

# **Wage Arrears for and Discrimination against Migrant Workers in China's Urban Labor Market**

Wang Meiyan

## I . Introduction

“household responsibility system” initiated in late 1970s in rural China made farm households the residual claimants of their marginal effort, thus solving the long-standing incentive problems associated with the egalitarian compensation rules created in the commune system. At the same time, the price system of agricultural products was altered, stimulating the increase in farm productivity and releasing surplus laborers from agriculture. The higher returns to labor in non-agricultural sectors motivated farmers to migrate out of agriculture<sup>1</sup>. Since the 1980s, China has implemented, to varying degrees, reforms in different social and economic systems that are aimed at dividing up the urban and rural labor markets. These reforms have brought forth many changes such as relative relaxation in the *hukou* system, the building-up of a socialized welfare system for urban dwellers and gradual marketization of labor and employment. More and more peasants move from the farmland to non-agricultural businesses and enterprises in the countryside, or to those in small and medium-sized and even large cities.

But the *hukou* system, because of its half-baked reform as regards fundamental issues, still functions as an “invisible wall” that defines the different identities of urban residents and migrant workers from the

---

<sup>1</sup> Sarah Cook (1999), “Surplus Labor and Productivity in Chinese Agriculture: Evidence from Household Survey Data”, *The Journal of Development Studies*, Vol. 35, No. 3, pp.16-44.

countryside, and treats migrants differently<sup>1</sup>. Rural-to-urban migrant workers, as the latecomers of the urban labor market, face different treatment from their urban counterparts.

The unequal treatment towards migrants is mainly shown as differentials in occupational attainments and earnings between urban local workers and migrant workers. In the urban labor market, migrant workers, generally speaking, earn less than their local counterparts because of two facts. First, it is difficult for them to enter “formal sectors” such as government offices and state-owned enterprises. They can only enter non-state-owned, informal sectors, or self-employment for unskilled labor<sup>2</sup>. Secondly, when they enter the formal sectors by chance, they are paid less and enjoy fewer benefits than their urban counterparts<sup>3</sup>. Not only do migrant workers earn 20 percent lower wages than local workers, they also obtain little in terms of housing, medical insurance and pension<sup>4</sup>. While migrant workers earn less than urban local workers, many migrant workers still suffered from wage arrears. That is, they can’t get their wage on time and with full amount.

Then we are concerned with the following questions: What is the situation of wage arrears of migrant workers? What kinds of measures have been taken to solve this issue? What improvements have been achieved to reduce wage arrears of migrant workers? What is the situation of earnings differentials between migrant workers and urban local workers? What is the extent of earnings discrimination against migrant workers? Some policy implications are also put forward.

---

<sup>1</sup> Kam Wing Chan and Li Zhang (1999), “The *Hukou* System and Rural-urban Migration in China: Processes and Changes”, *The China Quarterly*, No.160, pp.818-855.

<sup>2</sup> Dorothy J. Solinger (1999), “Citizenship Issues in China’s Internal Migration: Comparisons with Germany and Japan”, *Political Science Quarterly*, Vol.114, No.3, pp. 455-78.

<sup>3</sup> Feng Wang and Xuejin Zuo (1999), “History’s Largest Labor Flow: Understanding China’s Rural Migration Inside China’s Cities: Institutional Barriers and Opportunities for Urban Migrants”, *AEA Papers and Proceedings*, Vol. 89, No.2, pp. 276-80.

<sup>4</sup> John Knight, Lina Song and Huaibin Jia (1999), “Chinese Migrant workers in Urban Enterprises: Three Perspectives”, *The Journal of Development Studies*, Feb:73-104.

## II. Data Description

In this research, we will mainly use two waves of China Urban Labor Survey (CULS), which were conducted by Institute of Population and Labor Economics at the Chinese Academy of Social Sciences (CASS-IPLE) in 2001 and 2005 by working with provincial and municipal offices of the National Bureau of Statistics.

In the first wave of the survey in 2001 (CULS1), five big cities (Shanghai, Wuhan, Shenyang, Fuzhou and Xian) were chosen to provide regional diversity and variation in the size of the state versus private sectors. Fuzhou and Shanghai are coastal cities that have enjoyed outstanding economic performance throughout the reform period, while Shenyang in the northeast, Wuhan in central China, and Xian in northwest China are interior cities with large, struggling state industrial sectors that have experienced more painful restructuring.

Within each city, a proportional population sampling approach was used to sample an average of 15 registered urban households in each of 70 neighborhood clusters. 700 households in each city were interviewed. Each household head was asked questions about the family, and then all family members above age 16 who were no longer in school were interviewed individually. We also used proportional population sampling approach to sample an average of 15 migrants in each of 60 neighborhood clusters and interviewed 600 migrants above age 16 in each city.

In 2005, CASS-IPLE conducted another wave of this survey in the same five big cities and other seven cities (Wuxi, Yichang, Benxi, Zhuhai, Shenzhen, Baoji and Daqing). In this wave, a proportional population sampling approach was used to sample an average of 15 registered urban households in each of 50 neighborhood clusters within five big cities. 500 households in each city were interviewed. Each household head was asked questions about the family, and then all family members were interviewed individually. We also interviewed 500 migrant households in each of five big cities and 400 households in

each of other seven cities. The biggest difference of this wave from wave in 2001 is about the migrants. In 2005 survey, we used proportional population sampling approach to sample an average of 15 migrant households and interviewed all the members of each household in each city.

