CHAPTER 12

Communist Party of China Membership and Wage Gaps Between Party Members and Non-members

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12.1 Introduction

Unlike other developed countries (i.e., Japan, the United States, the United Kingdom, etc.) and transition economies (e.g., Russia and countries in Eastern Europe), despite the drastic transition from a planned economy system to a market economy, the de facto leadership of the Communist Party of China (CPC), remains dominant in China's political sphere because the government has performed a gradualist economic reform policy. According to reports published by China's Xinhua News Network Corporation, the CPC had 89.447 million members at the end of 2016, 45.9% of the members were well-educated, and there were

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451.8 million primary party organizations. In both state-owned enterprises (SOEs) and privately owned enterprises (POEs), a firm must accept management, supervision, and guidance from a primary party organization within the firm (Ma, 2019; Ma & Iwasaki, 2021).[1] CPC members can be thought of as an elite in Chinese firms and society, so it is assumed that wage levels may be higher for CPC members than for nonmembers.

Regarding the wage premium of CPC membership, according to the human capital theory (Becker, 1964; Mincer, 1974), signaling hypothesis (Spence, 1973), social capital hypothesis, and discrimination hypothesis (Becker, 1957), when human capital (i.e., education) and social capital is higher for CPC members, or when there is discrimination against non-CPC members, a positive wage premium for CPC membership may arise. On the contrary, with the progress of market-oriented reform and a separation of the political and economic systems, the characteristics of CPC members, notably their belief in Marxist ideology and loyalty to the CPC organization, may become harmful factors for company management espousing profit and market principles (Ma & Iwasaki, 2021). In addition, since 2012, in order to eradicate the negative reputation caused by corruption and legal disputes among CPC members, the Xi Jinping government has enforced an anti-corruption campaign in China, where the extent of corruption in CPC organizations and graft by CPC members may illicit social criticism. Consequently, the direction of the impact of CPC membership on wage levels in China cannot be predicted from economic hypotheses because they contradict each other. An empirical study is therefore necessary.

An investigation into the wage premium of CPC membership could allow us to understand the features of Chinese economy reform and the institutional segmentation of the Chinese labor market. Although numerous studies have not focused on the wage premium of CPC membership, the wage function including the CPC membership dummy variable were estimated, but the results are mixed. Additionally, the empirical studies on the two issues: (i) what determines the probability of people's participation in CPC organizations, and (ii) how do the human capital and discrimination contribute to the wage gap between CPC members and nonmembers, are scarce. This study employed an empirical study to examine these issues.

The original contributions of this study are summarized as follows: First, few studies have directly investigated the determinants of the probability of participation in CPC organizations and the impact of

CPC membership on wage levels (Appleton et al., 2009; Ma, 2019; McLaughlin, 2017). This study develops a debate in this neglected area. Second, this is the first study of the wage gap between CPC members and non-CPC members that uses decomposition models to estimate separately the contributions to the wage gap of the explained component (the differences in endowment factors such as human capital) and the unexplained component (discrimination against non-CPC members). The problem of income inequality is increasingly severe in China (Li et al., 2017; Sicular et al., 2020). Therefore, to investigate the determinants of the wage gap between CPC members and nonmembers may contribute to understand the income inequality due to political status disparities in China deeply. Third, this study uses two periods survey data of 2002 and 2013 to provide original evidence on the issue over a period from 2002 to 2013 and to discuss the change of CPC membership and its impact on wage gaps under *Hu jintao* and *Wen jiabao* administration. In this period, a set of policies aimed to reduce income inequality were established and enforced by the Chinese government.

Three new findings emerged. First, the probability of gaining CPC membership is higher for a male worker, a well-educated worker, a worker in the public sector, the older generation, and a worker with parents in the public sector or in CPC organizations. Second, when the endogeneity problem is not addressed, the wage premium of CPC membership ranges from 7.6 to 37.4% for 2002 and from 4.4 to 31.8% for 2013. Third, based on the resulst from the Blinder-Oaxaca decomposition analysis, the explained component is the main factor that contributes from 55.9 to 66.2% (2002) and from 85.7 to 91.0 %(2013) to the wage gap between CPC and non-CPC members. The results indicate that as the transition of the economic system advanced, the observable and unobservable factors that determine the probability of gaining CPC membership contributed to the wage gap, and their influence increased from 2002 to 2013.

The remainder of this chapter is organized as follows. Section 12.2 introduces the research background: the situations of CPC in Chinese company. Section 12.3 summarizes the results of published empirical studies on the issues. Section 12.4 introduces the methodology of the study, including the models, data, and variables used. Section 12.5 reports and discusses the basic results and the results of the robustness checks. The conclusions are summarized in Sect. 12.6.

12.2 Background: The CPC in Chinese Companies

12.2.1 The CPC Organization in China

The CPC has been the dominant political party since 1949 and has led the national organization of China. The Chinese Constitution stipulates that "China is led by the Communist Party of China." According to Article 29 of the Constitution of the Communist Party of China (hereinafter abbreviated as the Constitution), the CPC is constructed on six levels like a pyramid: (1) the highest position is filled by the general secretary who is the supreme leader of the CPC organization; (2) seven members of the Political Bureau of the Central Committee; (3) 25 members of the Political Affairs Bureau; (4) a Central Committee, currently composed of 205 full members and 171 alternate members; (5) about 2,000 representatives of the CPC conference; and (6) the most numerous and ubiquitous CPC members and primary party organizations. In China, primary party organizations are found in the majority of workplaces and communities.

The selection process for CPC membership is arduous and protracted and CPC members can be thought of as an elite in China. Li and Walder (2001) have pointed out that as the marketization of economy systems advances during the transition period, CPC organizations have recruited individuals with high ability and loyalty to strengthen their governing power.

12.2.2 The Role of the CPC in Chinese Companies

Article 19 of the Company Law of the People's Republic of China, as amended in 2013, states that, regardless of the type of ownership, "companies must establish the party organization, and provide the necessary conditions for the activities of the CPC organization." According to the *Notice for the Party Organization in Companies*, established by the Central Committee of the Communist Party of China and the Ministry of Finance, if the fees of CPC members are not sufficient, a company must provide financial support to the CPC organization within the company. The company must accept management, supervision, and guidance from the CPC organization.

In the public sector, CPC organizations continue to control companies as they did during the planned economy period. For the private sector (i.e., POEs), Item 3 of Article 32 of the Constitution states that

> CPC organizations should comply with the government laws and regulations thoroughly; guide and monitor the firm to comply with these laws and regulations; guide the popular organizations such as the trade unions and the Chinese Communist Youth Association; unite the workers, maintain and protect interests of workers; and promote the better performance of firms.

