



Economic Analysis to “Peasant Worker Shortage” in China

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Abstract

“Peasant worker shortage” originated from coastal towns in Fujian in 2003. However, there are about 200,000,000 surplus labors, and about 5,000,000 new surplus labor. From an angle of economics, the author analyses the causes of this phenomenon, indicating that the problems mirrored by the shortage of farmer laborers will have negative influence upon the construction of a new type industrial structure and the building of a harmonious socialist society, and thus makes some suggestions.

Keywords: Peasant worker shortage, Cause, Influence, Inspiration

1. China bothered by the “peasant worker shortage”

Information shows that the labor supply and demand situation has changed greatly in the Pearl River Delta Region and the Yangtze River Delta Region since 2004. In the past, there might be surplus labor supply, but now such supply might be barely sufficient. In some sectors, there might not be enough workers to meet employers’ demand. The labor market is no longer a buyer’s market.

Shenzhen. In the past, due to a surplus labor situation, companies could usually find lots of workers available for use. But now things have changed. Shenzhen has large numbers of migrant workers in China. In Shenzhen, more than 10 million migrant workers come from other places to find jobs.

Not only in Shenzhen, the peasant worker shortage problem has also occurred in other economically developed cities, such as Shanghai, Suzhou, Hangzhou and Nanjing, where large numbers of workers are needed. Among all kinds of jobs that meet labor shortage problem, over half do not require high technical skills. These include sewers, waiters or waitresses, salespeople, security guards, storage and transport workers, and printing and dyeing workers. In Guangdong Province late last year, the government said factories were short more than 500,000 workers; and in Fujian Province, there was a shortage of 300,000. Even north of Shenzhen, Zhejiang Province, known for its brash entrepreneurs, is short about 200,000 to 300,000 workers in 2004.

Our country has long time known for its surplus labor supply and cheap labor force resource and nobody can expect the “labor shortage” someday will appear in China. However it happened. What influence will this phenomenon make on our social and economic development? Author will get some insight from the angle of Economics.

2. Economic analysis to the reason of the “peasant worker shortage” in China

2.1 Labor force market can not get its equilibrium development.

Our country coastal labor market is characteristic of the coexistence of the low pay and the labor shortage, which broke the economic law and was not considered a normal phenomenon. According the general equilibrium principle in economics, both of supplier and demander will obtain equilibrium in a open competitive market, and no exception for labor market. The supplier and demander will reach its supply-demand equilibrium through game theory of wage. In demand situation, when demand for labor falls, wage will fall, vice versa; in supply situation, when labor supply falls short of demand, wage will rise, and when supply exceeds demand, wage will fall.

However, the labor force market of our country’s coastal region failed to follow the rules above: wage failed to rise along with the raise of labor demand. Take for example the Pearl River Delta Region where labor wage is relative higher, workers whose average month wage (including call-back pay) of a worker in Guangdong Province below 800 Yuan account for more than 80%, those whose wage over 1000 Yuan only account for 6.54%. Compared with that of ten year ago, month wage of a peasant worker increased no more than 100 Yuan, while in the corresponding period, annual wage of city workers (excluding increased price level factor) increased by 6%.

According market equilibrium theory, why wage level has lingered at low level is due to insufficient demand or surplus supply. However, the former is obviously out of reality, for our nation economy grows at the speed of 8%, annually, with a great demand for labor. If it is due to surplus supply, how can explain “peasant worker shortage”?

The author thought that, why our country coastal labor market can't adjust the labor force balance between supply and demand through the wages is due to our country labor market structure & characteristic. Our country labor market is characteristic of the coexistence of the short-term partial market and the long-term single market. Labor force supply exceeds demand, while the short-term market falls short of demand —this contradictory is long-standing. This kind of market pattern can cause the partial labor market inevitably distort the price, can't reflect the supply and demand condition, and thus cause the supply and demand fail to achieve automatical balance.

East coastal region of our nation develops fast ,in great demand for labor. As a single and enclosed market, wage should increase to a equilibrium level meeting demand along with the increasing demand. Nevertheless, wage can not reach a reasonable level because it's held down by the same market labor equilibrium price in the whole nation. It can be illuminate by the following figures.