### III. Wage Arrears for Migrant Workers

#### A. Overall Situation of Wage Arrears for Migrant Workers in China

A survey on migrant workers conducted in Beijing in 2001 shows that, about 24 percent of interviewees have suffered from wage arrears or wage deduction. The average wage arrear is 3500 yuan and 20 percent of migrant workers have more than 5000 yuan of wage arrear<sup>1</sup>. According to an incomplete statistics, wage arrears of migrant workers from construction enterprises in Beijing amounts to 2.2 billion yuan until the end of 2002<sup>2</sup>. By the survey of Xinhua News Agency, 72.5 percent of migrant workers suffer from wage arrears<sup>3</sup>.

According to a survey conducted in 8 provinces in 2003, 48.1 percent of migrant suffer from wage arrears. Among them, 30.6 percent have 100-1000 yuan of wage arrear, 15.7 percent have 1000-5000 of wage arrear, 1.6 percent have more than 5000 yuan of wage arrear<sup>4</sup>. According to the statistics of All China Federation of Trade Unions, wage arrears of migrant workers amounted to 100 billion yuan until 2003. Most of wage arrears happen in the construction and catering services and construction occupies 70 percent<sup>5</sup>.

---

<sup>1</sup> UNDP (2005), "China Human Development Report 2005---Human Development with Equity".

<sup>2</sup> Jinhua Newspaper, Jan.15, 2003.

<sup>3</sup> Xinhua News Agency, Jan.13, 2003.

<sup>4</sup> South News Net,

<http://www.southcn.com/news/community/shzt/nmggq/sdbd/200509270583.htm>.

<sup>5</sup> Yuehua Lu (2004), "An Analysis on How to Solve Wage Arrears of Migrant Workers, *Administrative Tribune*, No.62.

A lot of cases of wage arrears of migrant workers have been reported in the past several years, especially from 2003. The government has attached importance to this issue. A series of regulations and polices have been issued, such as “A Notice on Solving Wage Arrears of Construction Enterprises” in 2003, “An Emergent Notice on Solving Wage Arrears of Migrant Workers Further” in 2004, “An Notice on Solving Wage Arrears of Migrant Workers Further” in 2005 and “Several Suggestions on Solving Wage Arrears of Migrant Workers” in 2006.

On March 5, 2004, Premier Wen Jiabao says in the government work report that the State Council decides to solve wage arrears of migrant workers in three years. In the mid of 2006, Hu, Xiaoyi, Vice Minister of Department of Labor and Social Security, pointed out that their department will collaborate with other related departments to organize the examination on securing the payment of migrant workers’ wage and implement four measures to secure the payment of migrant workers’ wage all over China. On Jan.25, 2007, the State Council held a videophone conference and requires all levels of government to attach importance to securing migrant workers to get their wages on time and with full amount.

The evidence shows that these measures have been effective. According to the statistics by Ministry of Construction, wage arrear of migrant workers in construction has been basically solved by the end of 2004<sup>1</sup>. By a survey conducted in Wuhan in 2006, most of migrant workers can get their wage on time. Wage arrear has reduced much. 84.1 percent of migrant workers have never suffered from wage deduction and only 15.9 percent of migrant workers have suffered from wage deduction occasionally. 71.8 percent of migrant workers have never suffered from wage arrears, 22 percent of migrant workers have suffered from wage arrears occasionally and only 6.2 percent of migrant workers have often suffered from wage arrears<sup>2</sup>.

---

<sup>1</sup> UNDP (2005), “China Human Development Report 2005---Human Development with Equity”.

<sup>2</sup> China Statistical Information Net, Sep.30, 2006.

The Press Conference of Shanghai city government on Nov. 16 of 2006 pointed out that wage arrears of migrant workers in Shanghai has totally been solved already. According to the statistics of Rural Social and Economic Survey Team of Sichuan Province, Sichuan province has refunded 2.242 yuan of wage arrears of migrant workers by Dec.16 of 2004, which is 97.12 percent of the total wage arrears of migrant workers.

On the symposium on Sep. of 2006, Hua Jianmin pointed out that, according to the official statistics, 24 provinces has formed a system to secure wage of migrant workers. According to a report by Xinhua News Agency on Dec.27 of 2006, different levels of trade unions and other related departments helped 2.79 million migrant workers with wage arrears and get 1.31 billion yuan back. According to a report of People's Daily in Jan. of 2007, cases of wage arrears of migrant workers decreased significantly and 27 provinces has formed a system to secure wage of migrant workers.

## B. Evidence on Wage Arrears for Migrant Workers from CULS1 and CULS2

Employing CULS data in 2001, we analyze wage arrears of migrant workers in five big cities (Shanghai, Wuhan, Shenyang, Fuzhou and Xian). Employing CULS data in 2005, we analyzed wage arrears of migrant workers in the same five big cities and in other seven cities (Wuxi, Yichang, Benxi, Zhuhai, Shenzhen, Baoji and Daqing). Table 1 tells us that, compared with 2001, the proportion of migrant workers who suffered from wage arrears decreased a lot in five big cities in 2005. In 2001, the proportion of migrant workers who suffered from wage arrears is 12 percent. In 2005, it decreased to 2 percent. In 2005, the proportion of migrant workers who suffered from wage arrears in other seven cities was only 3 percent. All these indicate that a series of policies which has been implemented since 2003 and 2004 played a significant role to reduce wage arrears.

