Social Insurance Participation in Urban Workers and Rural Migrants

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Abstract: This article examines the effects of structural dynamics on social insurance participation of rural migrants and urban residents in reform era China. The analysis based on the data from the survey of Rural-Urban Migration in China (RUMiC) in 2009 reveals that the demarcation between government sector and private sector on urban residents' social insurance participation has become blurred with the increasing advantage of private sector on offering its employees the access to social insurance programs, whereas entering government sector is still an effective way for rural migrants to be covered by social insurances. Besides, local urban residents are found to be more likely to obtain social insurances than their non-local urban counterparts, whereas local rural migrants are not found to enjoy advantage over non-local rural migrants in being covered by social insurances. More findings and implications are discussed in this article.

Introduction

Social insurance is regarded as an important fringe benefit provided by work organizations and also is taken as the main official means of protecting individuals from major risks and ensuring social stability in market economy in contemporary urban China. According to Social Insurance Law, all waged labors in cities should be integrated into social insurance scheme by enforcing employers to provide equitable access to social insurance scheme for all their employees. However, the chances to be covered by social insurance are not equally distributed among different social groups in urban China. For instance, urban residents enjoy more advantages in accessing social insurances compared with rural migrants; and employees in privileged work units are more likely to be covered by social insurance scheme than their counterparts in other work units.

By reviewing literature on social insurance participation in urban China, we find previous studies generally separate urban residents from rural migrants in their analyses framework. The research on urban resident' social insurance participation usually considers social insurance as the fringe benefits offered by employers, therefore a large literature focuses on examining the relationship between the characteristics of work unit (danwei) and urban employees' social insurance attainment, such as the ownership of work units (Wang 2008; Wu 2013) and financial conditions of work units (Xie Lai and Wu 2009). However, the studies on rural migrants' social insurance participation tend to regard social insurance as an important means to protect individuals from major risks such as losing job, work injury and so forth, and thus, extensive research is devoted to examining the main reasons that hinder rural migrants in accessing social insurances, for instance, their rural household registration (hukou) status (Cheng Nielsen and Smyth 2014; Gao Yang and Li 2012) and their disadvantage on education, legal knowledge and urban work experience (Yao and Kim 2015; Xu Guan and Yao 2011; Bärnighausen et al 2007).

The split study tradition leaves an obvious gap. The former isolates rural migrant workers from its analysis by focusing on urban residents, whereas the latter, on the

contrary, overlooks other structural forces on rural migrant's social insurance participation besides hukou status that shape urban residents' fringe benefits attainment. Alongside more and more educated and young rural people joining the the tide of rural-urban migrating, rural migrants have more chances to be promoted to high occupational positions, to get employed in privileged work unit sectors, and to obtain secure employments. Therefore, it is quite necessary for us to examine how these structural dynamics exert impact on rural migrants' chances of being covered by social insurance by comparing with urban residents and so as to explore their implications for urban inequality and rural migrants' assimilation in cities.

Social Insurance System Reform: from Fragmented System to Unified System

China's social insurance system has experienced a series of reforms since market transition from planned economy. In planned economy, social security system was fragmented and characterized by institutional divide between two subsystems in rural and urban population (Hussain 1993 and 1994; Saunders and Shang 2001). In cities, work unit provided for its employees all-inclusive welfare package from cradle to grave, such as child care, health care, old age pension and so forth (Croll 1999; Saunders and Shang 2001). The work unit-based social security system funded by the state offered urban workers secure and stable life and effectively protected them from a wide range of risks and uncertainties. However, due to its limited economic capacity, the state did not extend the all-inclusive social security to rural areas. During that period, social security provision in rural areas mainly aimed to alleviate extreme poverty (Hussain 1994). For instance, the "Five Guarantee" (*wubao*) relief system provided support and helped in five ways (food, clothing, housing, medical care and burial expenses) for the most vulnerable population in rural areas, such as the childless and the disabled (White 1998). Hence, most of rural population had to rely on themselves, families, or communities to deal with a range of risks.

Since economic reform, the work unit-based social security faced a series of challenges. Firstly, the work unit-based security system characterized by the cradle-to-grave security package cast heavy financial burden on state-owned work unit sectors, particularly the state-owned enterprises that seriously harmed their

competitiveness in market economy (Saunders and Shang 2001). Since 1980s, along with the growing aged population, this issue has become more and more pressing due to the rapidly increasing cost on pension and medical care (Saunders and Shang 2001). Secondly, more and more people has been excluded from work unit-based social security in cities, and the increasing discontent in the population aroused by the uneven treatment eventually became the threat to social stability in cities (Croll 1999; Saunders and Shang 2001). On the one hand, private sector has been rapidly arising alongside the reemergence of private/hybrid enterprises, individual-owned enterprises and self-employed individuals. According to the National Bureau of Statistics, the number of workers in private sector has run up to 32.81 million in 1996. On the other hand, more and more rural migrant workers flooded into cities for jobs. The number of rural migrant workers has dramatically increased from less than 10 million in 1982 to 79 million in 2000 (Liang 2001). However, as work-united based security is exclusive to urban workers in state-owned work units, employees in private sector and rural migrants were locked out of urban security system, and instead, they had to depend on themselves or the market to deal with potential risks and misfortune in market economy (Croll 1999).