Figure 1-a denotes partial short-term supply-demand equilibrium relationship in coastal region labor market. Figure 1-b denotes the long-term supply-demand equilibrium relationship in nation labor market.

S_0 & S_1 respectively denotes long-term and short-term labor supply curve, the slope of S_0 is lower than that of S_1 , indicating supply elasticity in long-term market is larger than that in short-term market. D_0 & D_1 respectively denotes labor demand curve in nation uniform market and coastal partial market. The slope of D_1 is larger than that of D_0 , indicating demand elasticity in partial labor market is smaller than that in nation market. W_0 denotes wage of nation labor market supply-demand equilibrium, indicating the lowest wage in coastal partial labor market; $W \geq W_0$ denotes the lowest wage standard is higher than long-term labor market equilibrium price.

When speedy economic development in coastal partial region develops led to labor demand increase, demand curve D_1 shift right to D_2 , and labor price rise to W_2 . When the difference of W_2 minus W_0 is larger than flow cost of labor, migrant workers from other places will begin enter coastal labor market. Due to the increase of labor supply amount and the downward trend of equilibrium wage in nation labor market, W_2 will return back to W_1 . Under this wage level, L_a denotes labor supply amount, and demand amount L_b . Consequently, the supply gap of L_a-L_b creates and lead to “peasant labor shortage” phenomenon.

2.2 Low pay for work is the essential reason for “peasant worker shortage”.

As the previous analysis indicates: When wage returns back from W_2 to W_1 , why is a number of people unwilling to accept the wage and quitting for labor market? Economics principles explain that people face tradeoff between pain which labor brings about (that is human's physical & mental contribution and giving up leisure) and revenues which labor creates. The labor time people will supply depend on the formula: $MR=MC$ (marginal revenue of labor equals marginal cost of labor) Figure 2 can illuminate:

In Figure 2, x-axis T denotes time, y-axis P denotes marginal utility of labor product and marginal negative utility of labor output. Q curve denotes marginal utility curve of labor product. Abcd curve denotes during o-a period, marginal negative utility curve of labor output and this curve upward and then downward indicates negative utility of labor is gradually decreasing, since workers can not adjust themselves to work at the beginning and then can adjust themselves to their labor environment. During a-b period, it is positive utility because suitable labor brought about people pleasure. After b point, overmuch labor caused people fatigue and thus it's negative utility.

At the point t_1 , marginal negative utility labor caused t_1d just equals marginal utility of labor product t_1e , consequently, t_1 point is the equilibrium labor time, that is the time workers will give up leisure and pay out working time. It can be expressed by the following formula:

$$\frac{dy}{dt} = \frac{dp}{dt} = \frac{dy}{dp}$$

In this formula, v denotes negative utility of labor, dy/dt denotes marginal negative utility of labor; p denotes labor product, dp/dt denotes marginal output; u denotes the total utility of labor output, du/dp denotes marginal utility of labor product, $dp/dt \cdot du/dp$ denotes marginal positive utility of labor. When labor time passes t_1 point, marginal labor negative utility is greater than marginal labor positive utility, meaning people are reluctant to offer their labor for society. In the figure, marginal utility curve of labor product, Q stands for utility curve of wage and welfare. When wage is raised, curve Q1 shift to the left and the equilibrium point shift right to t_1 , meaning people will supply much more labor; contrariwise, curve shifts to the left from Q1 to Q2, meaning people will decrease labor and increase leisure to obtain tradeoff.

In coastal developed areas, graduate increased income of peasants caused some negative influence over labor supply, which is also the crucial reason for “peasant worker shortage”. Economics theory can explain this principle of the phenomenon.

In Figure 3, left curve denotes workers' “income-leisure” utility curve. Any point in this curve bears the same utility for workers; y-axis denotes income and x-axis denotes leisure or work time. From the original point to H point, meaning leisure time from 0 to 100 (hereby hypothesis: the maximum available time of someone is 100), the segment shifts to the left from H point to original point indicates graduate increased labor time. Original point denotes that workers devoted all labor time to work, without any leisure time. Ht_1 indicates legal labor time workers must total once workers begin their work for society.

