

Mincer's Wage Determination, Job Changing, and Social Capital in China

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Abstract

In this study, we examine the wage determinants of China's labor market, focusing on the effects of individual-level social capital and job changing. We use the micro-level data of the China General Social Survey (2008) for our estimation and find that individual-level social capital plays an important role in the evaluation of human capital, and that job changing increases the price of skill and the wage level of workers. The evaluation of human capital needs to be considered in the application of Mincer's equation to China's case.

Keywords: human capital, probit model, social network, wage

1. Introduction

Previous studies have found strong evidence of returns to education in China's wage determination. In a comparison with its planned economy before the 1980s, when wages were equally distributed among workers, China has made considerable progress toward a real labor market. However, since the Chinese labor market is still in an incomplete and imperfect state, and the country's internal labor markets have not yet been fully developed, the price of skill in China is not fully determined by market forces but is influenced by social capital and other factors as well. In this paper, we start from Mincer's theory and use a nation-wide survey to examine the contribution of education and work experience, as well as social capital and job hopping, to the determination of wages in China.

Mincer's wage equation is a statistical relationship between market wages, education, and work experience. The equation was developed under the assumption of an exogenously determined human capital accumulation rate that considered both school education and human capital accumulation beyond school education. It has been widely accepted in many empirical studies across many countries. In China, the relationship between wage and human capital has also been observed (i.e. Zhang, X. 2011). However, the labor market in China is still in an underdeveloped state, with imperfect information and many search frictions. Hence, social capital, which transmits information on job search and recruitment, plays an important role in the wage determination process. Furthermore, since China does not have a well-developed mature internal labor market, the wage of a worker usually grows more slowly in the

same firm than when the worker changes jobs, indicating that human capital is often more valued in job changing than staying in the same firm. Changing jobs has been an important tactic for workers to increase wages. Ariga et al. (2013) found that each job quit generates more than 0.2 log increases in monthly wages.

In this study, we extend Mincer's wage equation to China's case, and we consider not only the factors of education and work experience but also the endogenous evaluation of human capital, namely, the effects of social capital and job changing.

2. Model and Data

Consistent with Mincer (1974), we assume that, in the underdeveloped market of China, wages are determined in the following manner.

$$\ln w = a H(\text{edu}, \text{exp}),$$

where w denotes wage; H is the quantity of human capital, determined by edu , education, and exp , potential work experience; and a represents the evaluation of human capital. Note that a is determined by social , that is, the individual social capital, and is also influenced by job changes, as follows.

$$a = a(\text{social}, \text{job_changes}).$$

A reduced form of the estimation equation can be obtained as follows:

$$\ln w_i = c + \beta_1 \text{edu}_i + \beta_2 \text{exp}_i + \beta_3 \text{exp}_i^2 + \beta_4 \text{social}_i + \beta_5 \text{social}_i^2 + \beta_6 \text{job_change}_i + e_i$$

Furthermore, we apply several individual social capital measures, which include the scale of an individual's social network, denoted as $s_network$, and the characteristics of social capital.

Finally, the controlled variables are age (we exclude all individuals who are not in the Chinese labor force aged 16–64), sex, region (urban or rural areas), and household registration (*Hukou* in Chinese).

Further, we use data from a nation-wide questionnaire survey, the Chinese General Social Survey 2008 (CGSS 2008), conducted by the Renmin University of China and the Hong Kong University of Science and Technology. The data list is shown in Table 1 below.

Table 1 Data list

Variable	Obs	Mean	Std. Dev.	Min	Max
lnw	4754	9.025192	1.175107	4.60517	13.81551
wage	5032	14313.23	26432.28	0	1000000
education	5491	9.398834	3.676503	1	24
experience	3629	21.82667	14.35871	0	67
job_change	6000	0.302333	0.689449	0	7
s_network	5989	24.25497	23.96428	0	320
s_worker	5644	0.551028	0.497433	0	1
s_government	5633	0.135274	0.342047	0	1
s_employer	5638	0.206634	0.404926	0	1
party	6000	0.112833	0.316415	0	1
age_labor	5541	41.02581	12.28321	18	64
sex	6000	0.482	0.499718	0	1
region	6000	0.663667	0.472494	0	1
hukou_type	5991	4.266567	1.748326	1	6
hukou_region	5999	0.884981	0.319072	0	1

In Table 1, *wage* is the annual income from work, *education* represents schooling years, *experience* is the length of period from the first job, and *job_change* is the number of times the individual changes his/her jobs. The scale of social network is measured as the number of people who express their new year greeting to the individual (including greetings through telephone but not through mail) during the new year holidays (*chunjie* in Chinese). Among these people, *s_worker* denotes whether they are firm workers or not (Yes = 1), *s_government* whether they are government officers or not (Yes = 1), and *s_employer* whether they are enterprise employers or not (Yes = 1). These are important social communication indices in this survey. Further, *party*, which denotes whether the individual is a Communist Party member or not (Yes = 1), is also considered an important social capital index in China. Furthermore, *sex* indicates whether the individual is male or not (male = 1), and *region* whether the individual currently lives in an urban area or not (urban areas = 1). Finally, *hukou_type* indicates the type of household registration, defined according to size order as follows: central-government controlled cities = 1, central cities of provinces = 2, middle-sized cities (*dijishi* in Chinese) = 3, small-sized cities (*xianjishi* in Chinese) = 4, towns (*jizhen* in Chinese) = 5, and villages = 6. Since an individual might leave his or her household registered area for a higher-wage job in other areas,

hukou_region is controlled for, representing whether the individual lives in his/her household registered areas or not (Yes = 1).

