Sector Choice and Wage Determinants : Evidence from Urban China

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Abstract

Based on the urban data set of Chinese Household Income Project (CHIP) in 1995, this paper has empirically analyzed sector choice and wage determinants in contemporary urban China. Though the employees in the public sector have relatively lower wage, these employees are more willingly to work in the public sector. Factors including the "Educated Youth", marriage status, age, and geographic difference have significantly effects on the probability of being employed in the public sector, while education levels, gender, and political capital present obscure effects on the likelihood of the sector employment. Education level, experience, political capital, the experience of being "Education Youth", geographic position, and gender have all significant impact on one's wage in the public sector, while the impact of political capital on one's wage is not statistically significant in the non-public sector.

Key Words: China; Sector choice; Wage determinants; Public sector; Non-public sector.

1. Introduction

Following China's reform and opening-up, the non-public owned economic sector has, with its flexible mechanisms and high operation efficiency, gradually grown up, and is playing a key role in Chinese economic promotion. The non-public owned economic sector here includes all ownership categories excluding the state-owned enterprise (SOE, hereafter) and urban collective enterprise (UCE, hereafter). In other words, the non-public sectors here include private enterprise, self-employed business enterprise, Sino-foreign joint venture, foreign owned enterprise, township and village enterprise, and others. Although with all kinds of hardships and difficulties in the course of

the development, especially for private enterprises, self-employed business enterprises, and township and village enterprises, no one has now denied the achievements or the importance of non-public owned enterprises to the development of the Chinese economy.

Accompanying with presence of the non-public owned economic sector and the depth of reforms to the state-owned enterprise, how has people's sense of sector choice changed? Is there an evident disparity of the wage or income between the public sector and the non-public sector? Are the determinants of the wage for the public sector different from the non-public sector? Is wage differential the only factor considered when an employee chooses his or her job? To answer those questions is very important because a deep understanding and analysis of the motives of labor mobility would be conductive to the treatment of the unemployment, a knotty problem of the contemporary China.

There is rich literature on earnings differentials between two sectors of different institutional arrangements. Some examples include Lee (1978), Gunderson (1979), Van der Gaag and Vijverberg (1988), Bedi (1998), and Lokshin and Jovanovic (2003). Studies focused on sector choice and earnings differentials between sectors for China's case are, to our knowledge, few and far between. Based on the survey of "Life Histories and Social Change in Contemporary China" (1996), Wu (2002) examines the pattern of workers' entry into self-employment in reform-era China (1978-1996), and finds that education, party membership and cadre status deter urban workers' entry into self-employment. Using the urban household survey of China in 1996, Zhao (2001) estimates earnings differentials between state and non-state sectors for Chinese urban residents, and finds that state-sector workers earned significantly more than workers in urban collective and domestic private enterprises in 1996. Unskilled workers in foreign invested enterprises (FIEs) earn significantly less than in the state sector but skilled workers earned more in FIEs than in the state sector. Restricting my estimation to two sectors, public sector and non-public sector, is for the following reasons. Firstly, although previous references focused on earnings differentials between two sectors of different institutional arrangements abroad are very rich, similar studies for Chinese case are, as mentioned above, very few. Secondly, SOE and UCE are the only two kinds of ownerships had existed in urban

China during the planning economic era, so they have something in common. While the non-public sectors emerge only after the introduction of the reform and open-door policies in China. Thirdly, merging all non-public sectors into one group can augment degree of freedom of the non-public sector sample.

The rest of this paper is organized as the following. Section 2 briefly gives an introduction of the models. The data construction used in this paper is explained in section 3. Section 4 gives a minute analysis of the descriptive statistics. We explain the estimation theory, and analyze the empirical results on the wage differentials and sector choice in section 5. Section 6 gives some discussions and draws our conclusions.

2. Model

Considering the following models:

$$\ln w_1 = Z\gamma_1 + u_1 \tag{1}$$

$$\ln w_2 = Z\gamma_2 + u_2 \tag{2}$$

$$I^* = X_1\beta_1 + \varepsilon_1 \tag{3}$$

where $\ln w_1$ and $\ln w_2$ respect log wage rates of the public sector and non-public sector, respectively. Z is a vector of wage determining variables, including age, education, gender, experience, political capital, region, industry sector, etc. I^* is the latent variable denotes individual's net benefits from the sector choice (Assume the public sector is preferred), X_1 is a vector of characteristics that are associated with obtaining a sector's job. γ_1, γ_2, and β_1 are vectors of parameters, u_1 u_2 and ε_1 are the disturbance terms.