**Table 1 Wage Arrears of Migrant Workers in 2001 and 2005.**

	Five big cities in 2001 (1)	Five big cities in 2005 (2)	(2)-(1)	Other seven cities in 2005
Total				
Proportion of migrant workers suffering from wage arrears	12.01	2.38	-9.63	3.26
Gender				
Male	74.72	67.65	-7.07	69.35
Female	25.28	32.35	7.07	30.65
Education				
Junior high school and below	69.66	67.65	-2.01	74.19
Senior high and specialized secondary school	25.28	20.59	-4.69	17.74
College and above	5.06	11.76	6.70	8.06
Sector				
Manufacturing	6.82	8.82	2.00	20.97
Construction	32.39	26.47	-5.92	25.81
Wholesale and retail trade & catering services	22.73	26.47	3.74	14.52
Other sectors	38.06	38.24	0.18	38.70
Ownership				
Agencies, organizations and institutions	3.53	0.00	-3.53	0.00
State-owned enterprises	4.71	8.82	4.11	14.75
Collective enterprises	10.59	5.88	-4.71	3.28
Private enterprises	69.41	79.41	10.00	72.13
Foreign funded and cooperative enterprises	11.76	5.88	-5.88	9.84
Have labor contract or not				
Yes	26.86	29.41	2.55	31.58
No	73.14	70.59	-2.55	68.42

**Note:** The situation in five big cities in 2001 and 2005 are given in the second and third column for comparison. The difference of the proportion in 2001 and 2005 is given in the fourth column. The situation in other seven cities in 2005 is given in the fifth column.

**Source:** Calculated from CULS1 and CULS2.

The gender distribution of migrant workers suffering from wage arrears in five big cities hasn't changed too much between 2001 and 2005. The major parts of them are males. The gender distribution in other seven cities in 2005 is very similar to the situation in five big cities. The educational distribution of migrant workers suffering from wage arrears in five big cities is also very similar between 2001 and 2005. Almost 70 percent of migrant workers suffering from wage arrears are junior high school and below. In other seven cities, 74 percent are junior high school and below.

The sectoral distribution of migrant workers suffering from wage arrears is what we are most concerned with. As we all know, reducing wage arrears in the construction is the focus of the government's concern. Table 1 tells us that, the sectoral distribution of migrant workers suffering from wage arrears in five big cities between 2001 and 2005 is very similar in some aspects and different in some other aspects. The similarity is: the proportions of migrant workers suffering from wage arrears from construction and wholesale and retail trade and catering services are both very high and the total proportions from these two sectors are over 50 percent; the proportion of workers from manufacturing is less than 9 percent; the total of proportions from all the other sectors is 38 percent. The difference is: compared to 2001, in 2005, the proportion of migrant workers suffering from wage arrears from construction decreased by 6 percentage points and the proportions from wholesale and retail trade and catering services, manufacturing and other sectors all increased a little bit. Compared to five big cities, the proportion of migrant workers suffering from wage arrears in construction and other sectors in other seven cities is very similar to that in five big cities. However, the proportion of migrant workers suffering from wage arrears in manufacturing in other seven cities is higher by 12 percentage points than that in five big cities. The proportion of migrant workers suffering from wage arrears in wholesale and retail trade and catering services in other seven cities is lower by 12 percentage points than that in five big cities. All these indicate that, since wage arrears in construction is the focus of the policies, these policies have more



significant effects on reducing wage arrears in construction than on other sectors.

As for the ownership distribution, in 2001 and 2005, most of migrant workers suffering from wage arrears are from private enterprises in five big cities. In 2001, the proportion of migrant workers suffering from wage arrears from private enterprises is 70 percent and it increases to 79 percent in 2005. Compared to 2001, the proportion of migrant workers suffering from wage arrears from state-owned enterprises increased a little bit in 2005 and the proportion of workers from agencies, organizations and institutions and foreign funded and cooperative enterprises all decreased. In 2005, 72 percent of migrant workers suffering from wage arrears are from private enterprises in other seven cities.

Many migrant workers have not signed labor contracts with their employers. Having labor contracts does not necessarily mean that the rights of workers can be guaranteed. However, once migrant workers have signed labor contracts with their employers, the formal labor relationship exists between them. Then the probability that the rights of migrant workers are being violated should decrease. Table 1 shows that, more than 70 percent of migrant workers suffering from wage arrears have not signed labor contracts with their employers in five big cities in both 2001 and 2005. The situation in other seven cities in 2005 is very similar to that in five big cities.

After analyzing the basic situation of wage arrears for migrant workers, we will analyze the factors which affect wage arrears of migrant workers. We can use Probit model to estimate this. The dependent variable is whether a migrant worker suffers from wage arrears or not. It equals 1 if a migrant worker suffers from wage arrear. It equals 0 if a migrant worker does not.

The independent variables include variables which reflect migrant workers' personal characteristics (such as gender, age, education, marital status, *hukou* status, labor contract and occupation) and variables which reflect characteristics of migrants' enterprises (such as sector and ownership).

Female is included in the model and male is taken as the control group. Migrants' age is also included in the model. The model incorporates dummy variables for junior high school, senior high and specialized secondary school and college and above and take primary school and below as the control group. Dummy variables for having spouse, agricultural *hukou*, having labor contract and managerial and professional staff are also included in the model and the control groups are no spouse, non-agricultural *hukou*, having no labor contract and worker, respectively.

According to the above descriptive analysis, as for the sector, most of migrant workers suffering from wage arrears are from manufacturing, construction and wholesale and retail trade & catering services. As for the ownership, most of them are from private enterprises. Due to this, we include three dummy variables for manufacturing, construction and wholesale and retail trade & catering services and combine sectors other than manufacturing, construction and wholesale and retail trade & catering services into other sectors and take it as the control group. We also include four dummy variables for state-owned enterprises, collective-enterprises, private enterprises and foreign funded and cooperative enterprises and take agencies, organizations and institutions as the control group. Four city dummy variables (Wuhan, Shenyang, Fuzhou and Xian) are also included in the model (Shanghai is the control group).

