

An Empirical Study on the Evolution of Employment Structure of Transport, Storage and Post Industry of Beijing During Economic Transition in China

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Supported by Technology Innovative Platform of Beijing Municipal Education Commission: The Methodology and Technology of Modern Human Resources Management.

Received 3 November 2013; accepted 1 February 2014

Abstract

Employment structure of transport, storage and post industry is in continuous evolution along with the economic transition, and this paper makes an empirical study on it. This paper analyzes the change in employed laborers, employment structure and industry structure in transport, storage and post industry in Beijing, and makes a comparison with the employment proportion in third industry. Based on the above analysis, this paper gives some policy suggestions to both promote the healthy development of transport, storage and post industry in Beijing and further enhance the industry to absorb laborers.

Key words: Transport, storage and post Industry; Employment structure; Evolution

LIN Yuan, CAO Shi, CUI Jingjing (2014). An Empirical Study on the Evolution of Employment Structure of Transport, Storage and Post Industry of Beijing During Economic Transition in China. *Canadian Social Science*, 10(1), 111-114. Available from: <http://www.cscanada.net/index.php/css/article/view/j.css.1923669720141001.2740> DOI: <http://dx.doi.org/10.3968/j.css.1923669720141001.2740>

INTRODUCTION

Along with the economic growth, the industrial structure is changing all the time and the employment structure changes accordingly. A lot of theoretical and empirical analysis shows that transferring of labor force from primary industry to the secondary and tertiary industry is

inevitable under the influential factor such as technical progress, changing of the demand structure and the development of social division. Transport, storage and post industry including transport via railway, transport via road, urban public traffic, water transport, air transport, transport via pipeline, storage, post, loading, unloading, portage and other transport services, is an important part of the tertiary industry. Transport, storage and post industry can absorb a lot of laborers with different skills because of its wide range. The employment pressure is very great in China during the process of economic transition, and the development of transport, storage and post industry will help resolve the unemployment problem. This paper makes an empirical study on the evolution of employment structure of transport, storage and post industry during economic transition in Beijing based on the statistical data, and gives some policy advices to promote the healthy development of transport, storage and post industry in Beijing and further enhance the industry to absorb laborers.

1. EVOLUTION OF EMPLOYMENT STRUCTURE OF TRANSPORT, STORAGE AND POST INDUSTRY IN BEIJING

From the analysis of the employment of transport, storage and post industry in Beijing, we can know that the employment and employment proportion of transport, storage and post industry in urban units of Beijing present an upward tendency between 1999 and 2011, as shown in Figure 1. Periodical analysis shows that employment declined slightly in transport, storage and post industry in Beijing from 195000 to 179400 decreasing by 4.27% each year during 1999-2001. There is a tendency of fast growth in employment in transport, storage and post industry since 2001. The number of employment in transport, storage and post industry had been raised by 381200

increasing by 44.42% during 2001-2011. At the same time, the employment proportion of transport, storage and post industry also increased from 3.96% to 8.37% with an average annual growth rate of 5.28%. Transport, storage and post industry has become an important industry to absorb labor force.

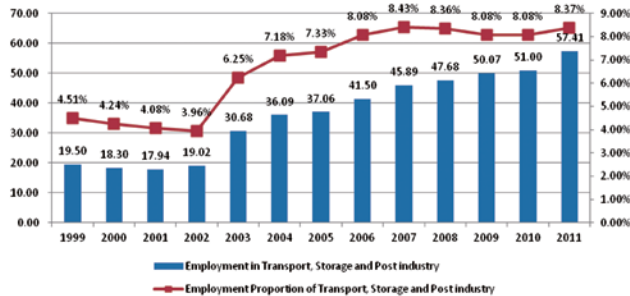


Figure 1
Employment and Employment Proportion of Transport, Storage and Post Industry in Urban Units of Beijing (1999-2011) Units: 10000, %

Source: China Labor Statistical Yearbook 2000-2012

2. CONSISTENCY ANALYSIS ON THE EVOLUTION OF EMPLOYMENT STRUCTURE AND INDUSTRIAL STRUCTURE OF TRANSPORT, STORAGE AND POST INDUSTRY IN BEIJING

According to scholars' study on the evolution of employment structure and industrial structure, there is a strong connection between employment structure and industrial structure in a nation or region. Petty-Clark's Law points out that, with the continuously increased in per capita national income, social labor force distributing in tertiary industry shows that labor force of service industry will increase. Simon Kuznets' study also shows that in the process of economic development, the proportion of the national income of the primary industry will continue to fall, so will the employment proportion. At the same time, the proportion of the national income of the third industry will increase slightly, and the employment proportion will present an upward tendency.