CPC organizations continue to control the management of companies, even as market-oriented reform progresses. CPC membership is highly correlated with an influential role in companies in the public and private sectors.

12.3 Literature Review

Most previous studies have used a CPC membership dummy variable as a control variable in wage functions to estimate the wage premium of CPC membership (Appendix Table 12.5). The results of published empirical analyses are inconclusive.[2] Most studies show that CPC membership positively affects the wage level (i.e., Gustafsson & Li, 2000; Knight & Song, 2003; Li, 2003; Ma, 2018a, 2019; MacDonald & Hasmath, 2018; McLaughlin, 2017; Mishra & Smyth, 2015; Wang & Lien, 2018, etc.); however, there are some studies, such as those of Mishra and Smyth (2015), Wang et al. (2017), McLaughlin (2017), and Ma (2019), that have reported that the effect of party membership on wages is not statistically significant.

Most previous studies have used the ordinary least squares regression (OLS) model to estimate the wage premium of CPC membership. A few studies addressed the heterogeneity problem using a fixed-effects model (Appleton et al., 2005; Li et al., 2007). Few studies have used the instrumental variables (IV) method to address the endogeneity problem (McLaughlin, 2017; Mishra & Smyth, 2015). Therefore, it is necessary to examine the wage premium of CPC membership with effective checks on the robustness of the results. Contrary to Ma (2019), this study investigates the wage premium of CPC membership using a set of models to conduct robustness checks. These results provide new evidence.

12.4 Methodology and Data

12.4.1 Models

First, the probit regression model is utilized to investigate the determinants of joining a CPC organization.

$$\Pr(\mathrm{CPC}_i = 1) = a + \beta_H H_i + \varepsilon_i \tag{12.1}$$

In Eq. (12.1), $\Pr(\mathrm{CPC}_i = 1)$ is the dependent variable for the probability of joining a CPC organization. i represents the individual, H represents factors (e.g. education) which affect the probability of joining a CPC organization, β is the estimated coefficient, and ε is a random error term.

Second, the wage functions are estimated in order to estimate the wage premium of CPC members. The wage function for the OLS model is expressed as Eq. (12.2).

$$lnW_i = a + \beta_{\mathrm{cpc}}\mathrm{CPC}_i + \beta_X X_i + u_i \tag{12.2}$$

As the selection bias problem may persist in the OLS model (workers choose to apply by themselves or are selected by the CPC organization to become CPC members), the selection bias correction model (Lee, 1983) is used. The estimated results of the distribution function ($\Phi(\cdot)$) and the density function ($\varphi(\cdot)$) are used for the probit regression model. The dependent variable indicates the probability of becoming a CPC member, see Eq. (12.2). The correction terms for CPC members and non-CPC members are calculated ($\delta = \varphi(\cdot)/\Phi(\cdot)$). The corrected wage function is expressed by Eq. (12.2). The parents with CPC membership dummy variable is used as an identification variable for Eq. (12.3).

$$lnW_i = a + \beta_{cpc}\mathrm{CPC}_i + \beta_X X_i + \beta_\delta \delta_i + u_i \tag{12.3}$$

In Eqs. (12.2) and (12.3), lnW is the logarithm value of the hourly wage, X represents factors (e.g. education, years of work experience) which may affect wage level, β is the estimated coefficient, and u is a random error term. When β_{cpc} is statistically significant and is a positive value, it indicates that when the other factors (e.g. human capital) are held constant the wage premium of CPC membership remains and the wage level is higher for the CPC member group than for the counterpart.

The QR model is used to investigate the wage premium of CPC membership through wage distributions from 10 to 90 percentiles, which

is expressed as follows:

$$\max_{x(\theta)}\left[\sum_{h:lnW_{i\geq\beta(\theta)H_i}}\theta|lnW_i-\beta(\theta)H_i\Big|+\sum_{h:lnW_{i\geq\beta(\theta)H_i}}(1-\theta)|lnW_i-\beta(\theta)H_i\Big|\right]$$

$$\rho(\theta)\in(0,1) \tag{12.4}$$

In Eq. (12.3), θ represents the quantile of wages (10% quantile is expressed as 10th), and $\rho(\theta)$ is a check (or indicator) function. The QR model is designed for estimation using the optimal method, which minimizes the two error terms in the equation. β expresses the estimated coefficient, and u is a random error term. When β_{cpc} is statistically significant and positive, the wage premium of CPC membership remains, and the wage level is higher for the CPC member group than for its counterpart when other factors (e.g., human capital) are held constant.

Third, two kinds of decomposition model: (i) the Blinder-Oaxaca decomposition model; and (ii) the Oaxaca-Ransom decomposition model are used to investigate the contributions of the explained and unexplained components to the wage gap separately as follows.

The Blinder-Oaxaca decomposition model (Blinder, 1973; Oaxaca, 1973) based on variable means is expressed as Eq. (12.4) and Eq. (12.5).[3]

$$\begin{aligned}\overline{lnW}_{\text{cpc}}-\overline{lnW}_{\text{ncpc}}&=\beta_{\text{cpc}}\left(\overline{X}_{\text{cpc}}-\overline{X}_{\text{ncpc}}\right)\\&\quad+\left(\beta_{\text{cpc}}-\beta_{\text{ncpc}}\right)\overline{X}_{\text{ncpc}}\end{aligned} \tag{12.4}$$

$$\begin{aligned}\overline{lnW}_{\text{cpc}}-\overline{lnW}_{\text{ncpc}}&=\beta_{\text{ncpc}}\left(\overline{X}_{\text{ncpc}}-\overline{X}_{\text{cpc}}\right)\\&\quad+\left(\beta_{\text{ncpc}}-\beta_{\text{cpc}}\right)\overline{X}_{\text{cpc}}\end{aligned} \tag{12.5}$$

In Eqs. (12.4) and (12.5), $\overline{lnW}_{\text{cpc}}$ and $\overline{lnW}_{\text{ncpc}}$ are the logarithm values of the hourly wage of CPC members and non-CPC members; $\overline{X}_{\text{cpc}}$ and $\overline{X}_{\text{ncpc}}$ are variable mean values of CPC members and non-CPC members. β_{cpc} and β_{ncpc} are estimated coefficients in wage functions.[4] Based on the human capital theory (Becker, 1964; Mincer, 1974) and discrimination hypothesis (Becker, 1957), the decomposition model decomposes the wage gap between CPC members and non-CPC members into two parts: the endowment (known as "explained component") [$\beta_{\text{cpc}}(\overline{X}_{\text{cpc}}-\overline{X}_{\text{ncpc}})$ or $\beta_{\text{ncpc}}(\overline{X}_{\text{ncpc}}-\overline{X}_{\text{cpc}})$] and the endowment return (known as the