We estimate Probit models to examine the factors affecting wage arrears of migrant workers in five big cities for 2001 and 2005 respectively in order to investigate changes of the factors. Marginal effects of each independent variable are also calculated. For other seven cities in 2005, we do the same things as that in five big cities. The estimation results are in Table 2.

**Table 2 The Factors Affecting Wage Arrears of Migrant Workers  
(Probit model)**

Variables	Five big cities in 2001 (Model 1)		Five big cities in 2005 (Model 2)		Other seven cities in 2005 (Model 3)	
	Coefficient	Marginal effect	Coefficient	Marginal effect	Coefficient	Marginal effect
Male	NI	NI	NI	NI	NI	NI
Female	-0.165 (1.43)	-0.023 (1.43)	-0.103 (0.59)	-0.002 (0.59)	-0.099 (0.72)	-0.004 (0.72)
Age	0.006 (0.81)	0.001 (0.81)	-0.022 (1.74)	-0.000 (1.74)	-0.015 (1.46)	-0.001 (1.46)
Primary school and below	NI	NI	NI	NI	NI	NI
Junior high school	0.019 (0.14)	0.003 (0.14)	0.050 (0.21)	0.001 (0.21)	-0.098 (0.50)	-0.004 (0.50)
Senior high and specialized secondary school	0.275 (1.67)	0.044 (1.67)	0.037 (0.13)	0.001 (0.13)	-0.279 (1.15)	-0.009 (1.15)
College and above	0.434 (1.68)	0.081 (1.68)	0.481 (1.31)	0.012 (1.31)	-0.256 (0.76)	-0.008 (0.76)
No spouse	NI	NI	NI	NI	NI	NI
Have spouse	0.039 (0.28)	0.006 (0.28)	0.546 (2.45)*	0.007 (2.45)*	0.476 (2.53)*	0.015 (2.53)*
Non-agricultural <i>hukou</i>	NI	NI	NI	NI	NI	NI
Agricultural <i>hukou</i>	0.267 (2.02)*	0.035 (2.02)*	0.272 (1.08)	0.003 (1.08)	0.116 (0.65)	0.004 (0.65)
No labor contract	NI	NI	NI	NI	NI	NI
Have labor contract	-0.004 (0.03)	-0.001 (0.03)	-0.058 (0.30)	-0.001 (0.30)	-0.142 (0.93)	-0.005 (0.93)
Worker	NI	NI	NI	NI	NI	NI
Managerial and professional staff	-0.436 (3.14)**	-0.052 (3.14)**	0.109 (1.10)	0.002 (1.10)	0.057 (0.81)	0.002 (0.81)
Other sectors	NI	NI	NI	NI	NI	NI
Manufacturing	-0.086	-0.012	-0.109	-0.001	0.096	0.004

	(0.45)	(0.45)	(0.37)	(0.37)	(0.54)	(0.54)
Construction	0.442	0.079	0.579	0.017	0.637	0.043
	(3.02)**	(3.02)**	(2.45)*	(2.45)*	(3.28)**	(3.28)**
Wholesale and retail trade & catering services	0.027	0.004	-0.027	-0.000	-0.064	-0.002
Agencies, organizations and institutions	(0.21)	(0.21)	(0.14)	(0.14)	(0.35)	(0.35)
	NI	NI	NI	NI	NI	NI
State-owned enterprises	0.416	0.076	4.713	0.958	4.832	0.981
Collective enterprises	(1.37)	(1.37)	(6.69)**	(6.69)**	(8.39)**	(8.20)**
	0.762	0.167	4.664	0.964	4.733	0.982
Private enterprises	(2.65)**	(2.65)**	(6.63)**	(6.63)**	(7.03)**	(6.90)**
	0.653	0.082	4.803	0.163	4.570	0.220
Foreign funded and cooperative enterprises	(2.80)**	(2.80)**	(7.52)**	(7.52)**	(8.36)**	(8.06)**
	1.030	0.249	4.523	0.946	4.477	0.952
City dummy variables	(3.57)**	(3.57)**	(6.35)**	(6.35)**	(7.64)**	(7.46)**
	Omitted		Omitted		Omitted	
Constant term	Omitted		Omitted		Omitted	
No. of observations	1336		1361		1757	
Pseudo R <sup>2</sup>	0.1817		0.1010		0.0971	
Prob>chi2	0.0000		0.0419		0.0010	
Log likelihood	-392.3892		-142.9538		-223.9756	

**Note:** 1) We estimate Probit models to examine the factors affecting wage arrears of migrant workers in five big cities for 2001 and 2005 respectively in order to investigate changes of the factors. Marginal effects of each independent variable are also calculated. For other seven cities in 2005, we do the same things as that in five big cities.

2) Z value in parentheses.

3) \* and \*\* indicate 5% and 1% significant levels, respectively.

Table 2 shows that, dummy variable for female, age, three dummy

variables for education and dummy variable for having labor contract are not significant in all three models. Dummy variable for having spouse is significant in Model 2 and Model 3, but not significant in Model 1. Dummy variables for agricultural *hukou* and managerial and professional staff are significant in Model 1 and not significant in other two models.

Dummy variables for sectors and ownerships have consistent effects in three models. Dummy variable for construction are significant in all three models. This indicates that, migrant workers from construction are more likely to suffer from wage arrears than those from other sectors. Dummy variables for collective enterprises, private enterprises and foreign funded and cooperative enterprises are also very significant in three models. This indicates that, migrant workers from these enterprises are more likely to suffer from wage arrears than those from agencies, organizations and institutions. Dummy variable for state-owned enterprises are also significant in Model 2 and Model 3.