Over the past twenty years, China's transport, storage and post industry has developed rapidly with an increasing output, and it has become an important basic industry. As an international megalopolis, Beijing has highly developed business, which provides a favorable opportunity to develop transport, storage and post industry. Statistics showed that output of transport, storage and post industry presents the fast growth with a growth rate of 14.02% annually in Beijing during 1999-2011. But the output proportion of transport, storage and post industry showed a declining trend. As shown in figure 2, the output proportion of transport, storage and post

industry to GDP was 7.70% in 1999, but the proportion had been declining and fell to the lowest 4.58% in 2009, followed by improved slightly.

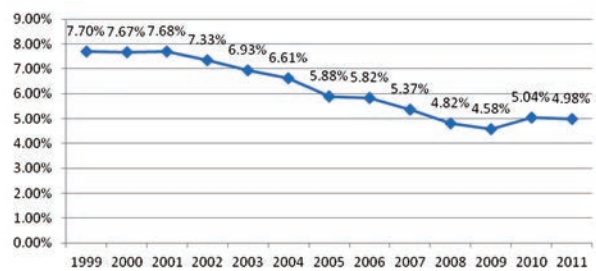


Figure 2
Output Proportion of Transport, Storage and Post Industry in Beijing (1999-2011)

Source: China Statistical Yearbook 2000-2012

Structure deviation degree is an important index to show the consistency of employment structure and industrial structure, and it reflects the difference between the proportion of employment and the added value. The structure deviation degree formula is as follows:

$$\beta = \frac{E_m}{E} - \frac{G_m}{G}$$

In this formula, β means the structure deviation coefficient; E_m means employment in a particular industry; E means the total number of employment; G_m means added value of a particular industry; G means GDP. The structure deviation degree of transport, storage and post industry in Beijing is calculated, as shown in Table 1. There is a degree of deviation between employment structure and industrial structure of transport, storage and post industry during 1999-2011 in Beijing. The maximum value of structure deviation coefficient is 3.6%, and the minimum value of structure deviation coefficient is 0.57%. Before 2003, the absolute value of structure deviation coefficient was negative, which reflects the labor productivity of transport, storage and post industry during this period is higher. But after 2004, the absolute value was positive and revealed an increasing tendency. It reflected that industry labor productivity declined with more laborers transferring to the transport, storage and post industry. The transport, storage and post industry can continue to absorb the labor force, which will undoubtedly have a positive meaning for ease pressure on urban employment when labor supply exceeds market demand. But on the other hand, how to improve the labor productivity of transport, storage and post industry by means of science is an important factor which affects the industry health and its sustainable development. The possibility of the labor force transferring to other industries will increase if labor productivity cannot be improved effectively during the development of economy in Beijing.

Table 1
Structure Deviation Degree of Employment Structure and Industrial Structure in Transport, Storage and Post Industry in Beijing

Year	1999	2000	2001	2002	2003	2004	2005
β	-3.19%	-3.43%	-3.60%	-3.37%	-0.68%	0.57%	1.45%
Year	2006	2007	2008	2009	2010	2011	
β	2.25%	3.06%	3.54%	3.50%	3.04%	3.39%	

3. COMPARATIVE ANALYSIS ON EMPLOYMENT PROPORTION BETWEEN TRANSPORT, STORAGE, POST INDUSTRY AND TERTIARY INDUSTRY

The process of economic transformation is also the process of upgrading of industrial structure, with employment structure evolution. In this process, a large number of labor force transferred from primary industry, so the employment proportion of primary industry was declining and the employment proportion of secondary and tertiary industry was growing. The analysis on employment structure in Beijing during 1999-2011 shows that the employment proportion of tertiary industry has been higher, as shown in figure 3. In 1999, the employment proportion of tertiary industry was 53.00% in Beijing, and the proportion was increasing over the next twelve years. In 2011, the employment proportion of tertiary industry in Beijing has climbed to 74.00%, with an average annual growth of 2.82%.