In order to conform to the new trends of workforce in the context of market transition, China's social insurance system has experienced radical overhauls since 1990s. After reforms, the comprehensive social security package in cities has been replaced by social insurance scheme. Social insurance scheme mainly contains five insurance programs: pension insurance, medical insurance, work injury insurance, unemployment insurance and maternity insurance that keep workers from five major risks in workplace or daily life, including old-age poverty, ill health, occupational injury, unemployment and maternity. Housing fund designed to allow employees to save money so as to buy their own houses was also officially incorporated into social insurance scheme since 1999 in the wake of the subsidized housing policy stepping down from the stage of history in 1998. The five insurance programs and housing fund are regarded as the cornerstones of social security system and are meant to ensure social stability and security (Li 2010).

According to the new social insurance scheme, the pooled social insurance funds should be contributed by both employers and employees, and are managed by local governments. Social Insurance Law stipulates that it is compulsory for employers to pay social insurance funds for their employees regardless the ownership of work units and hukou status of employees. Thanks to the reforms, the fragmented social insurance system seemed to take a big step toward unified system in cities, and the unification is reflected in two respects. Firstly, employees in both state and private work units are entitled equal rights to access social insurances. In addition, rural migrant workers have the equal right as their urban counterparts to be covered by social insurance scheme as well that ends the history of rural migrants living without social security in cities. But nonetheless, there still exists inequality between different social groups in accessing social insurance programs.

Hukou Status and Social Insurance Participation of Rural Migrants

Social insurance program has become available for rural migrant workers since 1999. Though it has been more than ten years, the social insurance participation rates in rural migrant workers are still at low level. In 2009, only 7.6 percent of rural migrants were covered by pension program, 12.2 percent by medical insurance, 21.8 percent by work-related injury insurance, 3.9 percent by unemployment insurance, and 2.3 percent by maternity insurance (National Bureau of Statistics 2010). In 2014, the participation rates of migrant workers in all social insurances programs were all increased and the coverage rates were 16.7 percent in pension insurance, 17.6 percent in medical insurance, 26.2 percent in work injury insurance, 10.5 percent in unemployment insurance, 7.8 percent in maternity insurance and 5.5 percent in housing fund, respectively (National Bureau of Statistics 2015). From the statistics, it is certainly true that social insurance scheme coverage in rural migrant workers has been increased, however, it still remains patchy.

The low coverage rates of rural migrants in social insurance scheme have drawn extensive attention. Disadvantages of individual characteristics, such as young age (Yao and Kim 2015), low educational level and low income (Yao and Kim 2015), the insufficient willingness to participate or lack of knowledge about social security

scheme (Xu Guan and Yao 2011; Bärnighausen et al 2007), are found to play negative roles on rural migrants' participating in social insurance scheme. Besides the individual characteristics, hukou status is ascribed to be the main institutional factor on the low participation of rural migrant workers in social insurance scheme. A large body of previous studies argued that due to their rural hukou status, rural migrant workers were excluded from urban social security system (Wu and Treiman 2004; Tao 2008; Fan 2004). However, more and more studies in recent years argue that negative role of rural hukou status is declining along with more and more efforts the government devoted to improve the gradual unification of social insurance scheme between rural migrants and urban residents (Li 2014; Davies and Ramia 2008; Cheng, Nielsen and Smyth 2014). One institutional milestone is Labor Contract Law (LCL) enacted in 2008 (Gao, Yang and Li 2012).

There are two important stipulations in LCL that significantly extend social insurance scheme to rural migrant workers. Firstly, LCL encourages open-term labor contract. There are several circumstances under which employees can request open-term contracts: if employees have worked for the same work unit for at least ten consecutive years, or if two consecutive fixed-term labor contracts have been executed (LCL Article 14). More importantly, if employers do not sign a written labor contract with workers within one year from the hiring date, an open-term contract can still be assumed (LCL Article 14). The last circumstance stipulated in LCL effectively urges employers to sign contracts with employees, particular with rural migrants. In 2005, only 12.5 percent of rural-urban migrant workers signed labor contract with employees (Project Team of the Research Office of the State Council 2006). In 2009, the number has increased to 42.8 percent (National Bureau of Statistics 2010). Secondly and more importantly, LCL stipulates that employers are required to pay social insurance funds for their employees, regardless their hukou status. Since then, rural migrants have been entitled equal rights as their urban counterparts to access to social insurance scheme in cities.

According to LCL, social insurance has unhooked the connection with hukou status, and instead, labor contract has been increasing its role on workers'

participation in social insurance scheme. Cheng, Nielsen and Smyth (2014) compared social insurance participation between rural migrants and urban migrants in Beijing and they found that rural hukou status are less able to explain rural migrant workers' low participation rates in social insurance scheme, and their findings suggested that the effects of having a labor contract is much larger than hukou status on rural migrants to access social insurance. Yao and Kim (2015) in their study on the determinants of social insurance participation in rural migrant workers found that signing a labor contract significantly increased the odds of rural migrant workers participating in social insurance. To exactly examine the correlation between employment type and social insurance participation of rural migrants, Gao, Yang and Li (2012) analyzed the effects of different employment types and they found that rural migrants with long-term contract are more likely to participate in social insurance whereas short-term or non-labor contract employment would decrease rural migrants' social insurance participation to a substantial extent and their findings highlighted the importance of labor contract on rural migrants' access to social insurance.

Besides the distinction between rural migrants and urban residents, the differences between local and non-local rural migrants, and between local and non-local urban residents should also paid attention to. As pooled social insurance funds are managed by local governments, when people migrate to other cities or provinces, they usually have to spend much time and deal with complicated procedures to transfer their accounts to migrated cities. The inconvenience often made migrants to lose their contribution and then hinder them being covered by social insurance scheme. Therefore, in this article, we will examine and compare the structural effects of employment types and hukou status on social insurance participation between rural migrants and urban residents.