In practice, I^* is unobservable. What we observe is the sector selection result, denoted by a dummy variable I, according to the following rule:

$I = 1$ if $I^* \geq 0$, i.e., the individual selects a public sector job

$I = 0$ if $I^* < 0$, i.e., the individual selects a non-public sector job

then, we change equation (3) into equation (4)

$$I = X\beta + \varepsilon \tag{4}$$

Where X is a vector of characteristics that are associated with the probability of obtaining a sector's job. X absorbs all exogenous variables in Z and X_1. β is a vector of parameters, ε is the disturbance term.

We will first estimate the wage and sector selection equation by OLS and a binary response model independently under the assumption of independence of the error terms in equations (1) and (4), or equations (2) and (4). However, assumption of independence of the error terms in equations (1) and (4), or equations (2) and (4) can be problematic. Some jobs in the public sector may be allocated based on personal connections. At the same time, individuals who left the public sector for the non-public sector likely had more entrepreneurial spirit and better earning opportunities in the non-public sector. Characteristics such as entrepreneurial spirit and the quality of personal connections are not measurable. Thus, OLS method would, in general, produce biased results if individual wages were affected by unobserved characteristics that correlate with the sector of employment[1]. In order to examine the effect of sample selection and eliminate such selection bias (if exists), a standard two-step procedure described by Heckman (1979) is used. The first step is a reduced form probit model of sector selection. From it we obtain the inverse Mill's ratio, which is $\phi(X\beta)/\Phi(X\beta)$ for the public sector employees, and $-\phi(-X\beta)/\Phi(-X\beta)$ for the non-public sector employees, where $\phi(.)$, $\Phi(.)$ are the normal density and cumulative distributions, respectively. The second step is to estimate the log wage equations with the inverse Mill's ratio. To obtain the estimates corrected for the sample selection bias, we regress:

$$\ln w_1 = Z\gamma_1 + \phi(X\hat{\beta})/\Phi(X\hat{\beta})\,\theta_1 + \upsilon_1 \tag{5}$$

$$\ln w_2 = Z\gamma_2 - \phi(-X\hat{\beta})/\Phi(-X\hat{\beta})\,\theta_2 + \upsilon_2 \tag{6}$$

where γ_1, γ_2, θ_1, θ_2 are vectors of parameters, υ_1 and υ_2 are the disturbance terms.

3. Data Construction and Descriptive Analysis

3.1 Data

Data used in this paper come from the urban data set of Chinese Household Income Project (CHIP) in 1995, which consists of 6,931 households with 21,698 individuals distributing over 11 of the country's provincially administrative

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[1] See Heckman (1979) for discussions of sample selection bias.

divisions, namely Beijing, Shanxi, Liaoning, Jiangsu, Anhui, Henan, Hubei, Guangdong, Sichuan, Yunnan and Gansu. Because our purpose is to analyze the wage differentials and sector choice, we constrain the samples under consideration on the urban individuals who were working at the time of the interview and aged between 16 and 59 for men, and between 16 and 54 for women. This creates a data set with 10,514 observations. In order to dispel the influences from the outliers, we remove individuals with residuals more than three-standard deviations away from average in our analysis. Further, we exclude government employees in our analysis, and divide our samples into two sub-samples, namely, the public sector sample and the non-public sector sample. The former, with observations of 7606, consists of state-owned enterprise (SOE) and urban collective enterprise (UCE), while the later, with observations of 383, contains the other ownership categories such as foreign-invested enterprises (including foreign owned, and Sino-foreign joint venture), private enterprises, and others.

3.2 Descriptive analysis

Table 1 lists the summary statistics of variables used in the analysis.

Labors employed in the non-public sector earn, on average, higher wages than those in the public sector. An employee working in the non-public sector will receive a 42-yuan higher wage than that in the public sector.

