Labor Market Vulnerability in Urban China

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I.   Introduction

The Chinese labor market has been facing with a significant transition. As evidenced by frequent labor shortage and rising wages for migrant workers, it is believed that China has already passed through the Lewis Turning Point (Cai, 2007). This labor market change affects the quality of jobs through several channels.

During the era of unlimited labor supply, the ceaseless labor flow out of agriculture weakened the bargaining power of labor. Since the employers take a dominant position, employees were incapable of imposing stress on the enterprises in the aspects of the salary level, working time, labor intensity and working environment, etc. so that they are always obliged to accept conditions unbeneficial to themselves. Under such circumstance, even if the laborers require to raise wages and to improve the labor protection conditions, the enterprises would not commit to do so. It is hard to reduce the vulnerability of jobs in such situations even the government has wishes to do so.

After passing through the LTP, the scarcity of labor presses the firms to compete for laborers. As a result, the employers have to raise the wage offer and other conditions so as to attract labor, otherwise workers will vote with feet and choose other opportunities.

The observation from the Chinese labor market indicates that, when facing with labor shortage, the enterprises provide quality jobs actually have no trouble in recruiting enough migration workers. Thus, under the conditions of being short of labor supply, enterprises must improve laborers' treatments so as to reduce the reservation wages for those who were out of labor market previously. The new changes of the supply and demand of labor force in China make more and more entrepreneurs follow "enterprises shouldering social responsibilities" with great interest.

In addition to the pressure of *voting with feet* from migrant workers, the Chinese government has been promoting the tripartite talk mechanism for employment and wage decisions, which increases the opportunities for workers to express their demand for wage rates, working conditions, and other work related requirements. In particular, the Employment Contract Law enacted in 2008 is widely considered as a milestone marking the Chinese labor market moving towards employment protection.

As an important stakeholder in the labor market, local governments taking the

responsibility for keeping economic development in local areas are also responsible for social stability too. When facing with the situations of labor shortage, attracting the migration workers is of importance to guarantee the labor input and then sustain local economic growth. Under such situation, local governments tend to make friendly policies for migrants. For example, in recent years some practices on social security system have been applied in coastal areas in order to cover migration workers. In addition, local government plays active role on labor market by monitoring the enterprises to reduce vulnerability of jobs so as to mitigate the negative impacts of labor shortage on local economic development.

Despite of these positive changes, China still has a long way to go if providing quality jobs is set up as one of the goals in labor market development. In particular, significant disparities in quality of jobs are found between migrant workers and urban workers holding local *hukou.* In this case, the labor market policies aiming to reduce the overall level of job vulnerability also need to bridge the gaps between groups of workers.

The paper is organized as follows. The next section introduces the main labor market developments in recent years in China, including rural to urban migration, trend of informality, social protection system, and recent development in labor market institutions. Section three tries to measure the vulnerability in urban labor market by introducing a new measurement in social security and job security. Section four

describes the vulnerability of jobs using the new tools we developed and observe the vulnerability variations across various groups of workers. A regression-based decomposition is applied to analyze the sources contributing to job vulnerability. The final section concludes.

II.   Labor and Employment in China

Migration

China has witnessed its largest labor migration in the world since reform and opening up policies were implemented. According to the most recent statistics, the total number of rural to urban migrant workers reached 153 million in 2010. The migration flow has propelled the economic and societal transition in China through the increase of labor productivity and social restructuring. Accordingly, the Chinese government has adapted its migration policies to increasing migration flow and changes in the labor market.

Migrant workers have been the stable sources of labor supply in urban labor market in the past decades. In recent years, in addition to growing employment, their average monthly earnings have been increasing. For instance, the annual growth rate of real monthly earnings (in 2001 price) for migrant workers was 19.6% in 2008. In 2009, although suffering from the global financial crisis, we still see an increase in

employment and wage growth for migrant workers. In 2010, as one of the outcomes of economic recovery, average real monthly earnings for migrant workers increased 15.5 percent.

Figure 1 Employment and Real Wage for Migrant Workers

Source: cite from *Migrant Workers Monitoring Report in 2010*, mimo.

During the era with dual economic structure, the transferred labor forces from rural areas would enhance their marginal productivity no matter working in manufacturing or service. Therefore, labor reallocation from low to high productivity sector results in improvement in economic efficiency, which contributes to overall economic growth. Previous studies have demonstrated that labor mobility between rural and urban areas had contributed 16%-20% to overall economic growth during the first two decades of reforming period (Cai and Wang, 1999; the World Bank, 1998). With passing through the Lewis turning point, the contribution of labor migration to

overall economic growth declines, even though it is still an important source driving growth. From 2001 to 2009, the average share of contribution to overall economic growth is 16.7% and has been decreasing in recent years (Cai, et. al., 2011).