Work Unit Sectors and Social Insurance Coverage

Under work unit-based insurance system in pre-reform China, social insurances or security as fringe benefits are closely correlated with ownership of work units. As mentioned earlier, work unit-based social insurance in pre-reform China only covered employees in state-owned work unit sectors, such as government agency, public

institutions, and state-owned enterprises. Every state-owned work unit was expected to provide all-inclusive social security to its employees. However, the benefits and welfare package that a work unit could provide for its employees were still varied by the characteristics of a work unit, such as its administrative level (Walder 1992) or profitability and financial condition (Xie and Wu 2008; Xie Lai and Wu 2009), and among which, the position of a work unit on redistributive hierarchy was accounted as an significant agent on stratifying fringe benefits that employees obtained.

In redistribution hierarchy, there were four work unit sectors from top to down including government/party agency (*dangzheng jiguan*), public institutions (*shiyedanwei*), state-owned enterprises (*guoyou qiye*) and collective-owned enterprises (*jiti qiye*) (Wu 2013). Generally speaking, work unit sectors on the top of the hierarchy were better able to bargain with the state for more resources, and accordingly, their employees could be much more benefited from their work organizations (Wu 2013). Therefore, government agencies and public institutions provided for employees social security and benefits in a more comprehensive way than state/collective-owned enterprises.

Even in reform era, the inequalities between different work unit sectors are still significant. Compared with enterprises, government agency and public institution kept their privilege on social security and welfare for a long time. Take the subsidized housing policy and medical insurance for example. Housing in pre-reform urban China was a life-long welfare in state-owned work units, however, cadres especially those in government agencies enjoyed larger welfare house compared with workers in enterprises (Yang and Wang 1992; Zhou and Logan 1996). Even after subsidized housing policy being abolished since 1998, employees in government agencies still possess the privilege in purchasing economic housing (*jingji shiyongfang*) at deeply discounted prices (Zhao 2008). Regarding medical insurance, before "Decision on the Establishment of the Basic Medical Insurance System" implemented in 1998, all the employees with fixing of personal quota (*bianzhi*) in government agencies and public institutions enjoy free medical care. Since 1998 civil servants have been required to join medical insurance, however, until now the government agencies still provide

extra medical subsidies to its employees, besides basic medical insurance (Yang 2012).

During market transition, private enterprises have rapidly increased, and social insurance coverage in private work unit has drawn extensive attention and a substantial number of academic studies have been conducted to examine the gap of social insurance coverage between state-owned work units' employees and private work units' workers. Wu (2013) examined income and benefits inequality in different work units in contemporary China and he found that employees' fringe benefits, such as pension and medical insurance, are closely correlated with the ownership of work units with that employees in government and institutions are more likely to be covered by social insurances, compared with workers in enterprises, and government employees have more chances to be covered by social insurances than employees in private sector.

The findings in previous studies reveal the structural effects of work unit sectors on social insurance coverage of urban residents, but quite a few studies examine the impact on rural migrant workers' social insurance participation. In pace with the state deepening market reform in public sectors, more and more rural migrant workers are employed in state-owned enterprises, government agencies and public institutions that once were strictly exclusive to urban residents. However, the majority of rural migrants are employed in government agencies and public institutions as contract labors or temps without personnel quota (*bianzhi*). Formal employees having personnel quota in government agencies and public institutions enjoy higher salary and more welfare benefits than informal workers. However, in state-owned enterprises, there is no such system to separate rural migrant employees from urban employees, therefore, we think rural migrants should have similar chances with urban residents to be covered by social insurances while other things being equal. In this article, to exactly capture the structural effects of work unit sectors, we will examine whether or not rural migrant workers' income varies by work unit sectors by comparing with urban employees.

Data and Variables

This analysis is based on data from the Urban Household Survey (UHS) and Migrant Household Survey (MHS) in 2009 abstracted from the Longitudinal Survey of Rural-Urban Migration in China (RUMiC). The RUMiC is conducted to investigate the impact of internal migration in China on income mobility and education, and the assimilation of migrant workers into the migrated cities. Both the samples of UHS and MHS were randomly selected and all the data from MHS and UHS was collected by using face-to-face interview (Akgüç Giulietti, and Zimmermann 2014; Kong, 2010). The new sample in MHS 2009 collects data from 3422 households consisting of 5426 individuals with the average age of about 29 years from 15 major migrant receiving cities, namely, Bengbu, Chengdu, Chongqing, Dongguan, Guangzhou, Hefei, Hangzhou, Luoyang, Nanjing, Ningbo, Shanghai, Shenzen, Wuhan, Wuxi, Zhengzhou. UHS 2009 covers 14859 individuals in 4735 households with the average age of around 40 years, spanning across the same 15 cities and additional 4 cities to the MHS, namely, Anyang, Jiande, Leshan and Mianyang. Both of the MHS and UHS 2009 survey questionnaires cover detailed standard demographic and socioeconomic characteristics of household heads and members, and also include questions on life events, social networks, household consumption and so forth.

In the survey, respondents were asked whether or not they have unemployment insurance, pension insurance, work injury insurance, medical insurance and housing fund. However, the question design regarding medical insurance is mixed with commercial insurance, therefore, we only focus on the pension insurance, unemployment insurance, work injury insurance and housing fund in this article. As every social insurance is provided by employers or by both employers and employees, therefore if the response was “paid by employer” or “paid by both employer and yourself”, their answer would be deemed as “yes”. If they answered with “none” or “paid by yourself”, then the reply would be coded as “no”. Each is coded as a dummy variable with yes=1 and no=0.