The male participation rate in public sector (52.79 percent) is 4.5 percent higher than that of females, while the same index in the non-public sector is 48.51 percent, which is lower than the female's by 3 percent. Although the male participation rate in the public sector is higher than the non-public sector, a t-test indicates that the difference of the male participation rate between the public and non-public sector is not significantly different from zero even at 90 percent confidence level.

Non-public sector employees are on average younger (the employees aged at less than 30 years old share 17.5 percent in the whole employees in the public sector, while this share is 41.5 percent in the non-public sector), and are less likely to be married. The differences of the public sector from the non-public sector both in age and married status are statistically different from zero at 95 percent confidence level.

The rate of the Communist Party Member (CPM hereafter, which is used as a proxy of political capital later) in the public sector (25.52 percent) is evidently higher than the non-public sector (6 percent).

Individuals employed in the public sector have averagely longer work experience compared with those in the non-public sector. Those with less

Table 1 Summary Statistics

	Public		Non-public		Absolute
	Mean	St. Dev	Mean	St. Dev	T-test
Monthly wage (RMB, yuan)	470.86	277.17	513.08	374.02	72.9153
Work years					
5-10 years	0.0997	0.2997	0.1700	0.3761	5.2371
10-15 years	0.1362	0.3431	0.2000	0.4005	3.9492
15-20 years	0.1701	0.3758	0.1275	0.3340	2.6348
20-25 years	0.1752	0.3802	0.1075	0.3101	3.4543
25 years or more	0.3537	0.4781	0.1200	0.3254	9.4754
Political Capital (Party Member = 1)	0.2552	0.4360	0.0600	0.2378	6.5665
Educational Level					
College and above	0.0394	0.1947	0.0470	0.2119	0.6040
Professional School	0.2480	0.4319	0.1697	0.3759	3.5389
Upper Middle School	0.6458	0.4783	0.6658	0.4723	0.7439
Lower Middle School	0.0668	0.2497	0.1175	0.3224	3.7113
Educated Youth to the Countryside (yes = 1)	0.2248	0.4175	0.0975	0.2970	7.1709
Region (Coastal region = 1)	0.3681	0.4823	0.5725	0.4953	8.0098
Gender (male = 1)	0.5279	0.4992	0.4851	0.5005	0.7764
Marriage (yes)	0.8875	0.3160	0.6575	0.4751	12.9762
Age					
Less than 30 years old	0.1748	0.3798	0.4150	0.4933	12.2533
30-40 years old	0.3316	0.4708	0.2775	0.4483	2.5219
40-50 years old	0.3647	0.4814	0.2550	0.4364	5.2306

than 15 years of the work experience make up 2.6 percent of all public employees, while the same group accounts for 39 percent of all non-public employees. On the other hand, more than 52 percent of people working in the public sector are of more than 20 years' standing, while less than 23 percent of employees in the non-public sector are with more than 20 years' seniority.

The proportion of the Educated Youth (zhiqing)[2] to the whole employees in the public sector (22.48 percent) is significantly higher than that in the non-public sector (9.75 percent).

In the public sector, employees of 3.94 percent have a college or above education, 24.80 percent have a professional school diploma, 64.58 percent have attended middle school, and 6.68 percent have an elementary school or below level of education, while in the non-public sector, those statistics are 4.70 percent, 16.97 percent, 66.58 percent, and 11.75 percent, respectively. Among which, the proportion of the employees with professional school diploma to the whole employees, as well as the proportion of those with elementary school or below level of education to the whole employees in the public sector, is significantly different from corresponding category in the non-public sector.

36.81 percent of observations are from the coastal region for the public sector sample, while this statistic is 57.25 percent for the non-public sector sample.

4. Empirical Results

4.1 Sector Choice

We first analyze the results of the sector choice from probit model.

Columns 6, 7, and 8 in table 2 list the results of the estimation of the sector choice equation. The set of explanatory variables for this estimation includes a series of dummy variables: political capital (CPM = 1), educational level (the reference category: elementary school and below), Educated Youth to the Countryside (yes = 1), region (coastal region = 1), marital status (yes = 1), age (the reference category: no less than 50 years old), nature of employment (the reference category: contract worker or employee), and industry sector (the

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[2] The Educated Youth here is the students of middle school age who were sent to the countryside during the "Cultural Revolution" to "learn from the peasants".