"unexplained component") $[(\beta_{\text{cpc}} - \beta_{\text{ncpc}})\overline{X}_{ncpc}$ or $(\beta_{\text{ncpc}} - \beta_{\text{cpc}})\overline{X}_{cpc}]$. The explained component expresses the differentials of individual characteristics such as the differences in human capital endowments. The unexplained component includes the differences in wage determination systems, discrimination, or individual attributes and abilities not at present measurable. The larger the estimated explained part is, the greater is the influence of human capital differences between CPC members and non-CPC members on the wage gap, and vice versa.

The Oaxaca-Blinder decomposition method is commonly used to decompose the wage gaps. Cotton (1988), Neumark (1988), and Oaxaca and Ransom (1994) note that the Oaxaca-Blinder decomposition method using the estimated coefficient and average values of two groups may lead to an index number problem. To address this problem, we use the Oaxaca-Ransom decomposition model (Oaxaca & Ransom, 1994), which can be expressed as Eq. (12.6).

$$\begin{aligned}\overline{lnW}_{\text{cpc}} - \overline{lnW}_{\text{ncpc}} &= \beta^*\left(\bar{X}_{\text{cpc}} - \bar{X}_{\text{ncpc}}\right) + \left(\beta^* - \beta_{\text{ncpc}}\right)\bar{X}_{\text{ncpc}} \\ &\quad + \left(\beta_{\text{cpc}} - \beta^*\right)\bar{X}_{\text{cpc}} \end{aligned} \tag{12.6}$$

In Eq. (12.6), the β^* is a gender-neutral coefficient estimated based on wage functions using the entire sample including CPC members and non-CPC members. In the Oaxaca and Ransom model, $\beta^*(\overline{X}_{\text{cpc}} - \overline{X}_{\text{ncpc}})$ represents the wage gap resulting from a difference in endowment (explained component); $(\beta^* - \beta_{\text{ncpc}}\overline{X}_{\text{ncpc}})$ represents the gap caused by low endowment return of non-CPC members (known as "loss of non-CPC members"), and $((\beta_{\text{cpc}} - \beta^*)\overline{X}_{\text{cpc}})$ represents the gap generated by too-high endowment return of CPC members (known as "gain of CPC members"). The sum of these two decomposition values stands for the wage gap resulting from differences in the endowment return (unexplained component).

12.4.2 Data and Variables

The analysis in this study uses data from the Chinese Household Income Project Survey (CHIPs) of 2002 and 2013. The CHIPs 2002 survey was conducted in 2003 and the most recent survey data (CHIPs 2013) was conducted in 2014. Both were conducted by the Institute of Economics, the China Academy of Social Science, Beijing Normal University, and the National Bureau of Statistics (NBS) of China. The CHIPs includes

urban local residents, migrants, and rural residents. The proportion of CPC members in either migrants or rural residents is low, therefore only local urban resident samples are used in this study. The CHIPs includes information about individual and household characteristic factors, job status, and wages. CHIPs 2002 and 2013 give information about parents with CPC membership which can be used as the identification variables in the selection bais correction model. The CHIPs sample is a part of the samples in the NBS which cover the representative provinces or metropolises. The surveyed provinces or metropolises that occur in both CHIPs 2002 and CHIPs 2013 are used in the analyses. They include Beijing, Shanxi, Liaoning, Jiangsu, Anhui, Guangdong, Henan, Hubei, Chongqing, Sichuan, Yunnan, and Gansu in the Eastern, Central, and Western Regions of China.

The analytic objects were workers, and the unemployed samples were excluded from this calculation. The analytic objects were limited to local urban residents aged 16–60 years with consideration of the mandatory retirement system in the public sector.[5] Abnormal value samples,[6] no answer samples, and samples with missing values were deleted.

The dependent variable used in the probability function of participation in the CPC organization is a binary variable, which is equal to 1 when an individual is a CPC member. In the wage function and decomposition model, the dependent variable is the logarithm of the hourly wage. The hourly wage was calculated from wages and work hours. The wage includes basic wage, bonus, and cash subsidy.

The independent variables are those that are likely to affect the wage level: first, education and years of experience[7] were used as the indicator of human capital. A female dummy variable was constructed to control for the influence of gender disparity.

Second, five types of occupations (manager and engineer, operator, clerk, service, and others) and five types of industry sector dummy variables (manufacturing, construction, sales, service, and others) were used to control the occupational and industry sector disparities. Public[8] and private sector[9] dummy variables were employed to control the influence of ownership type on wages.[10]

Third, the eastern, central, and western Region dummy variables were constructed to control regional disparities.

Fourth, a binary dummy variable of having parents (mother or father of respondents) who were working or had worked in the public sector (i.e., government organizations) was constructed.

Appendix Table 12.6 summarizes the descriptive statistics for the total sample, CPC members, and nonmembers. It can be observed that differentials remain in the mean values of the variables between CPC members and nonmembers. Thus, these variables should be considered in empirical analysis. Figure 12.1 displays the Kernel density of wage distribution of CPC members and nonmembers. It is shown that the average wage level is higher for CPC members than those for nonmembers from 2012 to 2013.

12.5 Results

12.5.1 The Determinants of Participation in CPC Organizations

Table 12.1 reports the results for the determinants of a worker joining a CPC organization after analysis using the probit regression model. The five main findings are summarized as follows.

First, when other factors are constant, the probability of joining a CPC organization is lower for a female worker than for a male worker: the gender gap is 10.3% in 2002 and 7.9% in 2002.