Based on the above analysis, we can conclude that sectors and ownerships consistently and significantly affect whether a migrant worker suffers from wage arrear or not. Migrant workers from construction are more likely to suffer from wage arrears than those from other sectors. Migrant workers from collective enterprises, private enterprises and foreign funded and cooperative enterprises are more likely to suffer from wage arrears than those from agencies, organizations and institutions. Most of variables which reflect personal characteristics have no effects on whether a migrant worker suffers from wage arrears or not. Some dummy variables (such as having spouse, agricultural *hukou* and managerial and professional staff) are significant in some models, but they are not significant in other models.

#### IV. Labor Market Discrimination against Migrant Workers

##### A. Earnings Differentials between Migrant Workers and Urban Local Workers

Earnings differential between migrant workers and urban local workers is a very important question in the context of China's economic development. Now we begin to use CULS1 and CULS2 to analyze earnings differentials between migrant workers and urban local workers. For comparison with 2001, when we analyze CULS2 in 2005, we will only use data in five large cities and will exclude other seven cities from our analysis.

Table 3 gives hourly earnings of migrant workers and urban local workers aged 16 to 60 in 2001. The average hourly earnings of migrant workers of five cities is 2.94 yuan and the average hourly earnings of urban local workers of five cities is 5.63 yuan. The average hourly earnings of urban local workers is 91 percent higher than that of migrant workers. In every city, hourly earning of migrant workers is much lower than that of urban local workers. For example, in Shanghai, the average hourly earnings of migrant workers is 3.79 yuan, which is only half of that of urban local workers (7.59 yuan).

**Table 3 Hourly Earnings of Migrant Workers and Urban Local Workers in 2001 (yuan)**

	Migrant workers		Urban local workers	
	Mean	Standard Deviation	Mean	Standard Deviation
Shanghai	3.79	3.26	7.59	5.68
Wuhan	1.77	1.09	4.99	3.15
Shenyang	3.05	1.79	4.62	3.01
Fuzhou	3.59	2.53	6.19	4.75
Xi'an	2.23	1.88	4.34	2.50
Total	2.94	2.38	5.63	4.26

**Source:** Calculated from CULS1.

Table 4 gives hourly earnings of migrant workers and urban local workers aged 16 to 60 in 2005. The average hourly earnings of migrant workers of five cities is 3.83 yuan and the average hourly earnings of urban local workers of five cities is 6.85 yuan. The average hourly

earnings of urban local workers is 79 percent higher than that of migrant workers. In every city, hourly earnings of migrant workers is still much lower than that of urban local workers. For example, in Shanghai, the average hourly earnings of migrant workers is 5.33 yuan, which is only half of that of urban local workers (10.65 yuan).

**Table 4 Hourly Earnings of Migrant Workers and Urban Local Workers in 2005 (yuan)**

	Migrant workers		Urban local workers	
	Mean	Standard Deviation	Mean	Standard Deviation
Shanghai	5.33	3.76	10.65	8.66
Wuhan	3.54	3.47	5.17	4.44
Shenyang	3.35	2.73	4.82	3.62
Fuzhou	3.21	2.19	7.15	5.06
Xi'an	3.38	2.66	4.88	3.17
Total	3.83	3.12	6.85	6.08

**Source:** Calculated from CULS2.

Compared with 2001, hourly earnings of migrant workers and urban local workers of five cities have both increased much in 2005. The average hourly earnings of migrant workers of five cities has increased from 2.94 in 2001 to 3.83 in 2005. The average hourly earnings of urban local workers of five cities has increased from 5.63 in 2001 to 6.85 in 2005. However, the hourly earnings differentials between migrant workers and urban local workers have narrowed from 2001 to 2005. In 2001, hourly earning of urban local workers is 91 percent higher than that of migrant workers. In 2005, hourly earning of urban local workers is 79 percent higher than that of migrant workers.

The earnings differentials between migrant workers and urban local workers have narrowed from 2001 to 2005. In the following, we will decompose earnings differentials between migrant workers and urban local workers and analyze the contribution of discrimination to earnings differentials between two groups in China's urban labor market.

First, we will employ Oaxaca decomposition method to decompose earnings differentials between migrant workers and urban local workers aged 16 to 60 in 2001<sup>1</sup>. To use this method, we need to estimate earnings equation for migrant workers and urban local workers respectively. We also need to calculate mean of all independent variables in earnings equation. After getting these, we decompose earnings differentials between migrant workers and urban local workers, using two decomposition equations (Table 5)<sup>2</sup>. We will just explain the average of two decompositions.

**Table 5 Oaxaca Decomposition Results of Earnings Differentials between Migrant Workers and Urban Local Workers in 2001**

	Decomposition 1		Decomposition 2		Average of decomposition 1 and decomposition 2	
	Log hourly earnings	% of total	Log hourly earnings	% of total	Log hourly earnings	% of total
Explained	0.2815	42.26	0.4089	61.39	0.3452	51.83
Unexplained	0.3845	57.74	0.2571	38.61	0.3208	48.18
Total	0.6660	100	0.6660	100	0.6668	100

The differential of mean log hourly earnings between migrant workers and urban local workers is 0.6668. Of this, 0.3452 (51.83 percent) is attributable to individuals' endowments difference, while 0.3208 (48.18 percent) is attributable to unexplained factors. We can say that the unexplained portion may be mainly due to the discrimination against migrant workers and in favor of local workers, which is rooted

<sup>1</sup> Ronald Oaxaca (1973), "Male-Female Wage Differentials in Urban Labor Markets", *International Economic Review*, Vol.14, No.3, pp.693-709.

<sup>2</sup> There is an index problem with the Oaxaca decomposition method. In order to solve this problem, we calculate both two decomposition results and take the average of them, which is also given in Table 5.



in the *hukou* system.