Independent variables in this article include background variables and structural variables. Background variables include age, gender, education, marital status and urban work experience, and number of children. Age is limited to the group between

16 and 64 years old, and the square of age is adopted to allow for a curvilinear relationship between age and social insurance participation. Gender is coded as dummy variable, with female=1 and male=0. Education is measured in years of formal education as a continuous variable. Marital status is categorized into two types, single and married. Single status includes never married, divorced and widowed. Married status contains married, remarried and cohabited. Marital status is coded as dummy variable, with single=1 and married=0. Urban work experience is controlled in this analysis, and is measured as the number of years that the respondents take for his/her current primary occupation.

Structural variables in this analysis include occupation, employment type, work unit sectors and hukou status. There are four occupational positions included into this analysis, namely professionals and managers, clerk, commercial and service personnel, and manual labors (for more details please see appendix table A1 and table A2). Employment type is measured by labor contracts and there are four types of employment in this article, namely, permanent employment, long-term employment, short-term employment and non-contract employment that includes non-contract temp, family business helper, self-employed and temporary job. We categorize work unit into four sectors: government sector, state-owned enterprises, collective-owned enterprises, and private enterprises (for more details please see appendix table A1). Hukou status in RUMiC survey is classified into four types: local urban hukou, non-local urban hukou, local rural hukou and non-local rural hukou. In MHS, only local rural hukou and non-local rural hukou are kept representing local rural migrant workers and non-local rural migrant workers, respectively. In UHS, local urban hukou and non-local urban hukou are kept representing local urban residents and non-local urban workers.

Table 1 presents descriptive statistics for selected variables in UHS sample and MHS sample. Gap between urban residents and rural-urban migrant workers in Social insurance coverage was huge. Specifically, urban residents' participation rates in social insurance were 71.34 percent in unemployment insurance, 80.08 percent in pension insurance, 64.73 percent in work injury insurance, and 61.94 percent in

housing fund, respectively. However, the coverage rates of social insurance programs in rural migrant workers were 16.04 percent in unemployment insurance, 24.52 percent in pension insurance, 22.30 percent in work injury insurance and 9.56 percent in housing fund, respectively.

In terms of individual characteristics, the statistics is consistent with conventional wisdom that rural migrant workers are young, unmarried, not well-educated and have short work experience period for the primary occupation. The average age of urban workers was around 40.5, whereas rural migrant workers in the sample were much younger with the average age of 30.4. And more than 84 percent of urban residents have been married, whereas there are about half rural migrants in the analysis sample who are still single. Regarding education, urban worker was much better educated than their rural-urban migrant counterparts with the mean years of education of around 12.9 in urban workers and of about 9.6 in rural migrants. The gap in terms of years of work experience for the current primary occupation is huge between the two groups. Urban workers spent around 14.8 on average for their primary occupations, whereas the mean of years of work experience in rural migrants was only 4.6 years.

The distribution of workers in different occupations and work unit sectors shows distinctive patterns in urban workers and in rural migrants. Urban workers evenly scattered in occupation hierarchy with that about 34 percent of urban workers occupying professional and manager position, about 28 percent and 20 percent of urban workers working as clerk and commercial and service personnel, respectively, and only 18 percent of urban workers making a living as manual labors. However, the majority of rural migrants is segregated in low end occupations. To be specific, around 61 percent of rural migrant workers worked in commercial and service position and there were another around 30 percent of rural migrants working as manual labors. Less than 10 percent of rural migrants in analysis sample occupied top occupational positions, such as professionals and managers or clerks.

In terms of labor distribution among different work units, a large share of urban workers was employed in non-private sectors with more than 70 percent. Specifically

speaking, employees in government sector and state-owned enterprises accounted for around 40 percent, and 27 percent, respectively. On the contrary, private enterprises had the largest share of rural migrant workers with around 78 percent. Only around 6 percent of rural migrant population working in government sector and about 9 percent were employed in state-owned enterprises.

Regarding employment types, table 2 shows that about 92 percent of urban workers signed labor contracts, among which more than 88 percent of them held permanent or long-term employment. However, labor contracts do not seem so common among rural migrant workers. There were about 33 percent of rural migrants did not sign any types of labor contracts. Regarding those having labor contracts, only abound 12 percent were in permanent employment and about 43 percent signed long-term contracts.

Table 1 Descriptive statistics for selected variables in UHS and MHS sample (workers' age is between 16 and 64)