3. Estimation

The estimation results are reported in Table 2. Schooling has a significantly positive effect on wages. Further, a positive coefficient of *exp* and negative coefficient of the squares of *exp* indicate that the wage of a worker rises with the accumulation of experience at a decreasing rate. These are consistent with Mincer’s theory.

However, we find that social capital also plays an important role in wage determination. On the one hand, one’s social network, measured as the number of people who share a close relationship with the individual, has a significant positive effect on the wage level, although one’s social network increases wages at a decreasing rate. On the other hand, having government officers in one’s social network has a significant positive effect on the wage level, in the same way as having the enterprise employer in one’s social network. However, having firm workers in the social network does not show any significant effect on the wage level. These results indicate that the type of social network is also important. Furthermore, they indicate that an individual could receive higher wages if he/she is a Communist Party member.

Furthermore, we find that job changing has a significantly positive effect on one’s wage level. Since China does not have a well-developed mature internal labor market, the Chinese workers can gain higher value for their experience through job hopping rather than by staying in the same firm. Finally, the region where an individual lives also influences his/her wage level. It is indicated that the larger the scale of residential city, the higher is the wage level the individual receives, controlling for the effect of internal migration, that is, the migration of those who move to other cities for higher jobs.

Table 2 Estimation Results

	Model 1	Model 2	Comparison1	Comparison2	Comparison3
	Ordered	Ordered	Ordered	OLS	OLS
	probit	probit	probit		
education	0.116626 [16.16]***	0.109599 [14.62]***	0.154555 [25.97]***	0.081788 [15.16]***	0.075846 [13.61]***
exp	0.013333 [2.11]**	0.011303 [1.74]*	0.004544 [1.03]	0.009375 [1.94]*	0.007645 [1.55]
exp_squa	-0.0004 [-3.24]***	-0.00036 [-2.85]***	-0.000015 [-0.17]	-0.000287 [-3.02]***	-0.00025 [-2.59]***

job_change	0.100221 [4.20]***	0.093562 [3.85]***	0.095018 [4.35]***	0.077629 [4.26]***	0.071017 [3.85]***
s_network	0.00649 [4.55]***	0.003738 [2.40]**	0.002646 [3.77]***	0.004926 [4.52]***	0.003039 [2.57]**
s_net_squa	-2.1E-05 [-2.37]**	-1.2E-05 [-1.25]		-0.000015 [-2.15]**	-0.000008 [-1.19]
s_worker		0.013701 [0.32]			0.013967 [0.43]
		s_government	0.117583 [2.11]**		[2.21]**
s_employer		0.252629 [5.40]***			0.174964 [4.93]***
party	0.104523 [1.89]*	0.068215 [1.19]		0.061703 [1.45]	0.031874 [0.73]
age_labor	-0.00089 [-0.22]	-0.00123 [-0.30]		0.000012 [0.00]	-0.000387 [-0.12]
sex	0.316294 [8.09]***	0.32185 [8.02]***		0.21535 [7.23]***	0.218265 [7.21]***
region	0.407669 [6.32]***	0.389963 [5.87]***		0.390934 [7.98]***	0.377908 [7.55]***
hukou_status	-0.15877 [-10.63]***	-0.16226 [-10.51]***		-0.116432 [-10.27]***	-0.117719 [-10.14]***
hukou_region	-0.49753 [-8.50]***	-0.50661 [-8.29]***		-0.356746 [-8.00]***	-0.361074 [-7.83]***
_cons				8.717421 [59.32]***	8.803796 [57.95]***
cut	(omitted)	(omitted)	(omitted)		
Log likelihood	-9720.33	-9215.82	-10773.263		
R-squared				0.308195	0.320372
Adj-R-squared				0.305235	0.316545
N	2817	2680	3033	2817	2680

* p<0.1, ** p<0.05, *** p<0.01.

4. Conclusion

In this study, we extended Mincer's wage equation to the case of China and found that

it is necessary to introduce the variables of social capital and job changes in the Chinese wage equation. Although education and work experience have played an important role in wage determination in China, the price of human capital is not determined by a fully developed market but is influenced deeply by social capital and job hopping.

We used the ordered-probit model and reduced-form estimation in this study. Further effort on Chinese wage equation could be made into optimal quality of schooling, one's selection of on-the-job search, and endogenous factors in the labor market.

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