4 Wage Structures and Inequality among Local and Migrant Workers in Urban China

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1 INTRODUCTION

China has been in transition from a planned to a market economy since the end of the 1970s when economic reform began. Although the labour market has been slower to change than other markets, such as commodity and capital markets, there can be no doubt that a labour market has gradually developed. Currently, the labour market plays an important role in labour allocation and wage determination. Governments, both central and local, are no longer responsible for assigning jobs to workers, and enterprises now possess complete autonomy over hiring, firing and wage determination. Governments may still have control over the quantity of labour hired by state-owned enterprises and the public sector, but not over who to hire and at what price.

Nevertheless, China's labour market is still far from competitive, and institutional barriers, both formal and informal, continue to exist. One of those barriers is the restrictions on rural migrants in the urban labour market implemented through the household registration (*hukou*) system. Under this system, only individuals who hold an urban *hukou* are eligible to obtain certain types of jobs in urban areas. This has led to a concentration of urban *hukou* holders in the professional and managerial sections of the workforce. In 1995, for instance, Meng and Zhang (2001) found that 36.7 per cent of urban *hukou* holders in Shanghai held white-collar jobs, whereas the proportion for rural migrant workers was only 3.4 per cent. The situation has not improved greatly since then. Based on data from the 2002 wave of the China Household Income Project survey, Démurger et al. (2009) found that 52.4 per cent of urban workers, but just 6.7 per cent of rural migrant workers, were professionals, technicians or office workers.

As a result of these job restrictions, the earnings of migrant workers are much lower than they would be otherwise, and far below those of urban work-

ers. Based on surveys conducted in Shanghai in late 1995 and early 1996, for instance, Meng and Zhang (2001) estimated that the hourly earnings of migrant workers were less than 50 per cent those of urban workers. Deng (2007) showed that this ratio remained low in 2002, at 62 per cent. This chapter finds a ratio of 48 per cent in 2007 based on data from the 2008 Rural–Urban Migration in China and Indonesia (RUMiCI) surveys.

The question naturally arises as to how the wage structures for urban and migrant workers differ, and to what extent the significant increase in rural-to-urban migration and the existence of job restrictions on migrants affect earnings inequality in the urban labour market.

Most of the studies mentioned above focus on the mean, rather than dispersion, of wages and no study has explicitly examined the effect of migration on urban wage inequality. This chapter aims to shed light on the role of migration in wage inequality in urban China based on the large quantity of representative data collected through the RUMiCI surveys.

The chapter is structured as follows. The next section provides a preliminary description of the data and summary statistics related to the issues under study. As wage structures are the key to understanding wage inequality in the urban labour market, the third section concentrates on the wage functions for urban workers, migrant workers, and urban and migrant workers combined. The fourth section examines wage inequality and its constituent elements, and the final section presents our conclusions.

2   DATA AND DESCRIPTIVE STATISTICS

The data used for this study are derived from the first wave of the RUMiCI surveys, which were conducted in China between March and May 2008. Three independent surveys were conducted: the Rural Household Survey, the Urban Household Survey and the Urban Migrant Survey. The Urban Migrant Survey covered 5,000 households and 8,446 individuals in 15 cities: Shanghai, Nanjing, Wuxi, Hangzhou, Ningbo, Hefei, Bengbu, Zhengzhou, Luoyang, Wuhan, Guangzhou, Shenzhen, Dongguan, Chongqing and Chengdu. The Urban Household Survey covered 4,601 households in the same 15 cities in addition to 399 households in the cities of Anyang, Mianyang and Leshan, resulting in a total sample of 5,000 households and 14,697 individuals. This chapter focuses on the data from the 15 consistent cities.

In this study, urban workers are defined as urban *hukou* holders aged 16–60 who were working and had a positive wage income at the time of the survey. Similarly, migrant workers are defined as rural *hukou* holders aged 16–60 who were working in an urban area and had a positive wage income at the time of the survey. Since migrant workers are overrepresented in the sample, a simple

combination of the figures for urban and migrant workers would lead to a biased picture of wage structures and inequality among urban workers as a whole. To correct for this bias, we weight each sample by weights computed from the 1% National Population Sample Survey. Details on how these weights are constructed are presented in Appendix A4.1.

Table 4.1 reports descriptive statistics for urban workers, migrant workers, and urban and migrant workers combined. On average, migrant workers are nine years younger than urban workers. They are also clustered in the younger age groups: around 55 per cent of migrant workers are aged 30 or below, whereas 60 per cent of urban workers are aged 31–50. The proportions for urban and migrant workers combined, meanwhile, are 44 per cent for those aged 30 or below and 48 per cent for those aged 31–50. There seems to be little difference in the gender composition of urban and migrant workers, with more men than women working in both groups. In line with the difference in age structure, the marriage rate for migrant workers (59 per cent) is much lower than that for urban workers (97 per cent).