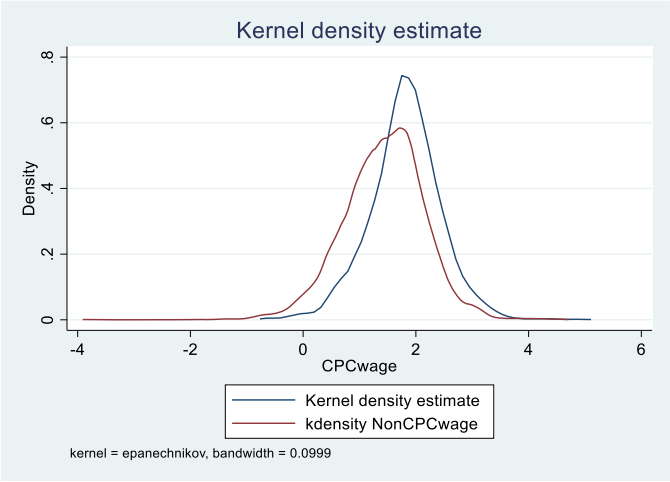
Second, more years of work experience and a higher level of education may increase the likelihood of joining a CPC organization.

Third, the probability of joining CPC organizations differs for each ownership sector. For example, the probability of a worker joining a CPC organization is lower for a worker in the private sector (e.g., POEs) than for a worker in the public sector: the gap between public and private sector is 13.2 and 11.7% in 2002, and 11.8 and 11.5% in 2013.

Fourth, the sector of industry and the region influence the probability of a worker joining a CPC organization.

Fifth, having parents with CPC membership may positively affect the statistical probability of becoming a CPC member. The results show that the probability of joining a CPC organization is higher for the group with parents with CPC membership than for the group with parents who do not have CPC membership: the gap is 4.0% in 2002, and 6.6% in 2013. It is thought that when a worker's parents are or were CPC members, they may gain access to CPC organizations more easily, obtain more information about CPC organizations, and derive more political and social capital from their parents. This may increase the children's probability of joining CPC organizations. The results suggest intergenerational transmission of CPC membership which may lead to the intergenerational transmission

(a) 2002



(b) 2013

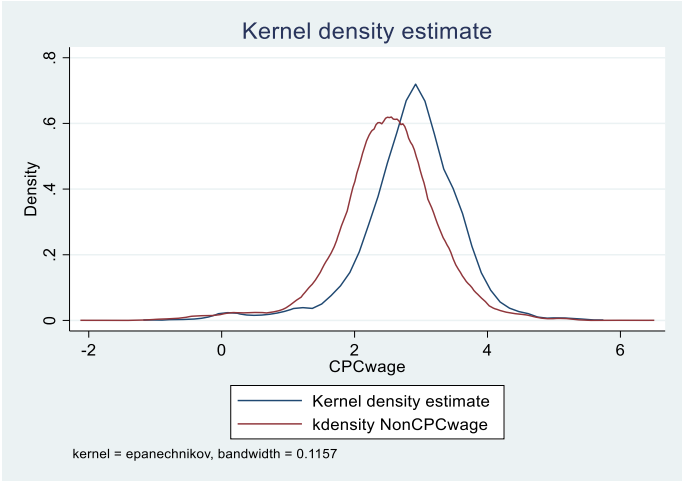


Fig. 12.1 Kernel density distribution of wages of CPC members and non-members (*Note* Blue line represents CPC members, red line represents non-members. *Source* Author' creation based on the data from CHIPs of 2002 and 2013)

Table 12.1 Results of probability of participation in CPC organizations

	(1) 2002		*(2) 2013*	
	dF/dx	*z-value*	*dF/dx*	*z-value*
Female	−0.105***	−10.65	−0.079***	−10.29
Age (Ref. Age 16–29)				
Age 30–39	0.208***	10.23	0.092***	6.56
Age 40–49	0.334***	17.14	0.140***	10.18
Age 50–59	0.509***	21.19	0.240***	13.89
Education (Ref. Primary)				
Junior high school	0.086**	2.49	0.199***	4.53
Senior high school	0.195***	5.47	0.323***	7.17
College	0.352***	8.67	0.476***	9.13
University	0.444***	9.92	0.627***	11.81
Occupation (Ref. Manufacturing)				
Manager and engineer	0.197***	13.36	0.039***	2.82
Clerk	0.181***	11.09	0.163***	9.68
Service worker	0.052**	2.20	0.049***	3.18
Other occupations	0.109***	2.36	0.046***	2.76
Ownership (Ref. Public)				
COE	−0.050**	−2.55	−0.021	−1.29
FOE	−0.132***	−4.28	−0.118***	−6.81
POE	−0.117***	−9.10	−0.115***	−11.96
Other ownership types	−0.028	−0.75	−0.081***	−7.46
Industry sector (Ref. Manufacturing)				
Construction	−0.056**	−2.12	−0.018	−0.91
Sales	−0.043**	−2.39	−0.089***	−5.70
Service	−0.052***	−4.13	−0.016	−1.03
Other industrial sectors	0.086***	5.19	0.008	0.61
Region (Ref. Western region)				
Central	−1.358E-04	−0.19	0.002	0.18
Western	0.014	0.69	0.028***	2.77
Parents CPC	0.040*	1.86	0.066***	4.01
Observations	9342		9415	
Pseudo R^2	0.205		0.247	
Log likelihood	−4608.049		−3669.077	

Note
1. ***$p < 0.01$, **$p < 0.05$, *$p < 0.10$
2. Values of marginal effects (dF/dx) are shown in the table
Source Author' creation based on the data from CHIPs of 2002 and 2013

of political and economic status. Having a parent with CPC membership is used as an identification variable in the selection bais correction model.

12.5.2 *The Wage Premium of CPC Membership*

The wage functions are used to investigate the wage premium of CPC membership. The results based on the OLS and the Lee models are summarized in Table 12.2. Four kinds of analysis are employed using different independent variables. The main findings are as follows.

First, the results from the OLS model show that when other conditions are not controlled (Model 1) the wage premium of CPC membership is 37.4% (2002) and 31.8% (2013) and they statistically significant at the 1% level (Model 1). When the individual characteristics (education,

Table 12.2 The wage premium of CPC membership

Methods	*Variables*	*(1)*	*(2)*	*(3)*	*(4)*
OLS	**2002**				
	CPC	0.374***	0.128***	0.093***	0.076***
		(24.06)	(8.11)	(5.89)	(4.93)
	2013				
	CPC	0.318***	0.044**	0.022	0.022
		(16.44)	(2.23)	(1.09)	(1.10)
Lee model	**2002**				
	CPC	0.085***	0.079***	0.078***	0.075***
		(5.17)	(4.89)	(4.96)	(4.84)
	Correction term	0.799***	0.409***	0.259***	0.059*
		(36.40)	(11.27)	(4.87)	(1.97)
	2013				
	CPC	0.026	0.026	0.025	0.024
		(1.21)	(1.26)	(1.20)	(1.19)
	Correction term	0.762***	0.122	−0.036***	−0.049
		(27.78)	(2.88)	(−0.63)	(−0.65)