Comparative analysis on employment proportion between transport, storage, post industry and tertiary industry shows that, the employment proportion of transport, storage and post industry increased obviously while the employment proportion of tertiary industry has continued to rise. The average annual growth rate of employment proportion of transport, storage and post industry is higher than that of tertiary industry during 1999-2011. It reflected that the transport, storage and post industry has the stronger employment absorption capacity than other sectors of the tertiary industry.

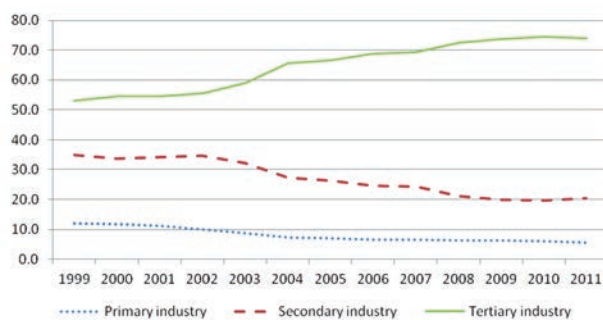


Figure 3
Employment Structure in Three Major Sectors in Beijing (1999-2011)

Source: China Statistical Yearbook 2000-2012

CONCLUSION AND POLICY RECOMMENDATIONS

Since reform and opening to the outside world, China has achieved a super rapid growth rate of GDP which was about 10% annually, and a lot of new jobs have been created. But the conflict between the supply and demand in labor market is still prominent, which has been the most important obstacle prohibiting China's economy from developing. In recent years, the transport, storage and post industry of Beijing has developed rapidly and has become an important industry to absorb labor force based on the above empirical analysis. But there is a certain deviation in the employment structure and industrial structure, and the possibility of the labor force transferring to other industries is increasing. In order to promote the healthy development of transport, storage and post industry of Beijing and further strengthen its ability to absorb labor force, this paper puts forward as follows to suggest.

The first one is increasing investment in fixed assets, and strengthening coordination and cooperation between government departments from the policy level, to optimize the resource structure of the transport, storage and post industry. From actual situation, as an international metropolis, Beijing has no dedicated cargo airport or the port constrained by geographical factors, although highway and railway are convenient. At the same time, aviation, railway, highway develop respectively and this kind of un-dovetail brings the obstacle for industry development. Various industries and their administrative departments plan for themselves. It's difficult to develop coordinately by lack of joined-up thinking and operation, and it resulted in the lack of effective integration among limited resources. Therefore, it's necessary to increase the fixed assets investment in transport, storage and post industry, and expand reproduction of industry to promote the upgrading of industrial structure, and enlarge the scale of industry employment. At the same time, we need strengthen coordination and cooperation between government departments to break the existing regional segmentation, and make policy orderly to create a favorable policy environment for industrial development and promote its employment absorption capacity.

The second one is to raise the average salary level of the industry, and promote the overall quality of staff in transport, storage and post industry. In the process of

economic transition, China's labor market has increasingly turned mature, and many institutional barriers which influence the flow of laborers are gradually broken, so it is easier for laborers to transfer from one industry to another. According to traditional labor economic theory, when someone makes decision on labor supply, he inclines to higher wage. In the process of economic development, a large number of small micro-enterprises gathered in transport, storage and post industry in Beijing. These small-scale enterprises with less number of workers often take advantage of cheap labor cost and the wage level is always low. According to related statistics, the growth rate of average wage in transport, storage and post industry is lower than that of average wage in Beijing. In 1999, the ratio of average wage in transport, storage and post industry to the average wage in Beijing was 1.10, while in 2011 this ratio dropped to 0.79. In the long run, by lowering wage to gain competitive advantage is difficult to maintain. Low wage is difficult to attract sufficient labor, especially those high-quality workforces who have mastered certain knowledge and skills. In

the process of upgrading of transport, storage and post industry, it's necessary to improve the overall quality of the workers. Raising the level of wage scientifically has positive influence on attracting highly qualified staff, expanding industry employment, and promoting healthy development.

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