The rural–urban divide in education in China has been the subject of much criticism (Knight and Li 1996; UNDP 2005: 47–8). In our data, it is reflected in huge differences in educational attainment between urban and migrant workers. Only 3 per cent of urban workers did not complete junior high school; among migrant workers, however, the figure is 12 per cent. A majority of migrant workers (57 per cent) are junior high school graduates and another 27 per cent have completed high school. Only 3.9 per cent have a tertiary education. In contrast, a majority of urban workers (36 per cent) have finished senior high school and another 44 per cent have a tertiary degree—25 per cent from a junior college and 19 per cent from a university. Among urban and migrant workers combined, the proportion of workers with at least a senior high school education is 48 per cent. Training is another way to invest in human capital. Once again, however, migrant workers are at a disadvantage. Only 26 per cent of migrant workers have received training, compared with 42 per cent of urban workers.

There are also significant differences in the employment characteristics of urban and migrant workers. Most obviously, urban workers are more likely to work in white-collar (managerial, professional or clerical) jobs: 56 per cent, compared with just 7 per cent of migrant workers. The distribution of workers by enterprise ownership also reveals striking differences. In workplaces where there are formidable barriers to entry, such as government departments, institutions and state-owned enterprises, there are fewer migrant workers. Around 51 per cent of urban workers, but just 9 per cent of migrant workers, work in these types of workplaces. On the other hand, private or individual enterprises absorb 79 per cent of migrant workers but only 32 per cent of urban workers. These differences extend to the distribution of workers by sector, with larger

shares of migrant workers employed in manufacturing, construction, wholesale and retail trade, and accommodation and catering.

Table 4.1 also provides information on the potential work experience and monthly and hourly earnings of workers.[1] The mean potential work experience of urban workers is six years more than that of migrant workers. The monthly wage of migrant workers is 1,648 yuan, or 46 per cent less than that of urban workers.[2] The difference in hourly wages is even greater. Migrant workers earn 7 yuan per hour, or 62 per cent less than urban workers, but work 62 hours per week, or 42 per cent more hours than urban workers.

Figure 4.1 shows the education–wage profiles of urban and migrant workers, and Figure 4.2 their age–wage profiles. As can be seen from Figure 4.1, monthly and hourly wages increase monotonically with educational level, but the slope is much steeper for urban than for migrant workers, especially in the case of hourly earnings. Figure 4.2 indicates that there is an inverse-U-shaped relationship between age and earnings for both urban and migrant workers, although the profile for the latter is flatter than that for the former. Depending on whether hourly or monthly earnings are used, the profile peaks at age 30 or 36 for urban workers, and at age 27 or 34 for migrant workers.

3   WAGE STRUCTURES

In this section we estimate logarithmic monthly and hourly wage functions for urban workers, migrant workers, and urban and migrant workers combined. The independent variables are potential work experience and its squared term, gender, marital status, education, training, whether or not an individual is self-employed, occupation, enterprise ownership, industry of employment and city dummies. To test the extent to which employment-related factors such as occupation, ownership and industry of employment affect earnings, in a separate model we exclude these variables from the specification.

Selected regression results are reported in Table 4.2. The first four columns report the results for urban and migrant workers combined; the last four columns show the results of the separate regressions for the two groups.[3]

In the combined sample estimation, an additional dummy variable indicating whether or not a person is a migrant is included. We find that migrant workers earn less than urban workers, and that the level of the difference is much higher in the log of hourly earnings equation than in the log of monthly earnings equation. The discrepancy between the two results can be reconciled by the longer hours worked by migrant workers.

Columns 1 and 3 report the results from the models that include the occupation, ownership and industry dummy variables, and columns 2 and 4 show the results excluding these variables. If we compare the coefficients for the

*Table 4.1   China: Descriptive Statistics for the Urban Labour Force*

	Urban Workers	Migrant Workers	All Urban Workers
Age group (%)			
16–20	0.52	14.26	9.45
21–25	7.67	23.57	18.01
26–30	15.16	17.25	16.52
31–35	13.98	13.55	13.70
36–40	17.93	14.08	15.42
41–45	15.58	9.48	11.61
46–50	13.39	4.54	7.63
51–55	10.99	2.23	5.29
56–60	4.78	1.04	2.35
Mean age (years)	39.32	30.74	33.74
Gender (%)			
Male	58.39	60.10	59.50
Female	41.61	39.90	40.50
Marital status (%)			
Married	97.08	59.30	72.51
Not married	2.92	40.70	27.49
Education (%)			
Primary or below	3.02	12.29	9.06
Junior high school	17.02	56.85	42.98
Senior high school	36.38	26.94	30.23
Junior college	24.83	3.32	10.81
University or above	18.75	0.60	6.92
Training (%)			
Received	41.57	26.30	31.62
Not received	58.43	73.70	68.38
Occupation (%)			
Manager	6.43	1.72	3.36
Professional	21.05	0.83	7.86
Clerk	28.60	4.76	13.05
Service worker or peddler	17.66	53.25	40.87
Production worker	11.62	27.23	21.80
Owner of private or individual enterprise	7.25	11.93	10.30
Other	7.39	0.28	2.75

Table 4.1 (continued)