Table 2 Estimates of Wage (without selection correction) and Sector Choice Equations

(1)	Public		Non-public		Sector Choice		
	Parameter	t-value	Parameter	t-value	Parameter	t-value	marginal effects
	(2)	(3)	(4)	(5)	(6)	(7)	(8)
C	5.1728	90.2999	4.7843	25.8018	7.1771	0.0043	
Work years (reference category: less than 5 years)							
5-10 years	0.2085	7.3928	0.0574	0.5503			
10-15 years	0.4225	15.8038	0.3090	3.1700			
15-20 years	0.4872	18.8128	0.4046	3.4241			
20-25 years	0.5796	21.4864	0.4000	2.9931			
25 years or more	0.6647	26.3612	0.7035	5.3198			
Political Capital (Party Member = 1)	0.1439	9.3500	0.0875	0.5920	0.1515	1.2383	0.0084
Education (reference category: elementary school and below)							
College and above	0.4240	11.6512	0.4240	2.2635	-0.0945	-0.4362	-0.0052
Professional school	0.2800	11.1627	0.6224	4.5326	0.2074	1.3657	0.0115
Upper Middle school	0.1670	6.7110	0.4059	3.3521	0.0860	0.5993	0.0048
Lower Middle School	0.0760	3.1983	0.3331	2.9419	0.1735	1.2848	0.0096
Educated Youth to the Countryside (yes = 1)	0.0416	2.9322	0.2684	2.0863	0.4015	3.5552	0.0222
Region (coastal region = 1)	0.3093	26.8334	0.5870	8.7675	-0.4553	-6.6627	-0.0252
Gender (male = 1)	0.1370	11.8738	0.1175	1.7310	0.0202	0.2912	0.0011
Martal status (yes = 1)					0.3582	3.2019	0.0198
Age (reference category: 50 years or more)							
less than 30 years old					-0.5499	-2.8777	-0.0304
30-40 years old					-0.3877	-2.2555	-0.0215
40-50 years old					-0.4370	-2.5956	-0.0242
Obs.	7,187		345				
Adjusted-R^2	0.2953		0.3213		7,542		
Log-likelihood					-793.185		

reference category: agriculture, forestry, animal husbandry, fishing or water conservancy). Among which, both dummy variables representing nature of employment and industry sector are included as control variable in all cases. Detailed definitions and explanations for independent variables are listed in appendix 1.

The role of political capital has repeatedly been mentioned in the references on the market transition theory. Gerber (2001) verifies former communist party members are more likely to be involved in entrepreneurial activities once the collapse of state socialist regimes appears inevitable in Russia. Inversely, Wu (2002) empirically find that ordinary party members in urban China are found less likely to be involved in self-employment than ordinary workers. Empirical result in this paper presents that a CPM has not statistically significant effect on the probability of being employed in the public sector, though with positive sign.

Some previous studies (Zhang and Zhao 2002; Zhao 2001) have mentioned the higher returns to education in the state sector or the pubic sector. Zhang and Zhao (2002) attributes higher returns to education in the public sector to both the decentralization in wage-setting within those sectors and the reaction to competition for skilled labor coming from foreign-funded firms and the domestic private enterprises. Empirical finding in this paper presents an obscure pattern of the educational attainment. Educational attainments have not statistically significant effect on the likelihood of the sector employment, though judged by the signs of the estimated coefficients, employees with educational level of college and above seem to have a tendency to work in the non-public sector, while employees with educational levels of professional school, upper school, and middle school seem to prefer to stay in the public sector.

An employee who has the experience of being sent to the countryside at the middle school age during the "Cultural Revolution" to "learn from the peasants", generally known as "Zhiqing", would rather stay in the public sector. An alternative explanation is that a "Zhiqing" may have the inferior position on age and knowledge structure, compared with the young.