The rural to urban migration has stylized the labor market in the past decades, together with fast employment growth and economic transitioning. As indispensable component in urban labor market, policy makers have to concern about the needs of migrant workers when aiming to the quality of jobs.

Informality

Informality is the one of the significant features in developing labor market. The trend of informality in China has been changing since China started its marketized reform. It is believed that both the urban economic restructuring and the rural to urban migration have contributed to informalization of urban labor market. However, due to the data limitations, it is difficult to measure the trend of informality using public data sources. As an alternative, Cai and Wang (2004) suggest that the difference between total employment and unit employment in published data by NBS could be approximated as informal employment. If the "employment residual" approach is applied, the size of urban informal sector accounted for 31.5% of urban employment in 2008 while it was 36.1% in 2005. The informality in urban labor market is mostly from migrant workers. According to a report by NBS (2010), if the

self-employed and wage employment without contract are defined as informal, 60% of migrant workers worked informally in 2009.

However, there is no micro level national representative data to measure the overall size of informal employment in urban labor market and to distinguish its components. Here, the three waves of China Urban Labor Survey are employed to look at the changing trend of informality in urban China. As figure 2 presents, overall size of informal employment in sampled cities increased from 2001 to 2005 and decreased by 2010.
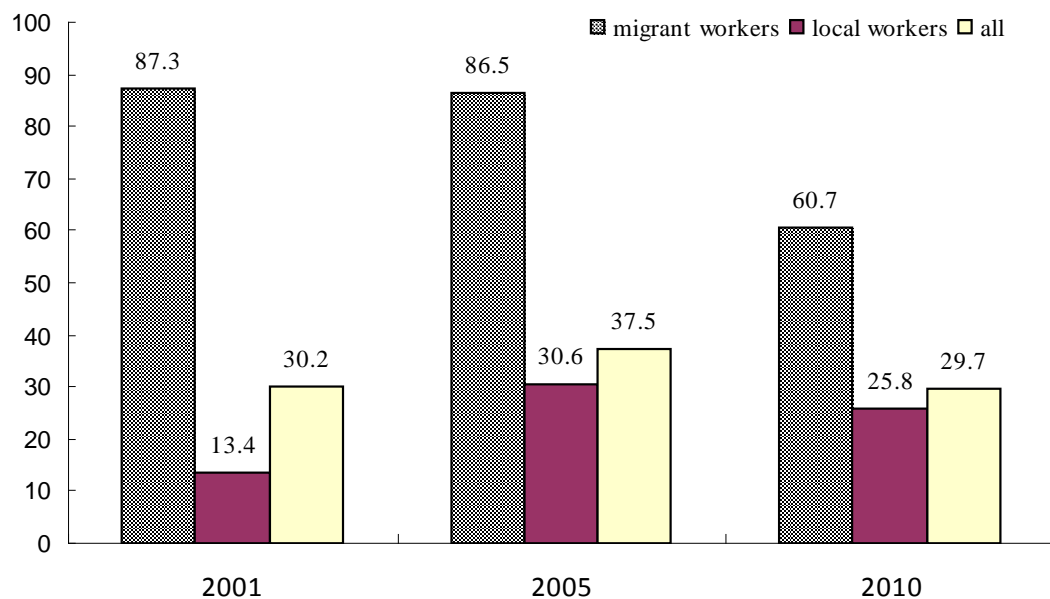

Figure 2 the Size and Components of Informal Employment in Urban Labor Market

Source: authors' calculation from CULS data.

Figure 2 also characterizes the labor market development at different stages. For instance, between 2001 and 2005, the increased informality was mostly from

increases of informal employment of urban local workers due to SOEs restructuring.

From 2005 to 2010, the declined informality was mostly from increased formality of

migrant workers, as a result of stricter labor market regulation during the period than

before. This trend also implies that employment quality might have been improved in

the past years where the next sections show the empirical evidence.

Social Protection Framework

Although we observe quality of jobs at individual level, to a large extent the job

quality is determined by social protection system. Given the fact that increasing

resources have been used on social protection system, the Chinese government is

able to raise new social programs so as to cover more vulnerable people. Figure 3

depicts the framework of social protection system in China. The social protection

system mainly consists of both social insurance programs and social assistance

programs as well, which are characterized as contributory or non-contributory

respectively. For social assistance program, *dibao* has played a dominant role in

terms of both the coverage and the benefit transferred as well. The social insurance

system in urban areas is quite complete, meanwhile, some a series of new programs

have been raising in rural areas although participants only get limited benefits

compared to those in urban programs.

Due to the gradualism that is applied to the construction of social protection, the

current system is far more from a complete one and is subject to adjustment, improvement, or further reforms. Several features of this system are worth noting here.