We also use Oaxaca decomposition method to decompose earnings differentials between migrant workers and urban local workers in 2005. The result shows that, the differential of mean log hourly earnings between migrant workers and urban local workers in 2005 is 0.5461. Of this, 0.3221 (58.98 percent) is attributable to individuals' endowments difference, while 0.2240 (41.02 percent) is attributable to unexplained factors. We can say that the unexplained portion can still be mainly due to the discrimination against migrant workers and in favor of local workers, which is rooted in the *hukou* system.

Comparing the results of 2001 and 2005, the proportion of earnings differentials due to individuals' endowments difference has increased from 51.83 percent to 58.98 percent and the proportion of earnings differentials due to unexplained factors (discrimination) has decreased from 48.18 percent to 41.02 percent. With the development of China's urban labor market, the discrimination against migrant workers has decreased in some degree.

As we know, Oaxaca method can not incorporate earnings differentials due to the occupational difference into overall earnings differentials between two groups. In fact, there exists significant occupational difference between migrant workers and urban local workers and this will definitely cause earnings differentials between them. Then we will employ Brown method to decompose earnings differentials between migrant workers and urban local workers<sup>1</sup>.

To employ this method, we need to divide occupations first. Since the differences in employment between migrant workers and urban local workers caused by the *hukou* system are mainly reflected in the ownership and posts of working units, we then divide occupations into four categories accordingly: (1) workers in public sectors, (2) managerial and professional staff in public sectors, (3) workers in

---

<sup>1</sup> Randall S. Brown, Marilyn Moon, Barbara S. Zoloth (1980), "Incorporating Occupational Attainment in Studies of Male-Female Earnings Differentials", *The Journal of Human Resources*, Vol.15, No.1, pp.3-28.

non-public sectors and (4) managerial and professional staff in non-public sectors<sup>1</sup>. There are very few migrant workers in managerial and professional staff posts in public sectors, so we combine workers and managerial and professional staff in public sectors into one category, as workers and staff in public sectors. Then occupations of migrant workers are grouped into three categories: workers and staff in public sectors, workers in non-public sectors, and managerial and professional staff in non-public sectors. In order to keep a consistency with migrant workers, urban local workers' occupations are also grouped into three categories. Table 6 reports occupational distributions and hourly earnings for migrant workers and urban local workers in 2001.

**Table 6 Occupational Distributions and Hourly Earnings for Migrant Workers and Urban Local Workers in 2001**

	Occupational distribution				Hourly earnings by occupation (yuan)			
	Migrant workers		Urban local workers		Migrant workers		Urban local workers	
	Freq.	%	Freq.	%	Mean	SD	Mean	SD
Workers and staff in public sectors	233	26.0	2436	78.1	2.94	2.42	5.70	4.17
Workers in non-public sectors	570	63.7	444	14.2	2.69	1.99	3.98	2.71
Managerial and professional staff in non-public sectors	92	10.3	241	7.7	4.41	3.64	7.95	5.94
Total	895	100	3121	100	2.94	2.38	5.63	4.26

**Source:** Calculated from CULS1.

The differences in occupational distributions between migrant

<sup>1</sup> Public sectors refer to government and party agencies, social organizations, state-owned enterprises and collective-owned enterprises; non-public sectors refer to foreign invest enterprises, joint venture enterprises, private enterprises and other enterprises.

workers and local workers are quite obvious. The proportion of workers and staff in public sectors for migrant workers is 26 percent, compared to 78.1 percent for urban local workers. 63.7 percent of migrant workers are workers in non-public sectors, compared to 14.2 percent for urban local workers. The proportion of managerial and professional staff in non-public sectors for migrant workers is 10.3 percent, compared to 7.7 percent for urban local workers.

The differences in hourly earnings between migrant workers and urban local workers are also large. Overall, hourly earning of migrant workers is 2.94 yuan and that of urban local workers is 5.63 yuan. The hourly earnings of migrant workers in every occupation is much lower than that of local workers. For example, workers and staff in public sectors is 2.94 yuan for migrant workers and 5.7 yuan for urban local workers.

There is also a significant difference in human capital endowments between migrant workers and urban local workers. Difference in human capital is undoubtedly one of the factors that cause gaps in occupational attainment and earnings between the two groups. Table 7 shows that, urban local workers have 3.39 more years of schooling than migrant workers. Working experience of urban local workers is 8.81 years longer than that of migrant workers. Height of urban local workers is 0.76 centimeters higher than that of migrant workers. Urban local workers also have more frequent training than migrant workers do. The proportion of female of urban local workers is higher than that of migrant workers and so is the proportion of being married.

**Table 7 Summary Statistics of Human Capital and Individual Characteristics for Migrant Workers and Urban Local Workers in 2001**

Continuous variables	Migrant workers		Local workers		Difference in mean
	Mean	SD	Mean	SD	
Years of schooling	8.59	2.80	11.98	2.78	3.39
Working experience	13.17	10.25	21.98	10.64	8.81
Height	166.35	7.48	167.11	7.44	0.76
Discrete variables	%		%		Difference in %
Training	11.96		14.64		2.68
Female	36.76		43.38		6.62
Married	44.25		82.67		38.42

**Source:** Calculated from CULS1.

We see the differences of occupational distribution, hourly earnings and human capital characteristics between migrant workers and urban local workers from Table 6 and Table 7. Now we are interested in the following questions: to what extent are the occupations and earnings differentials between migrant workers and urban local workers in China's urban labor market caused by the human capital gap and by other institutional or unexplainable discrimination factors? To answer this question, we need to estimate multinomial logit model of occupational attainment for migrant workers and urban local workers, respectively. The independent variables included in the occupational attainment model are years of schooling, working experience, square of working experience, Z-score of height, dummy variable for training (no training =0), dummy variable for female (male=0), dummy variable for marital status (no spouse = 0), four city dummy variables (Shanghai=0) and the error term.