Region dummy tells us the expected story that individuals in the coastal region have, compared with those in the non-coastal region, more evident tendency of entry into the non-public sector. An individual from the coastal

region is, on average, 2.52 percent more likely to the non-public sector than an individual from the non-coastal region. An alternative explanation is that degree of marketization in the coastal region is higher than that in the non-coastal region, while the higher the degree of marketization is, the more indifferent the stale sense of sector choice that fixed one's eyes on the public sector only will become.

Some of previous studies (Bedi 1998; Van der Gaag and Vijverberg 1988) have verified that males prefer to be employed in the private sector compared with females. Although dummy variable representing gender (male = 1) has a positive sign, which means that a man prefers to select to be employed in the public sector compared with a woman, the coefficient estimated is not statistically significant.

Dummy variable standing for marital status (the married = 1) has a positive and statistically significant effect on the public sector choice of employees. This is to say, those gotten married, compared with the single, prefer to work in the public sector. An alternative explanation is that those gotten married may regard the non-wage profit as important, while the non-wage profit in the public sector, as discussed later, is generally much more than that in the non-public sector.

The statistical significance of the coefficients on the dummy variables representing age points to the successful choice of identifiers for the estimation of the probit model. The young is more willingly to take up an occupation in the non-public sector. Compared with an employee aged at 50 years or more, an employee with less than 30 years old is 3.04 percent, an employee aged between 30 and 40 years old is 2.15 percent, and an employee aged between 40 and 50 years old is 2.42 percent more likely to work in the non-public sector, respectively.

4.2 Wage Equations

We now turn to the wage equations.

We first estimate the wage equations (1) and (2) by OLS without consideration of selectivity correction, i.e., under the assumption of independence of the error terms in equations (1) and (4), or equations (2) and (4). Columns 2-5 in table 2 present the estimates of the sector-specific

monthly wage equations, respectively.

Dependent variable in equation (1) or equation (2) is the natural logarithm of the average monthly real income which includes the regular wages, bonus, allowances, subsidies, welfare payments, and other income from work unit. The set of explanatory variables in wage equations are very similar to the variables used in the estimation of the sector choice equation, except for: (1) excluding the dummy variable standing for the marital status; (2) using work years (the reference category: less than 5 years) instead of age dummies to capture impact of experience on the wage in the wage equations. Detailed definitions and explanations for newly independent variables are also listed in appendix 1.

As discussed above, OLS estimation without selectivity correction may lead to biased results. To examine and eliminate such selection bias, we use the two-step model by Heckman (1979). The first step is a reduced form probit model of sector selection. Estimation results of the probit model are then used to construct selectivity variables to be included in estimation wage equations. Table 3 reports regression results with selectivity correction. As is shown, coefficients of selectivity variables are statistically insignificant in both of the estimated equations. This means that our estimation results using conventional OLS method are not seriously biased by sector selection. On the other hand, the adjusted R-squared for the wage equation with selectivity correction in non-public sector is less than that without selectivity correction in the non-public sector, while the adjusted R-squared has a marginal improvement for the wage equation in public sector after adding reverse Mill's ratio as an explanation variable. Therefore, we, from now on, prefer to focus our analyses on wage equations without selectivity correction.

As shown in table 3, the coefficients of dummy variables standing for work years are positive and significant at 1 percent level both in the public sector and non-public sector except for the group with work years of 5-10 in the non-public sector. The longer one's work years are, the higher his wage will be. In public sector, compared with an employee with work years of less than 5, a gain of more than 20 percent will be expected for an employee with work years of 5-10, while 42.25 percent, 48.72 percent, 57.96 percent, and 66.47 percent for those with the work experience of 10-15, 15-20, 20-25, and more than 25 years, respectively. On the other hand, in non-public sector, compared

with an employee with less than 5 years' standing, an employee with 10-15 years' seniority will gain 30.9 percent higher, while those with the work years of 15-20, 20-25, and more than 25 years will make a profit of 40.46 percent, 40 percent, and 70.35 percent higher, respectively.