The most significant feature of current social protection system in China is its segmentation between rural and urban areas. Given the legacy from dual society, the gap of social protection between urban and rural areas was substantial. Although some new programs, for instance, the New Cooperative Medical System, Rural Pension System, and etc., have been implementing, the social protection disparities between rural and urban areas are still obvious. To some extent, the rural residents have been better off since new social protection programs were introduced in rural China. Meanwhile, China has been facing with the challenges to integrate different systems and to reduce the gaps of benefit among different groups of people. The segmentation may translate into determination of job quality as we may see later on in this paper.

The second one is segmentation across various branches of government. As China starts to prioritize social protection as one of the most important government functions, different government agencies began to raise new programs in succession, which increases the coordination costs. For example, the rural medical system is run by Ministry of Health while the urban health care system is administered by Ministry of Human Resources and Social Security. Another example is that, in addition to rural

pension programs, the Commission of Population and Family Planning kicked off special program aiming to support the parents of one-child.

In addition, the interaction between central and local government in construction of social protection system is worth noting. Most social protection programs are funded by both central and local governments as well. Given the disparities in economic development across regions, it is easy to understand that people in some poor areas are less protected due to the constraints of limited fiscal capacity at local level. Furthermore, it leads to segmentation across regions because the rich areas tend to keep the benefit locally, which may also result in variations in job vulnerability across regions.

Labor market institutions

With the sustainable and rapid economic development and population aging, China has ended the era of unlimited labor supply and structural labor shortages have emerged. This has created good opportunities to protect lawful rights and interests of laborers. Under this circumstance, China has sped up the pace to construct labor market institutions. A series of institutions and policies on China's labor market have been enacted recently, which include the *Employment Contract Law*, the *Labor Disputes Mediation and Arbitration Law, the Wage Guideline System, the Minimum Wage Regulations and the Employment Promotion Law.* In addition, the Chinese

government has proposed active and passive labor market programmers to respond to labor market fluctuations.

In general, recent reforms in labor market institutions incline to a stricter regulation with focus on employment protection, job security, and formalizing the employment. Although it is too early to evaluate the impact of those institutional changes on labor market outcomes, the regulations have taken effects on labor protection, as evidenced by the increasing coverage of social insurance and contract signing.

III. Measuring Good Jobs in Urban Labor Market

As noted earlier in this paper, the trend of informality has been changing in the Chinese urban labor market. No matter what definition of informality is employed, however, informality is always a binary variable. This measurement in job vulnerability is subject to the following flaws. First of all, in fact, there exits great heterogeneity among jobs defined as either formal or informal one. Unfortunately, informality defined as 1/0 thing can not tell the difference within the same group. In other words, the vulnerability that workers have been facing with in the labor market varies among workers but have not been observed in informality measurement. Second of all, both the difference in job security and in social security could lead to variations in vulnerability. However, current informality measurement can not tell the sources of vulnerability, which weakens its ability as policy tool.

Thirdly, China has been characterized by economic transition in the past three decades, including labor market institutional changes. A good measurement should tell where the vulnerability is from during the transition. In this case, to observe the job quality and vulnerability in the Chinese labor market, we have to introduce some new tools.

In this paper, we give up the way measuring informality as binary variable, but introduce a multidimensional method to measure job quality.

Two components of vulnerability

Job vulnerability consists of two main components. First of all, a secure and stable job is of great importance for a worker's wellbeing. In many cases, job insecurity, which could be a source of vulnerability, but not well reflected by informality definition. Second of all, social protection is often associated with jobs, which is widely accepted by current definition on informality (ILO, 2002). Therefore, social security is treated as one of the components of job vulnerability.

The Chinese government has taken great effort to increasing the coverage of contract workers in recent years. In particular, the *Employment Contract Law* that was enacted in 2008 has promoted coverage of contract. This change could increase job security even if without improving social protection. A measurement without

considering this change may not effectively reflect the reality in the labor market.