Note

1. ***$p < 0.01$, **$p < 0.05$, *$p < 0.10$

2. Model (1): the independent variable is only the CPC member dummy variable; Model (2): the independent variables include the CPC member dummy variable, female, experience years, and education; Model (3): the independent variables include the CPC member dummy variable, female, years of experience and education, occupation, industry sector, and regions; Model (4) the independent variables include the CPC member, female, years of experience, education, occupation, industry, and ownership. The *t*-values or *z*-values are expressed in parentheses

Source Author' creation based on the data from CHIPs of 2002 and 2013

experience year, gender) are controlled, the wage premium of CPC membership decreases 4.4 percentage points to 12.8% (2002) and is statistically significant at the 1% or 5% level (Model 2). When occupation, industry, and ownership are controlled the wage premium of CPC membership decreases to 9.3% (Model 3 for 2002) and 7.6% (Model 4 for 2002). It is statistically significant at 1% level for 2002, whereas it is not statistically significant for 2013. During the 2000s although CPC membership positively affects wage levels when other factors (i.e. human capital) are constant, the wage premium of CPC membership on wage levels decreased from 2002 to 2013. It indicates that the influence of the market mechanism on wage determination increased with the economy system transition.

Second, the results from the selection bias correction model show that when the CPC membership positively affect wage in 2002, while it is not significant in 2013, which suggest as the economy system transition advanced, the influence of CPC membership on wage has become smaller. To compare with the results from the OLS model, the wage premium of CPC membership becomes smaller when addressing the selection bias, it is ranged from 7.5~8.5% in 2002, the selection correction items are statistically significant at 1% levels, which suggests that OLS may overestimate the wage premium of CPC membership.

Figure 12.1 shows the estimations using the QR model. For 2002, the wage premium of CPC membership was highest in the wage lowest group (10 percentile) and was higher for the low-wage group (10–30 percentiles) than for the middle- and high-wage group. In comparison, for 2013, the wage premium of CPC membership was higher for middle-level wage group (40–60 percentiles). Furthermore, the wage premium of CPC membership in each percentile is lower for 2013 than that for 2002. This result confirms the conclusion that the wage premium of CPC membership decreased from 2002 to 2013 as the market-oriented economic reform progressed.

12.5.3 Decomposition Results of the Wage Gap Between CPC Members and Nonmembers Based on Blinder-Oaxaca Decomposition Model

Table 12.3 reports the decomposition results of wage gaps between CPC members and non-CPC members using the Blinder-Oaxaca decomposition model (Blinder, 1973; Oaxaca, 1973). Decomposition 1 uses the

Fig. 12.2 Wage premium of CPC membership by wage percentile (*Note* (1) The quantile regression model is used. 10th expresses at 10% wage percentile. (2) The coefficients of CPC member dummy variables are summarized in Fig. 12.2. The covariate variables include the CPC member, female, experience years, education, occupation, industry, ownership, and region dummy variable are estimated, but the results are not expressed in Fig. 12.2. *Source* Author's creation based on the data from CHIPs of 2002 and 2013)

basic human capital model that includes only gender, education, and experience year variables. Decomposition 2 is an analysis adding the other factors which may influence the wage levels (i.e., occupation, industry, ownership, and regional variables). As the tendency of results for Decomposition 1 is similar to those for Decomposition 2, we summarize the findings based on the results of Decomposition 2 in the following.

Firstly, the results indicate the influence of the explained component (66.2% in 2002, and 91.0% in 2013) on the wage gap is greater than the unexplained component (33.8% in 2002, and 9.0% in 2013). It is shown the endowment differentials between CPC members and non-CPC members are the main factor that contributes to the wage gap between these two groups, and as the economic system transition advances, the influence of the endowment differential on the wage gap increases. It indicates the influence of the market mechanism on the wage gap increased from 2002 to 2013.

Table 12.3 Basic decomposition results of wage gap between CPC members and nonmembers based on Blinder-Oaxaca model

(a) 2002

	(1) Value		*(2) Percentage*	
	Explained	*Unexplained*	*Explained (%)*	*Unexplained (%)*
[Decomposition1]				
Total	0.218	0.172	55.9	44.1
Female	0.007	0.044	1.8	11.3
Years of experience	0.055	−0.003	14.1	−0.8
Education	0.156	−0.561	40.0	−143.8
Constants	0.000	0.693	0.0	177.7
[Decomposition2]				
Total	0.258	0.132	66.2	33.8
Female	0.007	0.030	1.8	7.7
Years of experience	0.041	−0.037	10.5	−9.5
Education	0.102	−0.639	26.2	−163.8
Occupation	0.056	−0.046	14.4	−11.8
Industry	0.023	0.053	5.9	13.6
Ownership	0.038	0.027	9.7	6.9
Region	−0.009	−0.021	−2.3	−5.4
Constants	0.000	0.765	0.0	196.2

(b) 2013

	(1) Value		*(2) Percentage*	
	Explained	*Unexplained*	*Explained (%)*	*Unexplained (%)*
[Decomposition1]				
Total	0.305	0.051	85.7	14.3
Female	0.034	0.021	9.6	5.9
Years of experience	0.006	−0.251	1.7	−70.5
Education	0.265	−0.089	74.4	−25.0
Constants	0.000	0.370	0.0	103.9
[Decomposition2]				
Total	0.324	0.032	91.0	9.0
Female	0.030	0.018	8.4	5.1
Years of experience	0.007	−0.194	2.0	−54.5

(continued)

Table 12.3 (continued)

(b) 2013

	(1) Value		*(2) Percentage*	
	Explained	*Unexplained*	*Explained (%)*	*Unexplained (%)*
Education	0.172	−0.215	48.3	−60.4
Occupation	0.050	−0.017	14.0	−4.8
Industry	−0.002	−0.116	−0.6	−32.6
Ownership	0.064	−0.104	18.0	−29.2
Region	0.003	−0.114	0.8	−32.0
Constants	0.000	0.774	0.0	217.4

Note The Blinder-Oaxaca decomposition model was used
Source Author' creation based on the data from CHIPs of 2002 and 2013

Secondly, the results of the detailed decomposition indicate that (1) education is the largest factor in both the explained and the unexplained components. The differential of educational level widens the wage gap (26.2% in 2002 and 48.3% in 2013), whereas the return of education on wage reduces the wage gap (−163.8% in 2002 and −60.4% in 2013). The influence of the differentials of education attainment on the wage gap increased from 2002 to 2013. It indicates that more well-educated workers join the CPC organization, or the CPC organizations tend to recruit well-educated workers as new CPC members during the 2000s. It seems like that as the economic system changes, CPC members have become intelligent much more in China.

