of rural labor in Anhui.

IMPACT FACTORS ON THE TRANSFERENCE OF RURAL LABOR SURPLUS IN ANHUI AND ITS RELEVANCE

The main driving force of the transference of the rural labor surplus is no doubt the combination of the push and the pull, of which the pull plays a more important part. The industrialization changes the social economic structures, resulting in another distribution of the labor force. Meanwhile, the gatherings of the industry provide enough chance for the employment. Furthermore, the development of urbanization brings the gathering of population, market and the infrastructure geographically which serves as a driving force to transfer the surplus of rural labor. The government should provide political guidance and financial support as well as the distribution of the resources to speed up the transference of the rural labor. Besides, the reform of the land system and land

transference causes a reform in rural economy for the size of the farming land is decreasing and the development of the agricultural mechanization with the improvement of the productivity release more labor, which increase the number of the transference.

Private factors influence the transference greatly. Factors mainly refer to the peasants' income, education, skills and their desire for transference. The desire and attitudes of the peasants are vital to the transference. Some are to make a living; others are to live the urban life. Different choices and motivations can affect the transference, the success of employment and the sustainable development. The personal quality of the peasant concluding his education and intelligence influences the transference. Difference can be seen by comparing the graduates from the primary school, middle school and the senior high school.

Factors from the root place of the transference and the destination place of it can not be ignored. This study takes the living conditions, relationship and cultivation and total machinery power into consideration.

Besides, the regional culture is also an impact factor. Take Anhui for example, great difference exists between the north and the southwest, which makes great difference in transference. For one thing, the regional culture is a creative point; for another, the destination of the transference is a concerning factor. The data from Anhui Labor and Social Security Office show surplus labor are transferred into the cities in the Yangtze River Delta and the Pearl River Delta. The researcher took Beijing, Shanghai, Wenzhou and Nanjing as examples to analyze the driving force on the transference by the per capita income, the urbanization and the Tertiary Industry. Meanwhile, social security and educational training are also impact factors. Relevance is reflected through all factors and the procedure of the transference.

CONCLUSION

The changes on the number of the surplus rural labor are not at sixes and sevens. The sharp rise took place in 1998 and it kept stable before 1998 while it decreased after 1998. The trends of Anhui surplus rural labor are complicated with the consideration to the increasing number of surplus by land transference and agricultural mechanization, the developing Tertiary Industry, the sound security for the migrant workers and the government's policy, as well as the historical development of it and the market needs of coastal areas. Then some issues and advice on the impact factors on the transference, the inflow of the transference and the efficiency should be discussed.

Firstly, further research should be done on the impact factors on the transference. Generally speaking, some transference rules exist but there are still many

impact factors, especially in the following 5 to 10 years. Land transference, the developing Tertiary Industry and modern service, social security policy, the economy, the population and the needs of the labor force in the transference destination all should be taken into serious consideration.

Secondly, the emphasis should be put on the direction, route and means of the transference. The transference of Anhui surplus rural labor can be divided into migrant work, urbanization, industrialization caused by non-agriculture, absorption by agricultural sectors, export of labor service and the start of an enterprise. How to make the transference route and means creative is closely related to the success of the transference.

Last but not least, importance should be stressed on the efficiency of the transference. In the past, the transference just laid emphasis on its number but neglected its quality, on its speed but ignored the stability, on its size but disregarded the efficiency. As a result, the phenomenon of the transferred labor coming back exists. Furthermore, the quality and the stability are easy to be affected by the impact factors. It is in great necessity to change the traditional ideas on the transference and establish a comprehensive, systematical and beneficial thinking on it in order that the transference of the surplus rural labor can be done better.

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