Y_a denotes other incomes than labor, that is the income not from labor. W_1 denotes wage rate that is reward in per unit time:
 $W_1 = (Y_b - Y_a) / (OH - Ot_1) = Y_a Y_b / Ht_1$.

General workers are running product operation based on family unit and thus family members' income or social welfare the whole family obtains can be considered a non-labor income. Research shows that when worker's non-labor incomes increase, the slope of one's "income-leisure" utility curve will turn steep. Corresponding economics indicates that because income effect causes increase speed of consume index larger than that of wage, if wage is not changed, income will be decreased relatively, and thus the utility curve of labor revenue will shift to the right, which indicates that the number of workers who quit labor market is turn great. It is just why "peasant worker shortage" was aggravated.

3. Inspiration & Countermeasures

3.1 Upgrading the industrial structure of the Enlightenment.

In order to improve China's international status in the international division of labor and to enhance its comprehensive national strength, we must effectively strengthen the transformation of traditional industries, upgrade the industrial structure and to choice some international high-tech, advanced technology, competitive, bright prospect industry as a national strategic industries, such as the information industry, bio-technology industry, the aerospace industry, advanced equipment manufacturing industries, etc. Only if cultivate our competitiveness in strategic industries, can we achieve better interests under economic globalization, and be able to maintain long-term competitiveness and economic growth. Otherwise, the future development of China's space will be reduced, the current low level of industrial structure in the international division of labor will be frozen even risk to be locked in the global industrial chain of low-end.

Our low-cost strategies we adopt at present will be detrimental to the upgrading of the industrial structure and the formation of the above strategic industries. First, from the angle of accumulation of human capital aspect, low labor costs will inevitably lead to low labor remuneration, so that workers lack of human capital investment, leading to their low level of the culture, skills, health and overall quality and those workers can not meet the needs of new industries; Secondly, from prospect of the enterprise's own innovative power, if labor costs has been unable to return to a reasonable level, enterprises will indulge in reliance on the cheap labor resources, without pressure and incentive to adjust and optimize the structure of production, technological upgrading and to elevate the proportion of innovation, technology and management among production factors. All of above factors will hinder industrial upgrading.

3.2 The author believes there are mainly three countermeasures.

First, to increase the minimum wage level of migrant workers in developed coastal areas. Governments in different regions should adjust the policy to the changing situation annually, based on the level of economic development, living standards and the price index, formulation of peasant workers the minimum wage protection. The standard wage should include workers' human capital investment required for the cost, besides maintaining basic living of peasant workers.

Secondly, to strengthen the power of social security system for peasant workers. Peasant workers mostly are engaged in "three-D" work that is dangerous, dirty and difficult (Dangerous, Dirty, Difficulty). This sort of work bears high-risk index, physical harm to health and great threat to the life. Government should intensify security, medical and pension aspects of social security for workers. When nation's financial resources can not directly bear such cost burden, we can introduce some other tilt policies to encourage the hiring units to pay these costs for workers, such as to offer various social insurance for workers and preferential policies under the degree of protection, access to industry and the industry tax deductions

Third, to intensify further efforts to assist peasant workers and increase the their incomes. "Peasant worker shortage" phenomenon is the essence of the overall low income of the farmers. Low incomes and the rural labor surplus led to low labor supply prices in overall labor market of the whole country, additionally, just the low price constrains the raise of labor price along with the rising demand in the developed coastal areas and inevitably led to the labor shortage. Only manage peasant workers' income to have a significant increase, the existing labor supply price will increase under the current population condition and fundamentally solve the coastal areas "peasant worker shortage" problem. Furthermore, only if society increase peasant workers' incomes, can we fundamentally resolve the long-interference we bothered to build a harmonious structure of China's two components city-country economy in a harmonious socialistic society in urban and rural areas "dual structure" and eliminate the urban-rural difference. Then, the existing urban and rural household registration system and the discrimination against the peasant workers can truly be resolved.