Following the above point of view, we measure the job vulnerability in two dimensions. One of them is the social security associated with jobs. The other one is the job security. For social security, main social insurance programs are selected to measure the level of social security. For employment security, characteristics of both employee and employer are considered. The former is reflected by the types of contract the employee signed and the latter is indicated by the characteristics of working place and the size of firms. The framework is presented in figure 4.
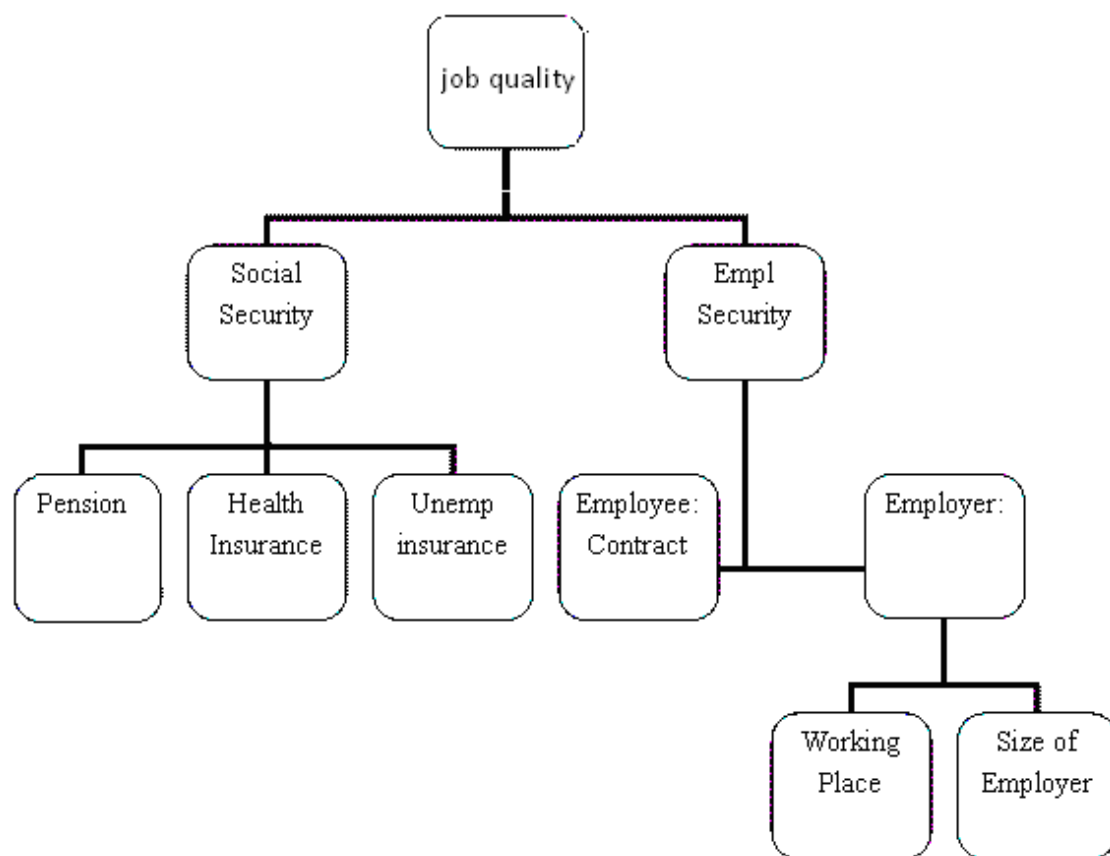

Figure 4 Framework of Scoring Job Vulnerability

Scoring the job characteristics

Taking advantage of China Urban Labor Survey conducted by the Institute of Population and Labor Economics at the Chinese Academy of Social Sciences in 2010, this paper tries to measure individual job quality in two dimensions as noted earlier. The China Urban Labor Survey (hereafter CULS) was implemented in five cities, Shanghai, Wuhan, Shenyang, Xian, and Fuzhou. The first two rounds were conducted in 2001 and 2005 respectively. In each city, 700 local resident households and 600 migrant households were surveyed. A 3-stage Proportional Probability Sampling (PPS) of urban sub-districts, neighbourhoods, and households is used. In each neighbourhood, detailed information of all dwellings is enumerated. For the purpose of this study, only the local resident sample is used. The survey provides information at both the household and individual levels. Detailed questions are designed to measure job characteristics and social security.

Firstly, we look at the aspects of social security. Current social insurance programs include the pension, the health insurance, and the unemployment insurance. Based on the benefits that participants get from each specific program, we score each type of social security the workers get access to. The more protection a social security program provides, the higher score it would be given. The maximum of job vulnerability is scored by 10 points. It consists of 5 points from scoring social security and 5 points from scoring job security. Table 1 gives details of the scores of social security.

Table 1 Scoring Social Security in Urban Labor Market

	Urban Local Workers	Migrant Workers
Pension		0.5
Urban Worker Basic Pension	2	
Urban Resident Pension	1	
Health Insurance		0.5
Urban Worker Basic HI	2	
Urban Resident HI	1	
Unemployment Insurance	1	1

As noted in figure 1, there exists a significant segmentation between migrant workers and local workers in current social security programs. The segmentation lies in two aspects: migrant workers without local *hukou* are not entitled to urban social insurance programs, and the benefits migrant workers can get from their programs are significantly less than local workers. For such a reason, the points allocated to migrant workers who are excluded from urban social insurance programs are less than urban local workers.

In addition, heterogeneity even exists among local workers. In some cases, the social protection for urban local workers is not attached to employers while local governments provide urban resident programs for them. Given that workers have to contribute from their own pocket, the scores for these types of programs are less than those attached to employers.