	Urban workers				Rural migrant workers			
	Unemployment Insurance	Pension Insurance	Work injury Insurance	Housing fund Insurance	Unemployment Insurance	Pension Insurance	Work injury Insurance	Housing fund Insurance
Participation rate	71.34%	80.08%	64.73%	61.94%	16.04%	24.52%	22.30%	9.56%
Age	40.547	40.489	40.550	40.497	30.385	30.393	30.372	30.371
	(9.873)	(9.878)	(9.907)	(9.854)	(10.165)	(10.162)	(10.177)	(10.163)
Age2	1741.549	1736.911	1742.395	1737.114	1026.561	1026.945	1026.022	1025.616
	(808.608)	(808.055)	(811.009)	(806.062)	(707.996)	(707.232)	(707.983)	(706.950)
Female	42.49%	42.50%	42.50%	42.57%	37.33%	37.29%	37.14%	37.29%
Male	57.51%	57.50%	57.50%	57.43%	62.67%	62.71%	62.86%	62.71%
Years of formal	12.652	12.666	12.634	12.667	9.553	9.548	9.554	9.557
Education	(3.105)	(3.106)	(3.102)	(3.096)	(2.573)	(2.571)	(2.567)	(2.567)
Single Status	15.64%	15.74%	15.64%	15.70%	46.22%	46.19%	46.41%	46.44%
Married Status	84.36%	84.26%	84.36%	84.30%	53.78%	53.81%	53.59%	53.56%
Work experience	14.856	14.816	14.848	14.822	4.569	4.580	4.569	4.575
	(11.027)	(11.022)	(11.066)	(11.012)	(5.131)	(5.136)	(5.126)	(5.129)
Occupation	**5,140**	**5,242**	**4,962**	**5,205**	**2,724**	**2,741**	**2,717**	**2,741**
Professional and manager	33.95%	34.07%	33.78%	34.27%	3.85%	3.76%	3.72%	3.79%
Clerk	28.60%	28.58%	28.36%	28.40%	5.32%	5.25%	5.34%	5.29%
Commercial & service personnel	19.71%	19.63%	19.91%	19.65%	60.79%	60.85%	60.73%	60.71%
Manual worker	17.74%	17.72%	17.96 %	17.68%	30.03%	30.13%	30.22%	30.21%

Employment type	**5,140**	**5,242**	**4,962**	**5,205**	**2,724**	**2,741**	**2,717**	**2,741**
Permanent	36.95%	36.80%	36.82%	36.95%	12.41%	12.29%	12.37%	12.33%
Long-term	51.15%	51.32%	51.07%	51.14%	42.88%	43.09%	42.80%	43.09%
Short-term	3.64%	3.62%	3.63%	3.63%	11.75%	11.78%	11.70%	11.89%
Non-contract	8.27%	8.26%	8.48%	8.28%	32.97%	32.83%	33.12%	32.69%
Work unit	**5,140**	**5,242**	**4,962**	**5,205**	**2,724**	**2,741**	**2,717**	**2,741**
Government sector	39.61%	39.58%	39.70%	39.71%	6.39%	6.28%	6.44%	6.31%
State-owned enterprises	27.32%	27.47%	27.25%	27.32%	8.81%	8.87%	8.80%	8.79%
Collective enterprises	6.77%	6.73%	6.79%	6.74%	6.72%	6.79%	6.81%	6.75%
Private enterprises	26.30%	26.21%	26.26%	26.22%	78.08%	78.07%	77.95%	78.15%
Hukou status	**5,140**	**5,242**	**4,962**	**5,205**	**2,724**	**2,741**	**2,717**	**2,741**
Local	97.84%	97.79%	97.90%	97.89%	15.86%	15.94%	15.97%	15.87%
Non-local	2.16%	2.21%	2.10%	2.11%	84.14%	84.06%	84.03%	84.13%
Sample size	**5,140**	**5,242**	**4,962**	**5,205**	**2,724**	**2,741**	**2,717**	**2,741**
Notes: Percentages are presented for categorical variables, and means and standard deviations are presented for continuous variables								

Empirical Results

Table 2 present the results of binary logit regression on the participation of social insurance schemes in urban residents and rural-urban migrant workers. In terms of individual characteristics, gender gap in their odds of participating in social insurances is statistically significant among urban workers. To be specific, the odds of female urban workers are only 84.4 percent ($e^{-.170}$), 82.0 percent ($e^{-.198}$) and 75.8 percent ($e^{-.277}$) of male urban workers to be covered by pension insurance ($p<.05$), work injury insurance ($p<.01$) and housing fund ($p<.001$), respectively, whereas there is no significant disparity found between male and female urban workers in unemployment insurance participation. The gender disparity of rural migrants is found to be statistically significant only in accessing work injury insurance program, with that female rural migrants' odds are only 70.6 percent ($e^{-.348}$) of their male counterparts to be covered by work injury insurance ($p<.01$).

Education is found to have consistent and significant effect on social insurance participation in urban workers and rural migrant workers and the effect of education is much stronger on rural migrants' being covered by social insurance programs than on urban residents' social insurance participation. To be specific, each extra year of education increases urban workers' odds of being covered by social insurance schemes by about 4.5 percent ($e^{.045}$-1) in unemployment insurance ($p<.01$), 2.7 percent ($e^{.027}$-1) in work injury insurance ($p<.05$) and 13.2 percent ($e^{.124}$-1) in housing fund ($p<.001$), respectively, whereas each additional year of education will increase rural migrants' odds by 15.6 percent ($e^{.145}$-1) in unemployment insurance ($p<.001$), 14.7 percent ($e^{.136}$-1) in pension insurance ($p<.001$), 13.5 percent ($e^{.127}$-1) in work injury insurance ($p<.001$) and 17.1 percent ($e^{.158}$-1) in housing fund ($p<.001$), respectively. Work experience is also revealed to play positive roles in both urban workers and rural migrant workers' social insurance participation, with bigger effects found on the latter than on the former group. Each extra year of work experience increases urban workers' odds of participating in social insurance schemes by about 2.1 percent ($e^{.021}$-1) in unemployment insurance ($p<.001$), 2.4 percent ($e^{.024}$-1) in pension insurance ($p<.001$), 2.4 percent ($e^{.024}$-1) in work injury insurance ($p<.001$)