The results of the detailed decomposition indicate that (2) the differentials of the number of years of work experience widen the wage gap (10.5% in 2002 and 2.0% in 2013), while the return to years experience reduces the wage gap (−9.5% in 2002 and −54.5% in 2013).

(3) The differentials of occupational distributions between these two groups contribute to the wage gap widening (14.4% in 2002 and 14.0% in 2013), the differentials of distribution of ownership types contribute to widen the wage gap (9.7% in 2002 and 18.0% in 2013.)

(4) The results of the detailed decomposition indicate that the differentials of the proportion of female workers widen the wage gap (1.8% in 2002 and 8.4% in 2013). The results indicate that when the proportion of female workers is higher for the non-CPC member group, the

wage may be lower for the non-CPC member group than for the counterpart. This may contribute to the wage gap between the CPC members and nonmembers. In fact, although gender equality employment policies were implemented in China and female employment in the public sector was greatly promoted by the government (Ma, 2018b), the proportion of female members in the CPC organizations remains less than that of male members (Ma & Iwasaki, 2021).

12.5.4 Decomposition Results of the Wage Gap Between CPC Members and Nonmembers Based on Oaxaca-Ransom Decomposition Model

To consider the index number problem, the Oaxaca and Ransom decomposition model (Oaxaca & Ransom, 1994) is used. The decomposition results are summarized in Table 12.4.

In general the explained components of the results from the Oaxaca and Ransom decomposition model are greater for both 2002 and 2013 than the explained component of the results from the Oaxaca-Blinder model. Thus, the main conclusion is again confirmed that the main factor contributing to the wage gap between CPC members and non-CPC members is the endowment differences between these two groups. For example, in 2002, the value of the explained component is 66.2% for the Blinder-Oaxaca model, and 85.0% for the Oaxaca and Ransom model; in 2013, the value of the explained component is 98.3% for the Blinder-Oaxaca model, and 91.0% for the Oaxaca and Ransom model. The results indicate that although the index number problem persists in the results of the Blinder-Oaxaca decomposition model, the problem is not severe, and these results are robust.

12.6 Conclusions

This study estimates the impact of CPC membership on wage levels. It examines the determinants of joining CPC organizations and investigates the determinants of the wage gap between CPC members and non-CPC members. It uses data from the CHIPs of 2002 and 2013. An empirical study is employed using wage function, the probit regression model, and the decomposition methods of the Blinder-Oaxaca model, and the Oaxaca and Ransom model.

Table 12.4 Decomposition results of wage gap between CPC and Non-CPC using Oaxaca-Ransom decomposition model

(a) 2002

	(1) Blinder-Oaxaca model		*(2) Oaxaca-Ransom model*			
	Explained (%)	*Unexplained (%)*	*Explained (%)*	*Unexplained*		
				(a) loss (%)	*(b) gain (%)*	*(c) total (%)*
Total	66.2	33.8	85.0	4.4	10.6	15.0
Female	1.8	7.7	4.0	1.2	4.2	5.4
Years of experience	10.5	−9.5	13.4	5.6	−18.0	−12.4
Education	26.2	−163.8	34.9	−9.3	−163.3	−172.6
Occupation	14.4	−11.8	15.4	−1.3	−11.5	−12.8
Industry	5.9	13.6	6.0	2.7	10.8	13.5
Ownership	9.7	6.9	13.4	0.4	2.9	3.3
Region	−2.3	−5.4	−2.1	−1.4	−4.2	−5.7
Constants	0.0	196.2	0.0	6.4	189.9	196.3

(b) 2013

	(1) Blinder-Oaxaca model		*(2) Oaxaca-Ransom model*			
	Explained (%)	*Unexplained (%)*	*Explained (%)*	*Unexplained*		
				(a) loss (%)	*(b) gain (%)*	*(c) total (%)*
Total	91.0	9.0	95.3	0.6	4.1	4.7
Female	8.4	5.1	10.1	0.4	3.6	4.0
Years of experience	2.0	−54.5	3.1	−7.6	−34.8	−42.5
Education	48.3	−60.4	57.0	3.9	6.7	10.5
Occupation	14.0	−4.8	14.9	0.6	−3.1	−2.5
Industry	−0.6	−32.6	3.9	−1.6	−26.4	−28.1
Ownership	18.0	−29.2	6.0	−6.2	−8.6	−14.8
Region	0.8	−32.0	0.3	−6.6	−26.4	−32.9
Constants	0.0	217.4	0.0	17.7	93.1	111.0

Note

1. The Oaxaca and Ransom decomposition model is used
2. Gain: gain of CPC members; Loss: loss of non-CPC members; Total = gain of CPC members + loss of non-CPC members

Source Author' creation based on the data from CHIPs of 2002 and 2013

Three new findings emerge. First, the probability of joining CPC organizations is higher for a male worker, a well-educated worker, and a worker with more years of work experience than for others in both 2002 and 2013. Having parents with CPC membership may increase the probability of their children becoming CPC members.

Second, the wage premium of CPC membership persists in the 2000s. Based on the results for the OLS model, the range of the wage premium of CPC membership is from 7.6 to 37.4% for 2002 and from 4.4 to 31.8% for 2013. When the sample selection bias is addressed the range of wage premium of CPC membership is 7.5 to 8.5% for 2002 and it is not statistically significant in 2013. This indicates that the wage premium of CPC membership may be overestimated if the sample selection bias is not addressed.

Third, although both the explained and unexplained components contribute to widen the wage gap, the influence is greater for the former which suggests the main factor contributing to the wage gap between CPC members and non-CPC members is the endowment differences between these two groups.

The results indicate that although in the 2000s CPC membership positively affects wage levels, and the wage premium of CPC membership decreased from 2002 to 2013. For the determinants of the wage gap between CPC and non-CPC, most results show that the influence of endowment differences (i.e., human capital) is the main factor and it is greater for 2013 than 2002. The results indicate that as the economic system transition advances, the influence of market mechanisms on wage determination becomes greater and the wage premium of CPC membership decreases. Although the CPC leadership remains dominant in the political sphere, the influence of market mechanisms on wage determination increased from 2002 to 2013. It can be expected that with the progress of market-oriented reform, the influence of unexplained components including the discrimination against non-CPC members on the wage gap between CPC members and non-CPC members may decrease, and the influence of differences of explained component including the human capital may increase. However, it should be noted that the wage data used in this analysis only includes the basic wage, bonuses, and allowances which are reported. It is well known that other income such as the income from corruption may not be reported and cannot be

measured, which may cause the income gap between CPC and non-CPC members to be underestimated.[11] Furthermore, the endogeneity problem may maintain in results which should be considered in future research.