The second aspect of the job vulnerability is reflected by job security. We measure the job security based on the types of contract the workers signed and the characteristics of employers including characteristics of working place and the total size of firms. Regarding to the types of contract, several aspects are worth noting here. First of all, the *Employment Contract Law* has not been applied to employees in government yet, so those people get maximum score even without any form of contract. Second, for fixed-term or dispatched contract, we assume that a long duration of contract is associated with a stable job and high quality.

Employers' characteristics affect the vulnerability too. In this measurement, we assume that employees in big firms tend to have more stable jobs than those in small firms. Also, decent working places are scored high points referring to invulnerability of jobs.

Table 2 Scoring the Employment Security

		Points
Types of contract		
Formal jobs in government		5
Open-ended contract		5
Fixed term contract		
	More than 3 years	4
	1~3 years	3

	Less than one year	2
Dispatched Contract/ Contract signed for certain work		
	More than 3 years	2
	1~3 years	1
	Less than one year	0.5
Characteristics of working place		
Office or Store		2
Building Site		1
Outdoor Place		0.5
Total size of employees		
More than 20		3
7-19 employees		2
2-6 employees		1

In the section followed up, we observe the pattern of job quality and analyze its determinants based on the above definition.

IV. Observing Vulnerability of Jobs in Urban Labor Market

Applying the above method to CULS data, we may score the vulnerability for each individual worker. To observe the vulnerability in urban labor market, several perspectives are worth noting here. First of all, the difference between migrant

workers and local workers is of great interests in policy making. Second of all, observing the vulnerability within informal/formal group is of importance too. Finally, we decompose the variations of vulnerability into contributing factors based on regression results on the determinants of vulnerability.

Difference of Employment Vulnerability between Migrant and Local Workers

Under the current circumstance, the most variations of employment vulnerability take place between migrant workers and local workers due to the insufficient reforms in *hukou* system. According to our new measurement, comparisons between the two groups of workers are of interests from the following aspects.

First of all, it is of policy importance to compare the level of employment vulnerability between migrant workers and local workers. As noted earlier in this paper, migrant workers tend to work more informally than local workers. Taking advantage of our new measurement in employment vulnerability, it is possible to know the degree of difference of employment vulnerability between the two groups of workers.

Second of all, it is good to understand where the gap of vulnerability is from between the two groups of workers. In this case, observing the difference of employment quality and difference in social protection is of policy relevance.

Figure 5 displays the results of vulnerability between migrant workers and local workers. On average, local workers are scored 5.4 points based on our measurement in job quality, 1.52 times higher than migrant workers. Breaking down the total scores into their two components, it is easy to find that most of the difference is from social protection gap between the two groups of workers. For social protection, migrant workers are scored 1.3 points on average, one third of their urban local counterpart.

The figure also gives the information that overall job quality in labor market is still low. The average score of job quality for all workers in the sample is 4.68 points while the total score in this measurement is 10 points. Compared to social security, employment for most workers is not secure enough since the average employment security score is only 1.35 for the whole sample.
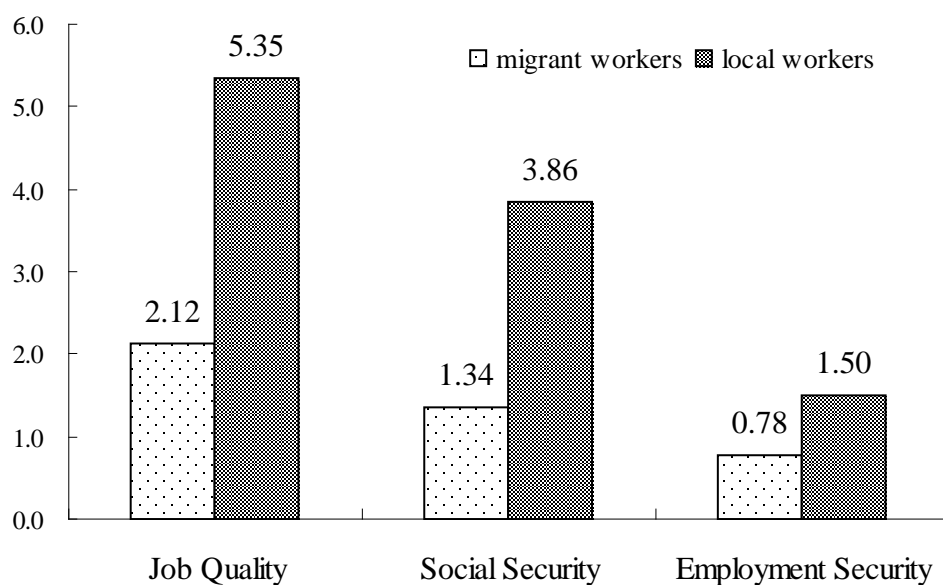

Figure 5 Vulnerability between Migrant and Local Workers

Source: Author's calculation from CULS data.