and 3.9 percent ($e^{.038}$-1) in housing fund (p<.001). Each additional year of work experience increase the odds of rural migrant workers by 2.6 percent ($e^{.026}$-1) in pension insurance (p<.05), 3.5 percent ($e^{.034}$-1) in work injury insurance (p<.01) and 5.5 percent ($e^{.054}$-1) in housing fund (p<.001), respectively. The effect of work experience is found to non-statistically significant on rural migrants' being covered by unemployment insurance. Occupations are found have non-statistically significant effects on rural migrants' social insurance participation, whereas it is revealed to play important roles on urban workers' accessing housing fund. Specifically, compared with professionals and managers, clerk and commercial and service personnel are found to enjoy 79.5 percent ($e^{-.229}$)(p<.05) and 49.1 percent ($e^{-.711}$)(p<.001) odds of being covered by housing fund, whereas the odds of manual labors are found to be 1.26 times ($e^{.232}$)(p<.05) of professionals and managers.

Consistent with previous studies, employment types are found to be closely correlated with social insurance participation in both urban workers and rural migrants. After taking a closer look at the results, we find the significant advantage of permanent employment over short-term or non-labor contract employments in urban workers, whereas rural migrant workers holding long-term employment enjoy the biggest chances to be covered in the all the four social insurances. Specifically speaking, compared to permanent employment, short-term and non-labor contract employment decrease urban workers' odds of being covered by 34.7 percent ($e^{-1.059}$), and 7.1 percent ($e^{-2.641}$) in unemployment insurance (p<.001), 41.4 percent ($e^{-.881}$), and 12.2 percent ($e^{-2.100}$) in work injury insurance (p<.001). In rural migrant workers, compared with permanent employment, long-term employment increase the odds to be 4.15 times ($e^{.789}$) in unemployment insurance (p<.001), 2.22 times ($e^{1.170}$-1) in pension insurance (p<.001), 1.59 ($e^{.952}$-1) in work injury insurance (p<.001), respectively. In terms of housing fund, permanent employment is revealed to have significant advantage over other employment types in both rural migrants and urban residents.

The structural effects of work unit sectors on urban workers participating in social insurance differed from that on rural migrant workers. The findings in urban

workers sample show that government sector has lost its advantage over other work unit sectors on providing its employees' unemployment insurance, pension insurance and work injury insurance except housing fund, and moreover, state-owned enterprises have surpassed government sector on offering their employees social insurance and the boundary between government sector and private enterprises is also becoming blurring. However, in rural migrants, entering government sector is still an effect way for rural migrants to be covered by pension insurance and work injury insurance.

To be specific, in urban workers, the odds of state-owned enterprises employees are 2.22 ($e^{.797}$) ($p<.001$) times, 2.75 ($e^{1.013}$) ($p<.001$) times, 1.84 ($e^{.612}$) ($p<.001$) times, and 1.52 ($e^{.416}$) ($p<.001$) times of government employees in participating in unemployment insurance, pension insurance, work injury insurance and housing fund, respectively. In rural migrants, the chances of workers in private enterprises are 56.1 percent ($e^{-.578}$) ($p<.001$), and 45.1% ($e^{-.796}$) ($p<.001$) of government employees in being covered by pension insurance, and work injury insurance. In terms of housing fund and unemployment insurance, the disparity of chances of rural migrants in different work unit sectors is not reported to be statistically significant.

With respect to hukou status, local urban status exerted positive effects on urban workers' odds of being covered by social insurance programs. In urban workers, non-local workers are found to be 65.8 percent ($1-e^{-1.074}$) ($p<.001$), 58.1 percent ($1-e^{-.869}$) ($p<.001$), 43.3 percent ($1-e^{-.561}$) ($p<.01$) and 68.2 percent ($1-e^{-1.146}$) ($p<.01$) less likely to be covered by unemployment insurance, pension insurance, work injury insurance and housing fund than local urban workers, respectively. However, there is no statistically significant disparity found between local and non-local rural migrant workers' participating in social insurance schemes.

Table 2 Binary logit models on the participation of social insurance schemes in separated samples of urban residents and rural-urban migrant workers

	Unemployment Insurance		Pension Insurance		Work Injury Insurance		Housing Fund Insurance	
	Urban residents	Rural migrants	Urban residents	Rural migrants	Urban residents	Rural migrants	Urban residents	Rural migrants
Age	.070*	.139**	.097**	.173***	.029	.122**	-.027	.116
	(.031)	(.049)	(.034)	(.041)	(.030)	(.043)	(.033)	(.059)
Age^2	-.001**	-.002**	-.002***	-.002***	-.000*	-.002**	-.000	-.002*
	(.000)	(.001)	(.000)	(.001)	(.000)	(.001)	(.000)	(.001)
Female	-.134	-.082	-.170*	-.203	-.198**	-.348**	-.277***	-.178
	(.073)	(.121)	(.082)	(.108)	(.068)	(.112)	(.075)	(.152)
Years of education	.045**	.145***	.004	.136***	.027*	.127***	.124***	.158***
	(.014)	(.025)	(.015)	(.022)	(.013)	(.023)	(.015)	(.030)
Single	.249*	-.168	.102	-.090	.075	.075	.029	.086
	(.121)	(.163)	(.134)	(.146)	(.112)	(.150)	(.118)	(.198)
Work experience	.021***	.024	.024***	.026*	.024***	.034**	.038***	.054***
	(.004)	(.013)	(.005)	(.012)	(.004)	(.012)	(.005)	(.015)
Occupation ("professional and manager"omitted)								
Clerk	-.164	-.533	.023	.120	.017	-.462	-.229*	-.217
	(.088)	(.344)	(.100)	(.315)	(.082)	(.321)	(.091)	(.445)
Commercial and service	-.259*	-.258	-.271*	.294	-.207*	-.182	-.711***	.232
	(.106)	(.251)	(.116)	(.246)	(.099)	(.243)	(.106)	(.323)
Manual worker	.162	.386	.210	.626*	.315**	.368	.232*	.550
	(.117)	(.258)	(.136)	(.254)	(.107)	(.251)	(.116)	(.333)
Employment types ("permanent" is omitted)								
Long-term	-.107	.789***	.113	1.170***	-.084	.952***	-1.300***	.956***
	(.087)	(.177)	(.101)	(.159)	(.081)	(.158)	(.091)	(.230)

