

Structural Change of Labor Market And Labor Capital Income

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I. Proposal of the issue

In this paper, we will focus on the issue of structural change of labor market and labor capital income emerged during the transitional period.

Many experts and scholars have noticed that during the transitional period, labor capital income has rapidly increased in labor market of China. Since the mid of 1990s in particular, the tendency has been very notable. Research fellows have studied on and explained it from points of view in the process of market mechanism and the intensity of market competition, while responds to the issue in sociological circle of China especially concentrated on “the debates on market transition” in several years of the past. As we know however, theories concerned with labor capital emphasize the relationship between labor capital income and market competition degree, which is more typical in the mature capitalist production system. Thus here comes the questions as: In the course of economic reform in urban areas conducted on a grand and spectacular

scale in 1990s, in what degrees has the reform given an impetus to the change of labor capital income? In what degrees has market competition itself influenced the change? In what degrees and by what kinds of means has the change of social structure pushed forward by the reform affected the repay of labor capital income? In specific, in the course of the reform, how has the increase of labor capital income been reflected in different economic sectors and which social individuals have become real beneficiaries? All these questions concern some key elements of the change of social stratification, and become important indexes to approach the emergence of middle class in the urban society of China.

II. Structural Change of labor market in the course of reform

1. Development of labor market

During the past 10 years of economic reform in urban areas of China, labor market has rapidly emerged and developed.

- (1) Bloc monopoly of labor market before the reform
- (2) Emergence of labor market outside traditional system
- (3) Period of partial labor market
- (4) Emergence of free labor market
- (5) Unification of different types of labor market broken up by traditional system

Two important changes of high-tech labor market:

- (1) Personnel reform in government agencies: public servants are required to participate in examination; government officials must compete each other for the posts; government agencies are streamlined.
- (2) Expansion of high education: standardized systems for diplomas and professional qualifications are established.

2. Structural change of labor market

One of the important characteristics of the change of labor market after 1990 is that ownership structure and labor population simultaneously have had changes in age, sex and educational structure.

Firstly, we can study on it from point of view in the change of structure of system. Early in 1990s, the proportion of the employed in state-owned enterprises covered 70% of the total number of labor population in urban areas, while the rate of labor population in private business sectors (including foreign enterprises) was only 2%. Both of the two were as basically same as the level before the reform. After 1992, the proportions had rapid changes in two different sectors respectively. By the year of 2003, the proportion of the employed in state-owned enterprises had decreased to 45%, while that in private enterprises increased to 33%. The

period of 14 years has witnessed the substantial change of structure of labor ownership sectors.

The second we have noticed is the change of population structure. According to the comparison to data materials concerned with census conducted in 1990 and 2000, we can discover as follows:

(1) The proportion of unemployment population sharply went up.

Among the populations at the age 18~65, the proportion of unemployment population increased from 14.9% to 31.1%.

(2) There occurred the changes of the structures of age and sex. In 1990, the proportion of labor population at the age 18~45 was 68% and the rate of the population at the age 46~65 was 32%. In 2000, the former increased to 80.6%, while the latter declined 12.6% correspondingly. In particular, the rate of female labor population at the age 46~65 reduced about a half.

(3) The educational structure of labor population has changed.

III. Analytical framework and research suppositions

1. Non-adaptability to the analytical framework of “reallocation-market”
2. Fundamental analytical framework adopted by the author.

**Classification of Sectors Concerned with The Sources of Personal
Income in Urban Areas**

Labor Market	Type of Sectors		Sectors	Labor Employment	
	Non-Economic Sectors		Public Agencies (Party and government)	Employed by State And	Labor Employment Market
			Public Agencies II (Public Institutions)	Collectives	
Sectors In Market Economy	Seriously Influenced by Governmental Rules And Regulations	State-Owned Enterprises And Their Holding Companies			

			Collectives Enterprises And Their Holding Companies	
		New Sectors in Market Economy	Private or Foreign Enterprises	Employed by Private Persons
			Self-management	Self-Employed
			Unofficial Labor Market	Self-Employed or Employed by others
Non-Labor Market	Those who have withdrawn themselves from or have not been in the labor market (no employment income) but have income of transfer payment from state or previous working units (such as old age pension, relief payment for the unemployed, funds for ensuring a minimum standard of living, and etc.)			
	Those who have not entered labor market but have the sources of income (such as profit, interest, rent and etc.) and those who have no sources of income)			

When we discuss the issue of income, perhaps we could notice that people have two sources of income: One is the payment from labor

market and the other the transfer payment from non-labor market (such as old age pension, relief payment, donated funds from relatives or friends and etc.) as well as property income (such as security interest, rent, profit for consumption use).

The study on private income rate of labor capital focuses on payment from labor market. The relationship between income from non-labor market and labor capital is not a topic within the analytical scope in our research.

3. Research suppositions:

Supposition in regard to the change of labor market structure:

Supposition One:

The change of labor market structure would have important influences on income model of labor capital.

Suppositions in regard to the issue on income rate of labor capital in public sectors:

Supposition Two:

After the reform on government agencies conducted in 1998, income rate of education in public sectors would have a big increase.

Supposition Three:

As the reform on salary system in public sectors has a very close relation to original salary system, income rate of seniority-based labor capital would be at a relatively high level continuously.