Linking with Individual Characteristics

Given the heterogeneity of workers in urban labor market, it is necessary to observe who are more vulnerable. To achieve this goal, we look at the job quality by individual characteristics including residence, age, and gender.

The first observation is to look at the life-cycle effect of job quality. Figure 6 depicts both employment security and social security for migrant workers and local workers respectively. The patterns are different between migrants and local residents. For local workers, job quality is improved with age increasing. However, for migrant workers, a significant inverted-U shape is found for both employment security and social security. Therefore, to improve the wellbeing of migrant workers, both new generation of migrants and the old migrant workers need to be concerned by the policy.
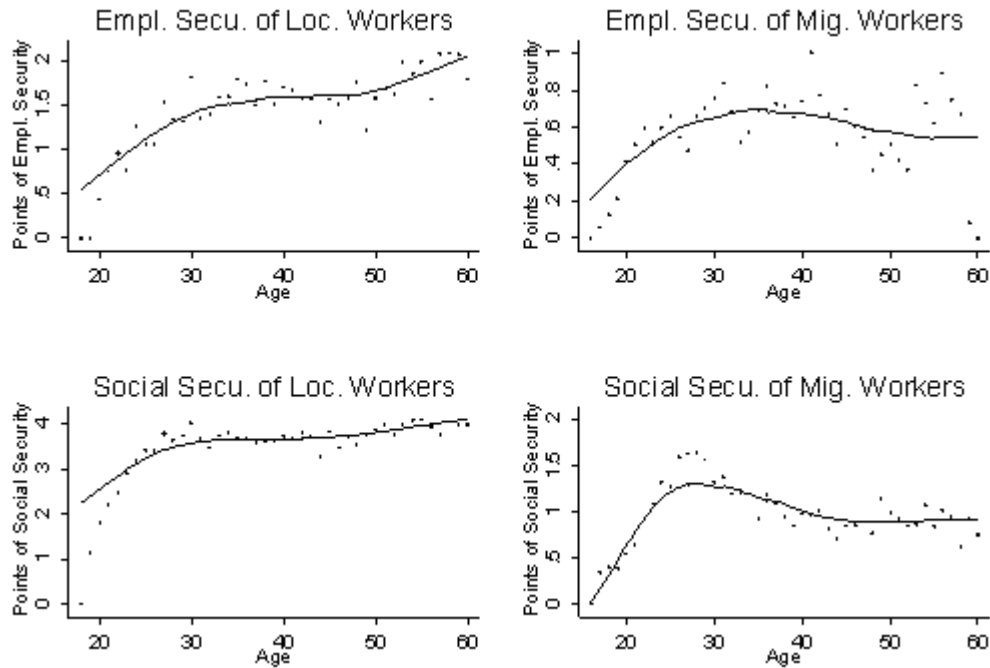
Figure 6 Job Quality Changes over the Life-Cycle

Source: Author's calculation from CULS data.

Table 3 describes the vulnerability from gender perspective. It seems that, without controlling for other individual characteristics, migrant workers have slightly bigger gaps between males and females than their urban local counterpart where difference is mainly from employment security. But this could be because both male and female migrant workers are not well protected by current social protection system. Further understanding the role of gender in vulnerability determination needs to control for the other factors affecting job quality where we see in the next section.

Table 3 Vulnerability by Gender

	Vulnerability	Social Security	Employment Security

Migrant Workers			
Males (a)	2.27	1.39	0.88
Females (b)	1.95	1.29	0.66
b/a	0.86	0.93	0.75
Local Workers			
Males (a)	5.54	3.96	1.59
Females (b)	5.10	3.73	1.37
b/a	0.92	0.94	0.86

Source: Author's calculation from CULS data.