Short-term	-1.059***	.435	-.761***	.387	-.881***	.252	-2.482***	.262
	(.173)	(.220)	(.184)	(.200)	(.173)	(.202)	(.209)	(.298)
Non-contract	-2.641***	-1.784***	-2.215	-1.727***	-2.100***	-1.702***	-3.243***	-1.810***
	(.159)	(.278)	(.145)	(.233)	(.152)	(.234)	(.190)	(.388)
Work unit (“Government sector” is omitted**)**								
State-owned	.797***	.165	1.013***	.296	.612***	-.052	.416***	.577
enterprises	(.098)	(.266)	(.117)	(.236)	(.088)	(.235)	(.096)	(.326)
Collective-owned	.115	-.248	.372*	-.265	.187	-.639*	-.602***	.002
enterprises	(.140)	(.312)	(.165)	(.267)	(.134)	(.271)	(.138)	(.390)
Private enterprises	.006	-.220	-.015	-.578**	-.053	-.796***	-.816***	-.009
	(.091)	(.223)	(.100)	(.195)	(.087)	(.193)	(.092)	(.288)
Hukou status (Local urban is omitted in urban sample, and local rural is omitted in rural sample**)**								
Non-local	-1.074***	-.175	-.869***	-.115	-.561**	.059	-1.146***	-.219
	(.209)	(.165)	(.216)	(.149)	(.213)	(.156)	(.243)	(.198)
n	5140	2724	5242	2741	4962	2717	5205	2741
Pseudo R-squared	0.152	0.156	0.161	0.206	0.111	0.191	0.285	0.148
Note: The figures in the parentheses are standard deviation *p<.05.** p < .01.***p < .001								

Discussion

In this article, we compared the effects of structural determinants on access to social insurances between rural migrants and urban residents, with particular interest in the effects of employment types, local and non-local hukou status and work unit sectors. In terms of employments, the findings suggest that labor contract has become quite important for both urban residents and rural migrants in accessing social insurances, and obtaining permanent or long-term employment greatly increases the odds of employees getting covered by social insurances. Regarding the distinction between local and non-local workers, we found local rural migrants didn't enjoy advantage over non-local rural migrants in accessing social insurances, whereas the advantage of local urbanites on obtaining social insurances is significant over non-local urban residents. With respect to the structural effects of work units, the findings suggest that compared with working in private enterprise, entering government sector was an effective way for rural migrants to be covered by social insurances except housing fund, whereas the demarcation between government sector and private sector on urban workers' social insurance participation has become blurred with the increasing advantage of private sector on offering its employees social insurances.

The significant role of employments on social insurance participation in both rural migrants and urban residents should be attributed to LCL. LCL enacted in 2008 has effectively made employers to sign labor contracts with employees, and to pay for employees' social insurance, regardless employees' hukou status and the ownership of work units, and therefore, it has been considered as one of the institutional milestones in promoting unification of social insurance scheme in rural migrant workers and urban residents (Li 2014; Davies and Ramia 2008; Cheng, Nielsen and Smyth 2014). Consistent with previous studies, the regression results in this study show that obtaining permanent or long-term employment could greatly increase employees' chances to be covered by social insurances in both rural migrants and urban residents. One subtle difference of the employment's effects between rural migrants and urban residents is that in rural migrants, long-term employment rather than permanent

employment exerts overwhelming advantage on employees' being covered by social insurances, whereas in urban residents, it is employees with permanent employment that hold the greatest chances to participate in social insurances.

In market economy, the length of employment contract reflects how the employers evaluate their employees for a certain degree, for instance, for those employees who are valuable for employers will be given permanent or long-term contacts so as to be inspired to work hard, whereas employees who are not so valued by employers will be offered short-term or non-contract employment. Attached to the employment contract are wages and all kinds of benefits. Theoretically, people with permanent or long-term employment will enjoy higher income and more benefits than employees with short-term or non-contract employment. However, rural migrants were often refused by their employers to sign labor contract, let alone permanent employment. After LCL was enacted in 2003, rural migrants have the legal rights to ask employers to sign contract with them, and if employers do not sign a written labor contract with them within one year from the hiring date, they can request open-term contract (LCL Article 14). Thus, we think on the one hand, it is possible that employers sign with rural migrant employees open-term contract due to the pressure of LCL rather than their satisfying performance, hence they will not offer these employees so much benefits such as social insurances. And on the other hand, we think rural migrants can get long-term employment because their performance is good enough for their employers and therefore they have more chances to be covered by social insurances.

Regarding the negative effects of non-local hukou status on urban residents' chances of being covered by social insurances, there is one possible reason that migrant workers refuse to participate in or drop out of social insurance scheme. As the pooled social insurance funds are managed by local governments, different cities stipulate different regulations about social insurance, for instance the contribution of employees and employers. Therefore, migrant workers face many difficulties in dealing with transfer procedure when they apply to transfer their benefits between pools, and many of them have to give up or suspend social insurance schemes due to

the complicated procedure and long wait.