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Appendix

See Tables 12.5 and 12.6.

Table 12.5 Summary of wage premium of CPC membership in literature

Author	*Data*	*Model*	*Wage premium of CPC*
Gustafsson and Li (2000)	CHIPs 1988 and 1995	OLS	1988: Male: 5.6%; Female: 10.2% 1995: Male: 7.7%; Female: 10.1%
Li (2003)		cohort, OLS	No significant
	CHIPs 1995	OLS	7.3~11.0%
Knight and Song (2003)	CHIPs 1988 and 1995	OLS	1988: 4.1%; 1995: 8.6%
Yueh (2004)	CHIPs 1995 and 1999	Heckman	1995: 10.04~10.37% 1999: 15.77~16.45%
Appleton et al. (2005)	CHIPs 1988,1995, 1999, 2002	FE	1988: 6.8%; 1995: 14.6%; 1999: 18.1%: 2002: 15.2%

(continued)

Table 12.5 (continued)

Author	*Data*	*Model*	*Wage premium of CPC*
Bishop et al. (2005)	CHIPs 1988 and 1995	OLS	1988: 13.0%; 1995: 9.51%
		QR	1988: 3.31~10.35% 1995: 2.22~12.085
Li et al. (2007)	Twin survey	Total: OLS	10.0~12.4%
		FE	No significant
		Twins: OLS	−29.80%
		FE	No significant
Shu et al. (2007)	SWSC 2000		Total: 11.3% Male: 10.6% Female: 14.5%
Braunsterin and Brenner (2007)	CHIPs 1995 and 2002	OLS	1995: Male: 7.3%, Female: 11.2% 2002: Male: 6.4%, Female: 10.9%
Bishop and Liu (2008)	CHIPs 1988, 1995	OLS	Male: 3.25~4.11% Female: 7.07~12.60%
Guo and Hammitt (2009)	CHIPs 1995	OLS	3.2~7.7%
Deng and Li (2009)	CHIPs 1988, 1995 and 2002	OLS	1988: 6.1%; 1995: 7.9%; 2002: 8.4%
Appleton et al. (2009)	CHIPs 1988, 1995 and 1999	Heckman	1988: 10%; 1995: 14%; 1999: 14%
Gao and Smyth (2010)	CULS 2005	OLS	Male: 6.52~7.83% Female: no significant (+)
Gao and Smyth (2011)	CASS survey 2007	OLS	12.46~14.90%
Laura and Poncet (2010)	CHIPs 1995	OLS	7.0~10.0%
Li et al. (2012)	CGSS 2010	OLS	9.80% When controlled other factors: no significant
Xiu and Gunderson (2013a)	CHIPs 1995 and 2002	OLS	Total: 7.4~12.6% Male: 6.7~11.6%

(continued)

Table 12.5 (continued)

Author	*Data*	*Model*	*Wage premium of CPC*
Xiu and Gunderson (2013b)	LHSCCC	OLS	Female: 9.1~14.4% Male: 7.1~12.7%
Mishra and Smyth (2014)	CEES 2007	GMM	Female: 14.2~19.8% 15.80%
Xing (2014)	CHIPs 2002	OLS	Urban residents: natives 14.4% migrants 14.7% Rural residents: local −13.1%, migrants in rural survey 11.9%, migrants in urban survey: no significant (−)
Mishra and Smyth (2015)	CEES 2007	OLS, IV	OLS: 14.2~14.5% IV: no significant (−)
Kwon et al. (2015)	CHIPs 1988, 1995, 2002 and 2007	OLS	1988: 7~8%, 1995: 10~11%, 2002: 7~8%
Bian et al. (2015)	CFCS 1999	OLS	5.8~8.0%
Wang et al. (2017)	CGSS 2003–2010	OLS	No significant
McLaughlin (2017)	CHIPs 2002	OLS IV	9.0~17.4% 32.8% or no significant
Ma (2018a)	CHIPs 2002 and 2013	Maddala model	2002: Migrant 21.4%, Urban 20.7% 2013: Migrant: no significant, Urban: −24.1%
Wang and Lien (2018)	Original migrants survey	OLS QR	16.13% 5.35~20.16%
MacDonald and Hasmath (2018)	CHES 2011	OLS	2.42~6.42%

Note OLS: Ordinary least squares model; IV: the instrumental variable mehod; QR: quantile regerssion model; FE: fixed effects model; GMM: generalized method of moments; Heckman: Heckman two-step selection method

Source Author's creation

Table 12.6 Descriptive statistics of variables

(a) 2002

	(a) Total		*(b) CPC*		*(c) Non-CPC*		*Gap (Means)*
	Mean	*SE*	*Mean*	*SE*	*Mean*	*SE*	*(b)−(c)*
Party	0.291	0.454					
Log. of wage	1.538	0.724	1.815	0.625	1.425	0.731	0.390
Female	0.441	0.496	0.322	0.467	0.489	0.500	−0.167
Years of experience	28.671	9.829	31.152	8.956	27.654	9.989	3.498
Age							
Aged 16–29	0.132	0.339	0.042	0.202	0.169	0.375	−0.127
Aged 30–39	0.319	0.466	0.268	0.443	0.340	0.474	−0.072
Aged 40–49	0.398	0.489	0.437	0.496	0.382	0.486	0.055
Aged 50–60	0.151	0.358	0.253	0.435	0.109	0.312	0.144
Education							
Primary	0.023	0.150	0.006	0.078	0.030	0.170	−0.024
Junior high school	0.230	0.421	0.117	0.321	0.277	0.448	−0.160
Senior high school	0.409	0.492	0.337	0.473	0.439	0.496	−0.102
College	0.232	0.422	0.345	0.476	0.185	0.389	0.160
University	0.106	0.307	0.195	0.396	0.069	0.253	0.126
Occupation							
Manager and engineer	0.367	0.482	0.543	0.498	0.295	0.456	0.248
Clerk	0.204	0.403	0.264	0.441	0.179	0.383	0.085
Manufacturing worker	0.288	0.453	0.134	0.341	0.351	0.477	−0.217
Service worker	0.120	0.325	0.044	0.204	0.151	0.359	−0.107
Other occupations	0.021	0.143	0.015	0.121	0.024	0.151	−0.009
Ownership type							
Public	0.667	0.471	0.826	0.379	0.602	0.489	0.224
COEs	0.071	0.257	0.047	0.212	0.081	0.272	−0.034
FOEs	0.023	0.149	0.011	0.104	0.028	0.164	−0.017
POEs	0.214	0.410	0.095	0.293	0.262	0.440	−0.167
Other onwenship types	0.025	0.157	0.021	0.144	0.027	0.163	−0.006
Industry sector							