A CPM holds a more favorable position in increasing one's wage in the public sector. The rate of return to a CPM is about 14.39 percent in the public

Table 3 Estimates of the Wage equations with selectivity correction

	Public		Non-public	
	Parameter	t-value	Parameter	t-value
C	5.1823	89.9987	5.0246	7.6753
Work years (reference category: less than 5 years)				
5-10 years	0.2013	7.0476	0.0662	0.6193
10-15 years	0.4073	14.3686	0.3304	2.9377
15-20 years	0.4703	16.8243	0.4302	3.1650
20-25 years	0.5629	19.4746	0.4235	2.8759
25 years or more	0.6471	23.5540	0.7283	4.9395
Political Capital (Party Member = 1)	0.1415	9.1558	0.1109	0.6926
Education (reference category: elementary school and below)				
College and above	0.4256	11.6931	0.4157	2.2012
Professional school	0.2775	11.0463	0.6293	4.5382
Upper Middle school	0.1671	6.7158	0.4077	3.3601
Lower Middle School	0.0737	3.0936	0.3396	2.9623
Educated Youth to the Countryside (yes = 1)	0.0368	2.5349	0.2891	2.0693
Region (coastal region = 1)	0.3189	24.5615	0.5576	5.4739
Gender (male = 1)	0.1369	11.8746	0.1177	1.7319
Mill's ratio	− 0.2104	− 1.6037	− 0.0962	− 0.3827
Obs.	7,187		345	
Adjusted-R^2	0.2955		0.3195	

sector, while such positive impact on one's wage has not statistical significance in the non-public sector. An alternative explanation is that a CPM may be put in an important position in the public sector, while political capital may not be stressed in the non-public sector.

With regard to educational level, regression results show that there exist gaps among different educational levels. Returns to education are positive and significant at all educational levels. Return to college and above education in the public sector (42.4 percent) is as same as that in the non-public sector. However, at all other educational level this public sector advantage is reversed. In the non-public sector, employees with professional school are more highly rewarded than those with educational levels of college and above. This seems to elude the understanding. However, it may indicate that simply acquiring higher education does not increase wage of non-public sector employee. Other features such as the quality of the education, work ability may be important in determining the wage levels in the non-public sector.

An employee who has the experience of the "Educated Youth to the Countryside" will be more highly rewarded than a man or woman who has not undergone such experience by 4.16 percent in the public sector, and by 26.84 percent in the non-public sector. It seems that "Educated youth to the Countryside" cohort has itself superiority in raising the wage.

Dummy variable capturing geographic differences in the wage equation indicates that an employee working in the coastal region tends to gain higher wage than an employee in the non-coastal region, especially for the non-public sector. Employees in the coastal region will, on average, more highly rewarded than those in the non-coastal region by 30.93 percent for the public sector, and by 58.70 percent for the non-public sector.

Gender plays an important role in determining one's wage both in the public and non-public sector. A male's wage is averagely higher than a woman's by 13.70 percent in the public sector, and by 11.75 percent in the non-public sector, though with the significance at 91.6 percent confidence level in the latter. Although a man gain more than a woman, we find that

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[3] According to Tachibanaki (1998), Australia and Canada show very small gender wage gaps compared with other countries such as France, Germany, Japan, Korea, The United Kingdom, and the U.S.A. However, compared with China, both Australia and Canada still appear evident wage differentials between man and woman (see table 5.2 and table 6.5 there)

Chinese women, compared with some developed countries[3], still enjoy greater wage equality. This confirms the Peng's finding (Peng's 1992) that the formally equal status for women under state socialism seems effective.

5. Conclusions and Discussions

In this paper we have empirically analyzed sector choice and wage determinants in contemporary urban China. The followings are the main findings in this paper.

Employees employed in the non-public sector, averagely, earn higher wages than those employed in the public sector.

Though the employees in the public sector have relatively lower wage, these employees are more willingly to work in the public sector.

Factors that have significantly effects on the probability of being employed in the public sector include the Educated Youth, marriage status, age, and geographic difference. On the other hand, education levels, gender, and political capital present obscure effects on the likelihood of the sector employment.

Education level, experience, political capital, the experience of being the "Educated Youth", geographic position, and gender have all significant impact on one's wage in the public sector, while the impact of political capital on one's wage is not statistically significant in the non-public sector.