However, the disadvantage of non-local rural migrants is not significant on their accessing social insurances compared with local rural migrants, and both local and non-local rural migrants hold low social insurance participation. The low social insurance coverage rate of rural migrants reflects rural migrants' homogeneity. Firstly, it is common for rural migrants regardless local or non-local status to move across cities and therefore, similar with urban migrants, the institutional design flaw of social insurance scheme is the main contributor for migrant workers to drop out of social insurances. Secondly, most of rural migrant workers are lack of sufficient awareness and of proper understanding about social insurance schemes and LCL, thus, on the one hand, they may not actively request social insurances from their employees, and on the other hand, employers would like to take the risk to disobey the laws and refuse to pay social insurance for rural migrant workers so as to save costs. In order to exactly explore the reasons behind the low social insurance coverage rates in rural migrants, employees' willingness to participate in social insurance scheme should be also included in to analysis. However, the data set we used in this article did not cover relevant information, and this should be one of the limitations of the study.

Work unit sectors are found to exert different effects on social insurance participation between urban workers and rural migrants. On the one hand, urban residents in government sector didn't enjoy significant advantages over employees in other work unit sectors on obtaining all kinds of social insurances except housing fund, and instead, urban residents in state-owned enterprises benefit the most from their work units in terms of participating in each social insurance program. However, on the other hand, entering government sector is still an effective way for rural migrant workers to be covered by social insurances.

The findings suggest that the overwhelming advantage of government sector on urban employees' social insurance participation is fading out, and urban employees in private enterprises and collective-owned enterprises enjoy the equal access to social insurances except housing fund as their counterparts in government sector. Different from other social insurances, housing fund is not compulsory for employers and it is

in a large part dependent on employers' profitability. To cut cost, a large number of private enterprises refuse to pay housing fund for its employees, therefore the advantages of government sector and state-owned enterprises become prominent on employees' benefit.

However, government sector is still the best workplace for rural migrant employees in terms of being covered by social insurances except housing fund, and private enterprises have the significant disadvantage on offering their rural migrant employees social insurances. The findings in this article indicate that during the market transition from redistributive economy, rural migrants may benefit from private enterprises to obtain high economic rewards or job opportunities, but they surely benefit from government sector to be covered by social insurances that are important for them to stay in cities. The roles of the state and the market on urban stratification in market transition have been discussed a lot, and the state has been accused to play a key role on generating urban inequality. The findings in this article shed new light on the changing roles of the state on rural migrants' social mobility and assimilation in cities.

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Appendix

Table A1

Measurement of occupations and work unit sectors

Variables	Description
Occupations	In UHS sample, occupations are classified into 8 types as below: ① Principals for government/party agencies and enterprises, ② Professional technicians, ③ Clerk, ④ Commercial and service personnel, ⑤ Agriculture, forestry, animal husbandry, fishery and water resources producer, ⑥ Manufacturing and transporting equipment manipulator and relating personnel, ⑦ Soldiers and ⑧ Other practitioners. To make the occupational classification more concise and keep it congruent with that in MHS sample below, we reclassified the 8 occupations into 4 types, namely, professional and manager (① and ②); clerk (③); commercial and service personnel (④) and other manual labors (⑤ and ⑥). Regarding ⑦ and ⑧, as they are quite different from the above occupations and the number of the two groups is quite small, we deleted the two types from our analysis. In MHS , respondents' primary occupations were categorized into 25 types, from professionals to family business helpers and others (please see Table A2). To be congruent with the classification in UHS sample, we combined Professional and manager as the first category, Clerk as the second category, and combined type 4 to 17 and types of 20, 22, 23 and 25 as Commercial and service personnel because all of the occupations belong to commercial and service, and categorized the rest types of 18, 19 and 24 as manual labors.
Work unit sectors	In MHS and UHS, there were 16 types of work unis, I categorized them into four sectors:①government sector, including government agencies and party agencies, public security and people's prosecutor and people's court, the Ministry of Armed Forces, army, state and collective service unit, civilian-run enterprises and public service unit;② state-owned enterprises, comprising solely state owned enterprises, state holding enterprises and state holding joint venture; ③collective-owned enterprises, including solely collective owned enterprises, collective holding enterprises and collective holding joint venture; ④ private enterprises, including private holding enterprises, private holding joint venture, solely foreign owned enterprises, foreign holding enterprises, and foreign holding joint venture. If the answer given by the respondents was "other enterprises", it was not attributed to any of the above categories and was simply dropped. And if the answer is self-employed individuals, as social insurances should be offered by employers, self-employed individuals will be delete in this analysis.

Table A2

Occupation for rural-urban migrant workers

1	Professionals
2	Managers
3	Clerk
4	Retails of vegetable/ fruits/ grains/ other agricultural by products, and others
5	Sales
6	Recycling and other buyer
7	Delivery and transport worker
8	Restaurant and hotel staff
9	House-maid, household worker
10	Hairdresser, beautician, Masseur, tourist guide
11	Auto and home appliance repair
12	Cleaning and sanitizing
13	Chefs and butcher
14	Kitchen assistance
15	Security, warehouse and property management
16	Driver and conductors
17	Other service area
18	Construction labors
19	Manufacturing
20	Repair and manufacturing service
21	Other factory process
22	Private business owner
23	Self-employed
24	farmers
25	Family business helper and others