(continued)

Table 12.6 (continued)

(a) 2002

	(a) Total		*(b) CPC*		*(c) Non-CPC*		*Gap (Means)*
	Mean	*SE*	*Mean*	*SE*	*Mean*	*SE*	*(b)−(c)*
Construction	0.033	0.178	0.030	0.170	0.034	0.182	−0.004
Manufacturing	0.255	0.436	0.206	0.405	0.276	0.447	−0.070
Sales	0.122	0.328	0.066	0.248	0.145	0.352	−0.079
Service	0.419	0.493	0.403	0.491	0.426	0.495	−0.023
Other industrial sectors	0.171	0.375	0.295	0.456	0.119	0.324	0.176
Regions							
Eastern	0.391	0.488	0.375	0.484	0.397	0.489	−0.022
Central	0.345	0.475	0.355	0.479	0.341	0.474	0.014
Western	0.264	0.441	0.270	0.444	0.262	0.440	0.008
Parent CPC membership	0.052	0.223	0.055	0.207	0.045	0.229	0.010
Observations	9342		2741		6601		

(b) 2013

	(a) Total		*(b) CPC*		*(c) Non-CPC*		*Gap (means)*
	Mean	*S.E*	*Mean*	*S.E*	*Mean*	*S.E*	*(b)−(c)*
Party	0.189	0.392					
Log. of wage	2.191	0.784	2.482	0.744	2.123	0.777	0.359
Female	0.44	0.496	0.322	0.467	0.467	0.499	−0.145
Years of experience	28.942	11.193	29.344	10.658	28.848	11.313	0.496
Age							
Aged 16–29	0.168	0.373	0.091	0.288	0.185	0.389	−0.094
Aged 30–39	0.278	0.448	0.273	0.445	0.279	0.449	−0.006
Aged 40–49	0.351	0.477	0.360	0.480	0.349	0.477	0.011
Aged 50–60	0.203	0.403	0.276	0.447	0.187	0.39	0.089
Education							
Primary	0.058	0.234	0.004	0.067	0.071	0.257	−0.067
Junior high school	0.289	0.453	0.092	0.289	0.335	0.472	−0.243

(continued)

Table 12.6 (continued)

(b) 2013

	(a) Total		*(b) CPC*		*(c) Non-CPC*		*Gap (means)*
	Mean	*S.E*	*Mean*	*S.E*	*Mean*	*S.E*	*(b)−(c)*
Senior high school	0.294	0.456	0.231	0.422	0.309	0.462	−0.078
College	0.179	0.383	0.247	0.432	0.163	0.369	0.084
University	0.180	0.384	0.426	0.494	0.122	0.328	0.304
Occupation							
Manager and engineer	0.225	0.417	0.337	0.473	0.198	0.399	0.139
Clerk	0.144	0.351	0.320	0.466	0.103	0.304	0.217
Manufacturing worker	0.200	0.400	0.104	0.305	0.223	0.416	−0.119
Service worker	0.301	0.459	0.143	0.35	0.338	0.473	−0.195
Other occupations	0.130	0.336	0.096	0.295	0.138	0.344	−0.042
Ownership type							
Public	0.372	0.483	0.730	0.444	0.288	0.453	0.442
COEs	0.045	0.207	0.045	0.208	0.045	0.207	0.000
FOEs	0.028	0.165	0.011	0.104	0.032	0.176	−0.021
POEs	0.256	0.437	0.099	0.299	0.293	0.455	−0.194
Other occupations	0.299	0.458	0.114	0.318	0.342	0.474	−0.228
Industry sector							
Construction	0.053	0.225	0.029	0.169	0.059	0.236	−0.030
Manufacturing	0.147	0.354	0.098	0.297	0.158	0.365	−0.060
Sales	0.197	0.398	0.048	0.213	0.232	0.422	−0.184
Service	0.183	0.387	0.131	0.337	0.195	0.396	−0.064
Other industrial sectors	0.420	0.494	0.694	0.461	0.356	0.479	0.338
Regions							
Eastern	0.419	0.493	0.424	0.494	0.418	0.493	0.006
Central	0.360	0.480	0.355	0.479	0.361	0.480	−0.006
Western	0.221	0.415	0.221	0.415	0.221	0.415	0.000
Parent in public sector	0.049	0.215	0.101	0.301	0.037	0.188	0.064
Observations	9415		1961		7454		

Source Author' creation based on the data from CHIPs of 2002 and 2013

Notes

1. Article 19 of *The Company Law of the People's Republic of China* (revised in 2013) states: "In a company, an organization of the Communist Party of China shall be established to carry out the activities of the party in accordance with the charter of the Communist Party of China. The company provides the necessary conditions for the activities of the party organization."
2. For the systematic literature review and a meta-analysis on the wage premium of CPC membership, please refer to Ma and Iwasaki (2021).
3. To simplify the expression of the decomposition equations, all constant items are omitted.
4. The published debate suggests an index number problem with the Blinder-Oaxaca model. The estimated results may vary according to the type of comparison group used. Given the space constraints and because the two sets of decomposition results are almost identical, only the estimated results using Eq. (12.4) are presented in this study.
5. The retirement age is 45 for female workers, 50 for male workers, 55 for female cadres, and 60 for male cadres.
6. Variable values in the range of the "mean value ± three times S.D." are defined as abnormal values.
7. Years of experience = age-years of schooling−6.
8. The public sector comprises government offices, government-related organizations (*Shiye Danwei*), and state-owned enterprises (SOEs).
9. The private sector includes collectively owned enterprises (COEs), privately owned enterprises (POEs), and foreign-owned enterprises (POEs).
10. For empirical studies on the wage gap between the public and private sectors in China, please refer to Demurger et al. (2012) and Ma (2018a, 2018b).
11. For recent studies on the corruption of CPC members, please refer to Kim et al. (2018).

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