Suppositions in regard to the repay of labor capital in state-owned and collective enterprises:

Supposition Four:

After system reform in the enterprises, repay rate of education would have a big increase in state-owned and collective enterprises.

The reform on allocation system in state-owned and collective economic sectors would be in the consistency with the market law that income model of labor capital and key elements of labor should be properly integrated.

Supposition Five:

In view of policies concerned with labor and salary that were regulated by state and were always in favor of working class in the past, repay rate of work's seniority in state-owned and collective sectors would still be at a high level.

Suppositions in regard to private sectors:

Supposition Six:

Educational income rate would have been at a high level at the early

stage of economic reform in urban areas.

Supposition Seven:

Seniority repay rate would be much lower than that of state-owned and collective sectors, and in the meanwhile be lower than that of market economy-based countries.

Suppositions in regard to high education:

Supposition Eight:

Compared to the mid-term of 1990s, repay rate of high education at present would have a rapid increase.

Supposition Nine:

Although a basically balanced educational income rate has been achieved on the whole among various sectors, educational income rate in private sectors would be higher than that in state-owned and collective sectors.

IV. Data, measure and model

Data used in the research is based on two national large-scale sampling surveys conducted by Department of Sociology, the People's University of China in 1996 and 2003. The main reason we adopted the data is that it is advantageous to do comparative analysis.

1. Labor capital model

There are two types of labor capital model, accurate estimation and function estimation to measure private income rate of individual investment in education (Lai Desheng, 2000). We have adopted function estimation to do analysis. First of all, we adopted Mincer's formula concerned with income rate for the convenience of comparison:

$$\ln(Y) = a + \beta_0 E + \beta_1 W + \beta_2 W^2 + \varepsilon \quad (\text{Formula 2})$$

E stands for the years of schooling and W the seniority.

According to sampling data of labor market of the year 2003, we fictionalized sampling data similar to the structure of labor market of the year 1996 to analyze the effect of the change of labor market structure on the repay model of labor capital of the year 1996. The fictitious pattern absorbed into the ideas of weight. The weighted variables include ownership structure, age structure, sex structure and educational structure.

However, as education is accepted and practiced in different stages and by different school systems and there exist great differences in annual average educational repay rate at different stages, income rate of years of schooling may be nonlinear. But such a nonlinear model can be regarded to mainly exist in a specific educational period (such as college education). Therefore, we adopted a pattern to combine linear estimation

with nonlinear estimation in regard to educational income rate among the sectors:

$$\ln(Y) = a + \beta_0 E + \beta_s S + \beta_1 W + \beta_2 W^2 + \varepsilon \quad (\text{Formula 4})$$

Here β_0 estimated average educational income rate in a country or in a region, while β_s can estimate the difference between educational income rate and average educational income at a specific stage.

2. Main analytical model

By using Formula 4 for reference, a model is established for the comparative analysis of labor capital income among the sectors:

$$\ln(Y) = a + \beta_0 E + \beta_s S + \beta_1 W + \beta_2 W^2 + \sum \lambda_i D_i + \sum \beta_{0i} D_i \times E + \sum \beta_{si} D_i \times S + \sum \beta_{1i} D_i \times W + \sum \beta_{2i} D_i \times W^2 + \varepsilon \quad (\text{Formula 5})$$

In Formula 5, we use $\beta_0, \beta_s, \beta_1, \beta_2$ in Formula 4 to estimate average effect of E、S、W、 W^2 on labor capital income respectively among the sectors of labor market. D_i stands for the fictitious variable of three sectors (non-economic sectors, state-owned and collective enterprises and private or foreign enterprises) of labor market; alternate effect items, $D_i \times E$ 、 $D_i \times S$ 、 $D_i \times W$ 、 $D_i \times W^2$ stand for compared personal years of schooling, specific education stages (college or the level above college), seniority and the square of seniority among various sectors of labor market. The design of this kind of alternate effect mainly aims at comparing the differences of labor capital income between education and seniority among various sectors.

3. Design of variables (omitted)

V. Discovery and explanation

The result of model analysis has basically testified 9 suppositions of our research.

VI. Conclusion

The contribution of our research lies in having analyzed the changing process of labor capital income model during the period of market transition from point of view in structural change of labor market.

We have drawn conclusions as follows:

- (1) The change of labor capital income model is firstly related to the change of labor market structure. After having control of the effect of structural change, we can find that the change of labor capital income is not especially obvious.
- (2) In the course of socialist market economy, state administrative right and market are two elements that are often integrated in social allocation. At the same time, there exist great differences in market competition degree among different sectors. Market development and market maturity are key elements to decide the basic structure

of different labor capital repays among various sectors.

(3) The general saying of “market mechanism having led to the increase in income rate of labor capital” is not correct, or is one-sided at least. In the course of market mechanism, seniority income rate has greatly decreased, although educational income rate increased. The change of labor market structure has created good conditions for private sectors to reduce production costs. They can employ labor in a manner of reducing production costs, reduce or even pay no labor capital value accumulated by workers through years of professional trainings.

(4) The increase of income rate of labor capital mainly reflects in the increase of income rate of high education. After having control of the effect of high education, there is no obvious change of income rate of education at the level of high school and below the level. This situation reflects from one side that those who have accepted high education are the groups of people who can acquire important social resources and have abilities to seize opportunities during the period of social and market transition, which is the main reason that they will become the mainstay of middle class in the future.