The estimation result tells us that, the relationships between occupational attainments and the independent variables are somewhat

different for migrant workers and urban local workers. Education decreases the probability of becoming workers in non-public sectors for urban local workers and increases the probability of becoming managerial and professional staff in non-public sectors for both migrant workers and urban local workers. Z-score of height decreases the probability of becoming workers in non-public sectors for both migrant workers and urban local workers. For migrant workers, training decreases their chances of becoming workers in non-public sectors. Training also decreases urban local workers' probability of becoming managerial and professional staff in non-public sectors. Workers who have spouses are less likely to be workers in non-public sectors and managerial and professional staff in non-public sectors for both migrant workers and urban local workers.

The structural difference in occupational attainment between migrant workers and local workers seemingly indicates that they are treated differently in urban labor markets. We predicted the occupational distribution for migrant workers using the estimated parameters of the occupational attainment model for urban local workers. This prediction reveals what the occupational distribution of migrant workers would have been if they were treated in the same way as urban local workers. The difference between actual and predicted occupational distributions indicates the degree of different treatment in favor of urban local workers or against migrant workers. We also predicted the occupational distribution for urban local workers using the estimated parameters of the occupational attainment model for migrant workers. It reveals what the occupational distribution of urban local workers would have been if they were treated as migrant workers.

The result shows that, if migrant workers had been treated equally to urban local workers, the proportion of workers and staff in public sectors would have increased by 1.55 percent. The proportion of workers in non-public sectors would have decreased by 13.05 percent. The proportion of managerial and professional staff in non-public sectors would have increased by 11.51 percent. On the contrary, if local workers had been treated the same way as migrant workers, the

proportion of workers and staff in public sectors would have decreased by 32.31 percent. The proportion of workers in non-public sectors would have increased by 34.48 percent. The proportion of managerial and professional staff in non-public sectors would have decreased by 2.17 percent.

In order to know the components of discrimination in the overall earnings differentials between migrant workers and urban local workers, we need to estimate earnings equations for migrant workers and urban local workers, respectively. The decomposition procedure requires us to estimate earnings equations for each occupation within migrant workers and local workers. The independent variables included in the earnings equations are exactly the same as those in multinomial logit model of occupational attainment. Most of the independent variables have the expected signs and are statistically significant.

To conduct the decomposition of earnings differentials, we also need to calculate means of all the independent variables for every occupation within each of these two groups. The mean earnings differentials between migrant workers and urban local workers can be decomposed into four components: intra-occupational explained, intra-occupational unexplained, inter-occupational explained and inter-occupational unexplained.

Brown decomposition method also has different decomposition equations. In order to solve the index problem, we take the average of all possible decompositions and give the result in Table 8. The differential of mean log hourly earnings between migrant workers and urban local workers is 0.6660. Of this, 0.5621 (84.4 percent) is attributable to intra-occupational earnings differentials, while 0.1040 (15.62 percent) is attributable to earnings differentials caused by occupational distribution differences.

**Table 8 Brown Decomposition Results of Earnings Differentials between Migrant Workers and Urban Local Workers in 2001**

	Log hourly earnings	% of total	% of intra-occupational	% of inter-occupational
Total earnings differential	0.6660	100		
Intra-occupational	0.5621	84.40	100	
Explained	0.2349	35.27	41.79	
Unexplained	0.3272	49.13	58.21	
Inter-occupational	0.1040	15.62		100
Explained	0.0608	9.13		58.44
Unexplained	0.0432	6.49		41.54
Total explained	0.2956	44.38		
Total unexplained	0.3704	55.62		

**Note:** There are four different decomposition equations with Brown method. Here we just give the average of these four decompositions for simplicity.

**Source:** Calculated from CULS1.

Of the 0.5621 intra-occupational earnings differential, the contribution of individual endowments is 0.2349 (41.79 percent) and the unexplained portion remains 0.3272 (58.21 percent). The unexplained portion may be attributable mainly to the discrimination rooted in the *hukou* system. Of the 0.1040 inter-occupational earnings differentials, the contribution of individual endowments is 0.0608 (58.44 percent) and the unexplained portion is 0.0432 (41.54 percent). Overall, 44.38 percent of the total earnings differentials between migrant workers and urban local workers can be attributed to individual endowments difference and the unexplained portion is 55.62 percent, which may mainly be attributable to discrimination in favor of urban local workers and against migrant workers.

Our results are very similar to the results of Meng and Zhang's

conclusion in some aspect<sup>1</sup>. According to their study, 82 percent of the mean log hourly earnings differential between migrant workers and local workers is attributable to intra-occupational wage differentials, while only 18 percent is attributable to earnings differentials caused by occupational distribution differences. This is very similar to our results. However, there exists some difference between their results and ours. According to their study, -10.59 percent of earnings differentials between migrant workers and urban local workers is attributable to individuals' endowments difference and ours is 44.38 percent.

Following Brown method and exactly the same procedure, we decompose earnings differentials between migrant workers and urban local workers in 2005. The result shows that, the differential of mean log hourly earnings between migrant workers and urban local workers is 0.5460. Of this, 0.4657 (85.29 percent) is attributable to intra-occupational earnings differentials, while 0.0803 (14.71 percent) is attributable to earnings differentials caused by occupational distribution differences.