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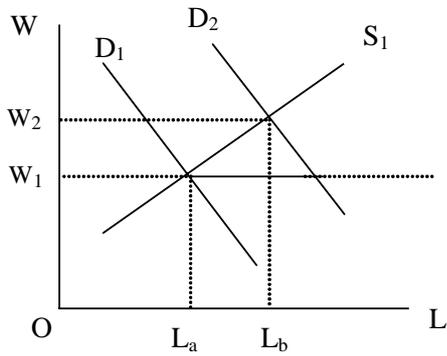


Figure 1-a. partial short-term labor market

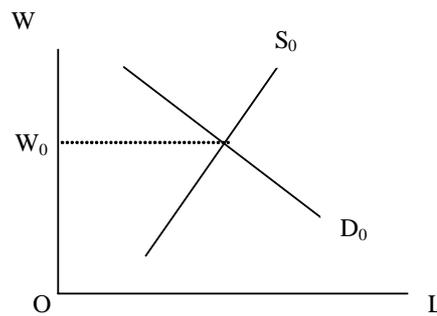


Figure 1-b. partial nation long-term labor market

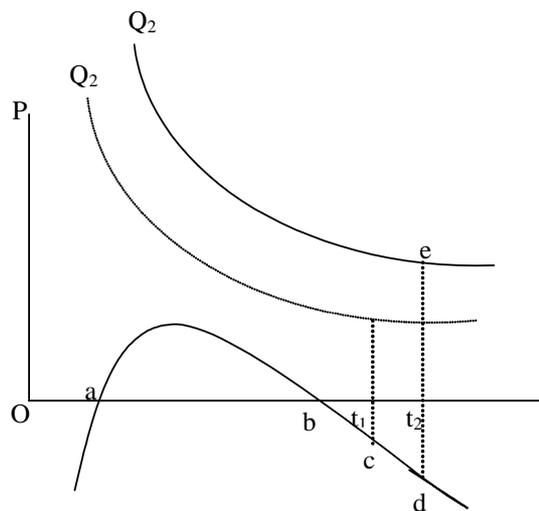


Figure 2. Determination of labor time

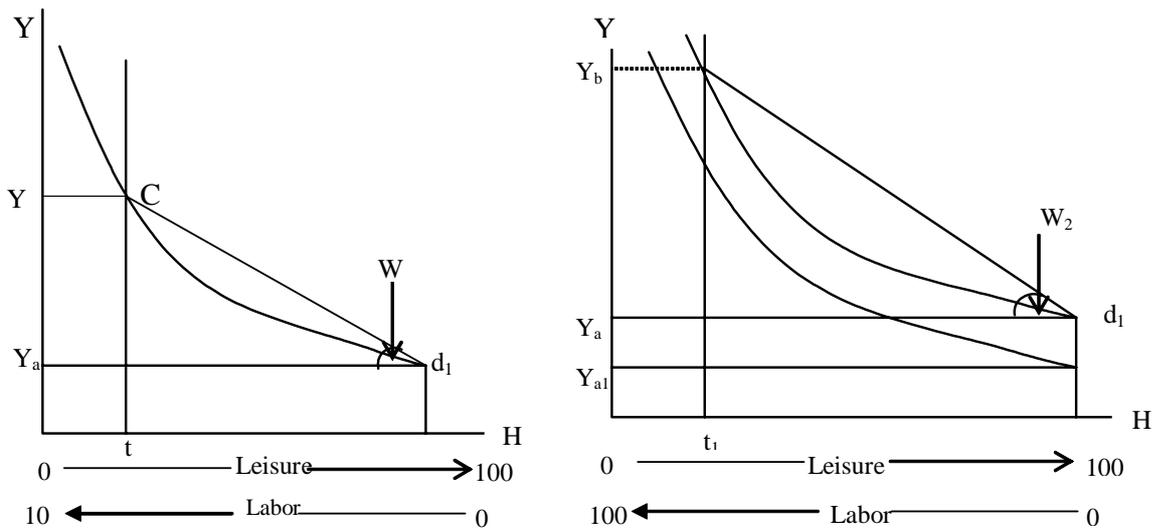


Figure 3. Determination of whether to work