An important reason that the employees prefer to stay in the public sector despite of the relatively lower wage in this sector may be the high non-wage profit in the public sector. Because of the lack of data, we cannot analyze and compare the difference of the non-wage profit between the public sector and non-public sector from the urban data set of CHIP used in this paper. Fortunately, Zhao (2001) has, based on the macro-data, contributed to this topic. According to Zhao's estimation, a worker working in the SOE earns 442.6 (Chinese Yuan) less in wage than does in domestic private enterprises, but this shortfall is more than compensated by the non-wage premium[4] of 3430.8 (Chinese Yuan) in favor of SOEs. While the wage premium in favor of workers working in foreign investment enterprises is nearly equal to the non-

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[4] Non-wage premium calculated by Zhao (2001) includes pension, housing and health care.

wage benefits in favor of workers employed in SOEs. We guess that the non-wage premium in favor of workers employed in SOEs can be higher if the extent of the non-wage premium defined by Zhao (2001) is enlarged. So it is not difficult to explain why the employees prefer to stay in the public sector despite of the relatively lower wage in the same sector.

A caveat is needed. Our analysis is based on urban data set of CHIP in 1995 when it wasn't three years before "socialist market economy with Chinese characteristics" was endorsed as the goal of China's economic reform. Labor market situation in China has changed evidently in recent years. For example, in July of 1998, the government announced that welfare distribution of housing would stop (Zhao, 2000). Reforms of pension and health insurance are performing. All of these reforms are expected to reduce the cost of shifting employment and promote labor mobility. So a further investigation using a more recent data set would be valuable.

Acknowledgements

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Appendix 1   Definition of Independent Variables

Independent Variables		Description
Dummy variables for experience (reference group: less than 5 years)	5-10 years	= 1 if the length of the experience is 5-10 years; = 0 otherwise
	10-15 years	= 1 if the length of the experience is 10-15 years; = 0 otherwise
	15-20 years	= 1 if the length of the experience is 15-20 years; = 0 otherwise
	20-25 years	= 1 if the length of the experience is 20-25 years; = 0 otherwise
	25 years or more	= 1 if the length of the experience is not less than 25 years; = 0 otherwise
Dummy variable for political capital (reference group: non-CPM)	CPM	= 1 if of Communist Party Member; = 0 otherwise
Educational level (reference group: elementary school and below)	College or above	= 1 if individual attained college or above; = 0 otherwise
	Professional school	= 1 if individual attained professional school; = 0 otherwise
	Middle school	= 1 if individual attained middle school; = 0 otherwise
Dummy variable for "the Educated Youth" (reference group: the non-"Educated Youth")	Educated Youth to the countryside	= 1 if of the "Educated Youth"; = 0 otherwise
Dummy variable for region (reference group: inland region)	Coastal region	= 1 if of coastal region; = 0 otherwise
Dummy variable for marital status (reference group: singular)	Married	= 1 if of the married; = 0 otherwise
Dummy variables for age (reference group: 50 years or more)	Less than 30 years old	= 1 if individual is less than 30 years old; = 0 otherwise
	30-40 years old	= 1 if individual is 30-40 years old; = 0 otherwise
	40-50 years old	= 1 if individual is 40-50 years old; = 0 otherwise
Dummy variables for industry sector (the reference group is industry sector 1 which includes agriculture, forestry, animal husbandry, fishing or water conservancy)	Industry Sector 2	= 1 if of industry or manufacturing, mining and geological survey and prospecting, or construction; = 0 otherwise
	Industry Sector 3	= 1 if of transportation, communications, posts and telecommunications, or commerce and trade, restaurants & catering, materials supply, marketing, and warehousing; = 0 otherwise
	Industry Sector 4	= 1 if of real estate, public utilities, personal and consulting services, or finance, insurance; = 0 otherwise
	Industry Sector 5	= 1 if of health, physical culture and social welfare, or education, culture, arts and broadcasting, or scientific research and technical services; = 0 otherwise
	Industry Sector 6	= 1 if of government and Party organs, social organizations; = 0 otherwise
	Industry Sector 7	= 1 if of other; = 0 otherwise
Dummy variables for nature (tenure) of employment (reference group: contract worker or employee)	Permanent worker/employee	= 1 if individual is employed as permanent worker or employee of an enterprise; = 0 otherwise
	Self-employee or other	= 1 if individual is a private enterprise proprietor or other; = 0 otherwise