Of the 0.4657 intra-occupational earnings differential, the contribution of individual endowments is 0.2060 (44.23 percent) and the unexplained portion remains 0.2598 (55.78 percent). The unexplained portion may be attributable mainly to the discrimination rooted in the *hukou* system. Of the 0.0803 inter-occupational earnings differentials, the contribution of individual endowments is 0.0464 (57.75 percent) and the unexplained portion is 0.0339 (42.22 percent). Overall, 46.22 percent of the total earnings differentials between migrant workers and urban local workers can be attributed to individual endowments difference and the unexplained portion is 53.78 percent, which may mainly be attributable to discrimination in favor of urban local workers and against migrant workers.

Comparing the decomposition result of 2001 and 2005, we can find

---

<sup>1</sup> Xin Meng and Junsen Zhang (2001), "The Two-Tier Labor Market in Urban China: Occupational Segregation and Wage Differentials between Urban Residents and Rural Migrants in Shanghai", *Journal of Comparative Economics*, 29, pp.485-504.



that, the proportions of intra-occupational and inter-occupational earnings differentials between migrant workers and urban local workers don't change too much. And the proportion of earnings differentials due to discrimination is 55.62 percent in 2001 and 53.78 percent in 2005, which decrease a little bit. If discrimination is a phenomenon which is related to the labor market development, the decrease of discrimination against migrant workers does reflect the development of China's urban labor market.

When we compare the results of Brown method with those of Oaxaca method, we can see that, the proportion of earnings differentials due to discrimination against migrant workers by Oaxaca method is lower than that by Brown method in both 2001 and 2005. As we know, Oaxaca method can't take account of the earnings differentials due to occupational difference. Meanwhile, there exist large differences on occupational distributions between migrant workers and urban local workers. Our results just indicate the main difference between these two methods.

## V. Main Conclusions and Policy Implications

Based on the analysis using CULS1 and CULS2, we can conclude that: firstly, the proportion of migrant workers suffering from wage arrears decreased a lot from 2001 to 2005; secondly, the proportions of migrant workers suffering from wage arrears from construction and wholesale and retail trade and catering services are both very high and the total proportions from these two sectors are over 50 percent in both 2001 and 2005; the proportion of workers from manufacturing is less than 9 percent; the total of proportions from all the other sectors is 38 percent; thirdly, compared to 2001, in 2005, the proportion of migrant workers suffering from wage arrears from construction decreased by 6 percentage points and the proportions from wholesale and retail trade and catering services, manufacturing and other sectors all increased a little bit; fourthly, most of migrant workers suffering from wage arrears are from private enterprises.

The econometric analysis tells us that migrant workers from construction are more likely to suffer from wage arrears than those from other sectors. Migrant workers from collective enterprises, private enterprises and foreign funded and cooperative enterprises are more likely to suffer from wage arrears than those from agencies, organizations and institutions. Most of variables which reflect personal characteristics have no effects on whether a migrant worker suffers from wage arrears or not. Some dummy variables (such as having spouse, agricultural *hukou* and managerial and professional staff) are significant in some models, but they are not significant in other models.

Compared with 2001, hourly earnings of migrant workers and urban local workers of five cities have both increased much in 2005. The average hourly earnings of migrant workers of five cities has increased from 2.94 in 2001 to 3.83 in 2005. The average hourly earnings of urban local workers of five cities has increased from 5.63 in 2001 to 6.85 in 2005. However, the hourly earnings differentials between migrant workers and urban local workers have narrowed from 2001 to 2005. In 2001, hourly earning of urban local workers is 91 percent higher than that of migrant workers. In 2005, hourly earning of urban local workers is 79 percent higher than that of migrant workers.

Comparing the decomposition result of 2001 and 2005, the proportions of intra-occupational and inter-occupational earnings differentials between migrant workers and urban local workers don't change too much. And the proportion of earnings differentials due to discrimination is 55.62 percent in 2001 and 53.78 percent in 2005, which decrease a little bit.

The policies and measures which are intended to solve wage arrears of migrant workers have played important roles in reducing wage arrears. The proportion of migrant workers suffering from wage arrears decreased with a large extent. However, the effects of these policies and measures are different in different sectors. The effects on construction are better than those on some other sectors. More polices and actions should be taken in manufacturing, wholesale, retail trade & catering services and other sectors. Compared to agencies, organizations and

institutions, migrant workers from enterprises, especially from private enterprises, are more likely to suffer from wage arrears. More policies and actions should be taken in private enterprises.

The discrimination against migrant workers in China's urban labor market is rooted in *hukou* system. The *hukou* system is unique to China. The *hukou* system has been changing over time during the course of marketization. Almost all cities have implemented different *hukou* system reforms, even in city like Beijing and Shanghai. Usually, cities with smaller sizes have implemented more radical *hukou* system reforms. However, there have not been big steps yet in *hukou* system reform in China<sup>1</sup>. The nature of its differentiation in treating urban local workers with residential status and those migrant workers without such status remains largely unchanged. Furthermore, this differentiation has pushed the migrants from the rural areas, like illegal immigrants in some other countries, into a space of economic, social and humanistic marginalization. Therefore, the most fundamental way of changing this marginalized status of migrant workers is to carry out a thorough reform of the *hukou* system. The ultimate objective of such a reform is to eliminate the "gold content" of this system, strip off its welfare implications and limit its functions only to the registration and management of households. Only in this way can the migrant workers, once they enter the urban space, access and enjoy the same rights as urban local workers, in terms of employment, social security, public services and improved quality of life.

---

<sup>1</sup> Cai, Fang, Yang Du and Meiyang Wang (2003), *The Political Economy of Labor Migration*, Shanghai Sanlian Shudian, Shanghai Renmin Chubanshe.