Observing variations of vulnerability within groups

As noted earlier in this paper, one of the advantages in this new measurement in job quality is that we can tell the difference of job quality for workers within formal/informal group while the informality definition treats them as the same. We look at the overall job quality by age for both migrant workers and local workers, as figure 7 shows.
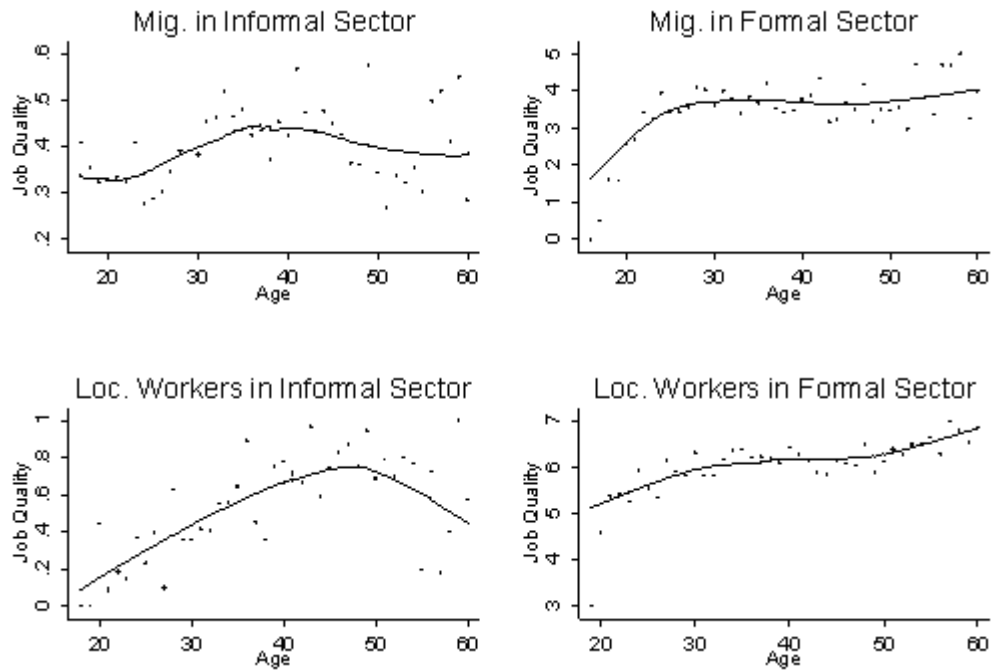
Figure 7 Vulnerability in Formal and Informal Sectors

Source: Author's calculation from CULS data.

Among those who are treated as working informally, both local workers and migrant workers display an inverted-U shape of job quality over the life-cycle. Therefore, through this new measurement we know that both young workers and the elderly workers around retirement encounter more insecurity in the labor market than the other workers while the informality measurement is not able to tell this difference. Despite of the similar shape over the life-cycle, it seems that local workers are subject to more variations across workers with different ages.

Decomposing the sources of vulnerability

The above analysis indicates that both individual characteristics and status of

residence determine the quality of jobs. To follow up, we regress the quality of jobs on individual characteristics variables including age, squared age, years of schooling, gender, self-reported health status, status of residence, and city dummies. Based on the regression results, a decomposition methodology of factor contributions proposed by Fields (2002) is applied to look at the contributions of determinants to job quality.

Table 4 presents estimation results where vulnerability, social security, and job security are taken as dependent variables respectively. As for overall measurement in job quality, all the individual characteristics variables and residence variable are statistically significant. As indicated in figure 5, the estimation results show an inverted-U shape over the life-cycle too. Not surprisingly, people with more education attainment or workers in good health tend to work in quality jobs. Males are more advantageous when controlling for other characteristics. Given other things constant, workers with local *hukou* are easier to get quality jobs than migrant workers.

The last two columns give the estimation results on the two components of quality of jobs, which we may get more information on where the variations of quality of jobs are from. Compared to the regression on total scores, the effect of status of residence on job security is much smaller than on social security, which implies that welfare gaps between migrant and local workers are mainly from those institutional

arrangements attached to *hukou*.

Table 4 the Determinants of Vulnerability

	Vulnerability	Social Security	Job Security
Age	0.146 (7.96)	0.087 (8.17)	0.059 (4.39)
Squared Age (/100)	-0.085 (3.69)	-0.070 (5.24)	-0.0150 (0.89)
Years of Schooling	0.407 (42.45)	0.220 (39.52)	0.187 (26.70)
Gender (male=1)	0.137 (2.51)	0.089 (2.82)	0.047 (1.19)
Health	0.131 (3.27)	-0.009 (0.38)	0.122 (4.18)
Residence (migrant=1)	-2.180 (29.54)	-2.05 (47.79)	-0.128 (2.37)
City Dummies	Yes	Yes	Yes
Adj. R^2	0.30	0.38	0.099
No. of Observations	11113	11113	11113

Note: the absolute value of t statistics in parenthesis.

Source: Author's calculation from CULS data.

Table 5 presents the decomposition results by sources contributing to variations of vulnerability. The contributions from both individual characteristics and city dummies are aggregated respectively. The status of residence accounted for 28.2 per cent of variations of social security, but less than 1 per cent in explaining job security. This strongly suggests that reforming social protection attached to *hukou* system is a pressing issue in China when aiming to improve job quality.

Table 5 Fields decomposition of factor contributions to vulnerability (%)

	Vulnerability	Social Security	Job Security
Individual characteristics	21.79	18.02	10.60
Residence status	16.88	28.18	0.74
Regional factors	0.89	1.65	0.76
Residual	60.44	52.15	88.00
Total	100	100	100

Source: Author's calculation from CULS data.

V.   Creating Quality Jobs

A new measurement in vulnerability is tried in the paper. By giving up binary measurement in informality, this paper includes job security and social security as two components in measuring vulnerability. The new measurement allows variations within informal/formal group, which reflects more information than the traditional way measuring employment quality.

Generally speaking, the overall job quality in the urban labor market is quite low. As discussed earlier in this paper, the average the scores for job quality is 5.35 for local workers and 2.12 for migrant worker while the total score in this measurement is 10 points. On the one hand, it is expected that the changing labor market situation will facilitate to improve the job quality for the workers; on the other hand, the government may take more efforts to improving job quality when the overall

employment pressure is eased up.

With the substantial transition in the labor market, China has witnessed significant changes in labor market in terms of both labor market outcomes and institutions in recent years. The empirical analysis in this paper indicates significant gaps in employment quality between migrant and urban local workers while the major difference comes from the disparities in social protection.

Therefore, improving social protection through government effort ought to be one of the key strategies to achieve inclusive growth in China. Migrant workers should be the focused group because they are less protected by current social protection system.

Increasing the coverage of social protection, especially for migrants, is of great importance to achieve inclusive growth under current situations. Due to instability of migrants' employment and high contribution rates of various social security programs, there is lack of incentives for both migrant workers and their employers to participate in those programs, giving rise to their low coverage (Table 6). Those exclusions of labor market institutions and social protection put them in a position of being exposed to labor market risks and prevent them from serving main force of urban labor market stably. Migrant workers' needs thus should be in the center of labor market institutions and social security system building.

Table 6 Comparison of Social Insurance Programs Coverage Rates in 2009

	Urban workers (%)	Migrant workers (%)
Basic pension	57.0	9.8
Basic health care	52.7	13.1
Unemployment insurance	40.9	3.7
Work injury insurance	47.9	24.1
Maternity insurance	34.9	2.0

Source: NBS (2009); Sheng (2009)

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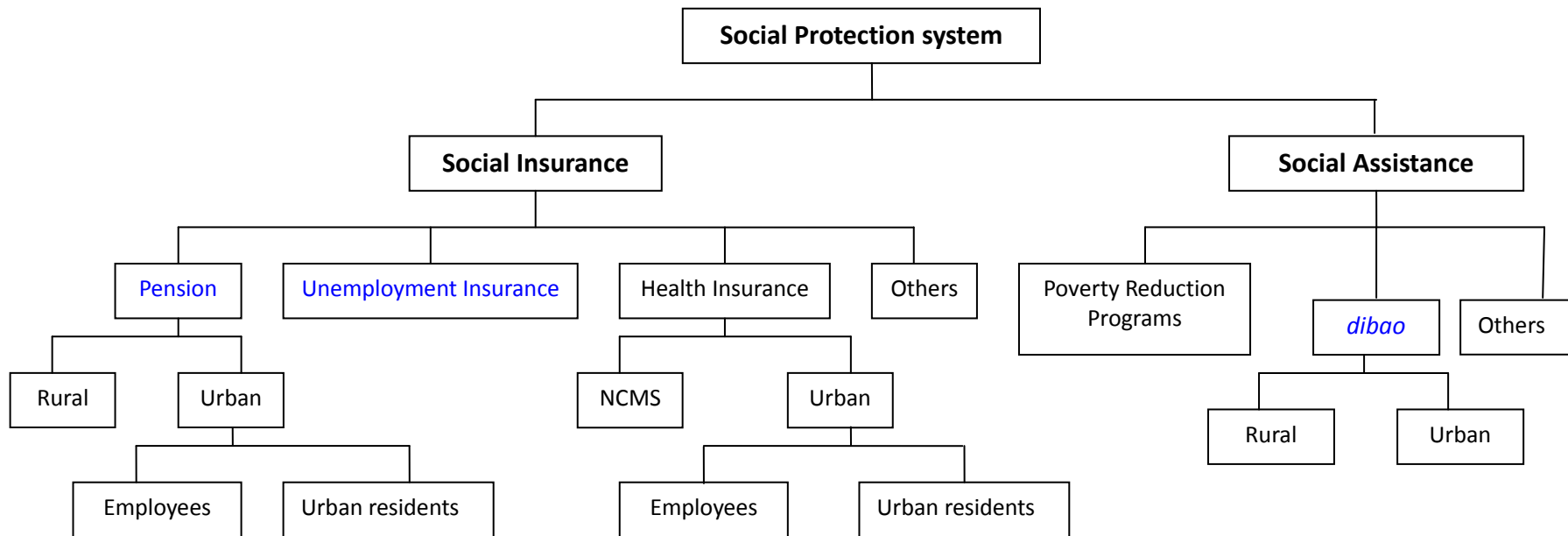
Figure 3 the Structure of Social Protection System in China