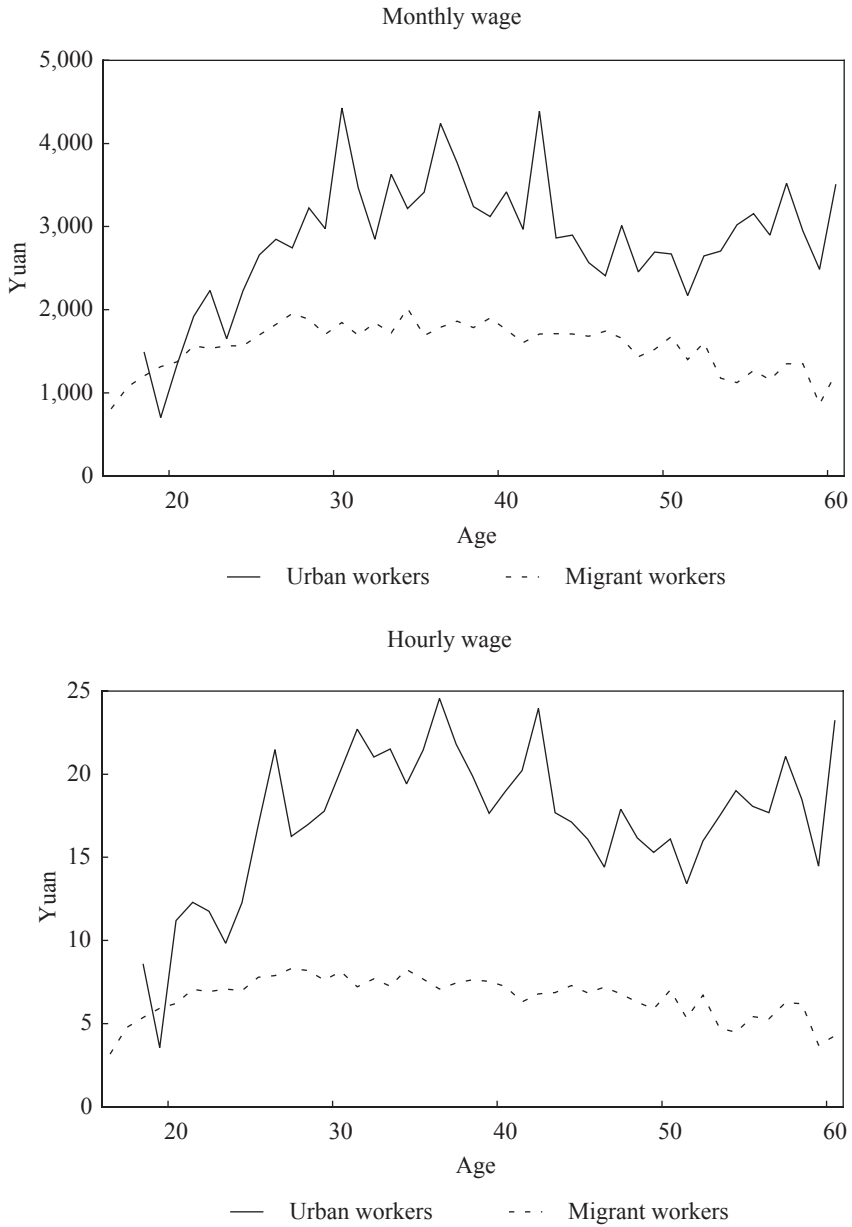|	Urban Workers	Migrant Workers	All Urban Workers
Enterprise ownership type (%)			
Government departments	32.20	2.31	12.90
Non-public enterprises or institutions	4.61	2.11	3.00
State-owned enterprises	14.43	4.96	8.32
Collective enterprises	6.38	4.33	5.05
Foreign enterprises	6.25	7.02	6.75
Private or individual enterprises	32.25	79.15	62.53
Other	3.88	0.12	1.45
Sector (%)			
Primary	1.45	0.03	0.53
Manufacturing	16.64	24.38	21.68
Electricity, gas & water	3.59	0.15	1.35
Construction	3.28	8.38	6.60
Transport, warehousing & posts	8.81	2.68	4.83
Information transmission & computer services	5.11	0.77	2.28
Wholesale & retail trade	12.74	24.75	20.55
Accommodation & catering	2.86	17.37	12.30
Finance & real estate	6.07	3.95	4.69
Leasing & business services	4.66	0.11	1.70
Scientific research & technical services	1.33	0.76	0.96
Water supply, environmental services & public utilities	1.34	2.80	2.28
Residential & other services	12.87	1.55	5.51
Education	4.01	8.36	6.84
Health, social security & social welfare	3.68	2.52	2.92
Culture, sport & entertainment	2.18	0.36	0.99
Public administration & social organizations	9.38	1.09	3.99
Experience, wages & hours			
Potential work experience (years)	21.04	15.30	17.32
Monthly wage (yuan)	3,075.21	1,648.38	2,147.21
Hourly wage (yuan)	18.40	7.09	11.04
No. of hours worked per week	43.45	61.53	55.20
No. of observations	5,628	6,554	12,182

Source: Urban Household Survey, 2008; Urban Migrant Survey, 2008.

Figure 4.1　China: Monthly and Hourly Wages of Urban and Migrant
　　　　　　　Workers by Educational Level
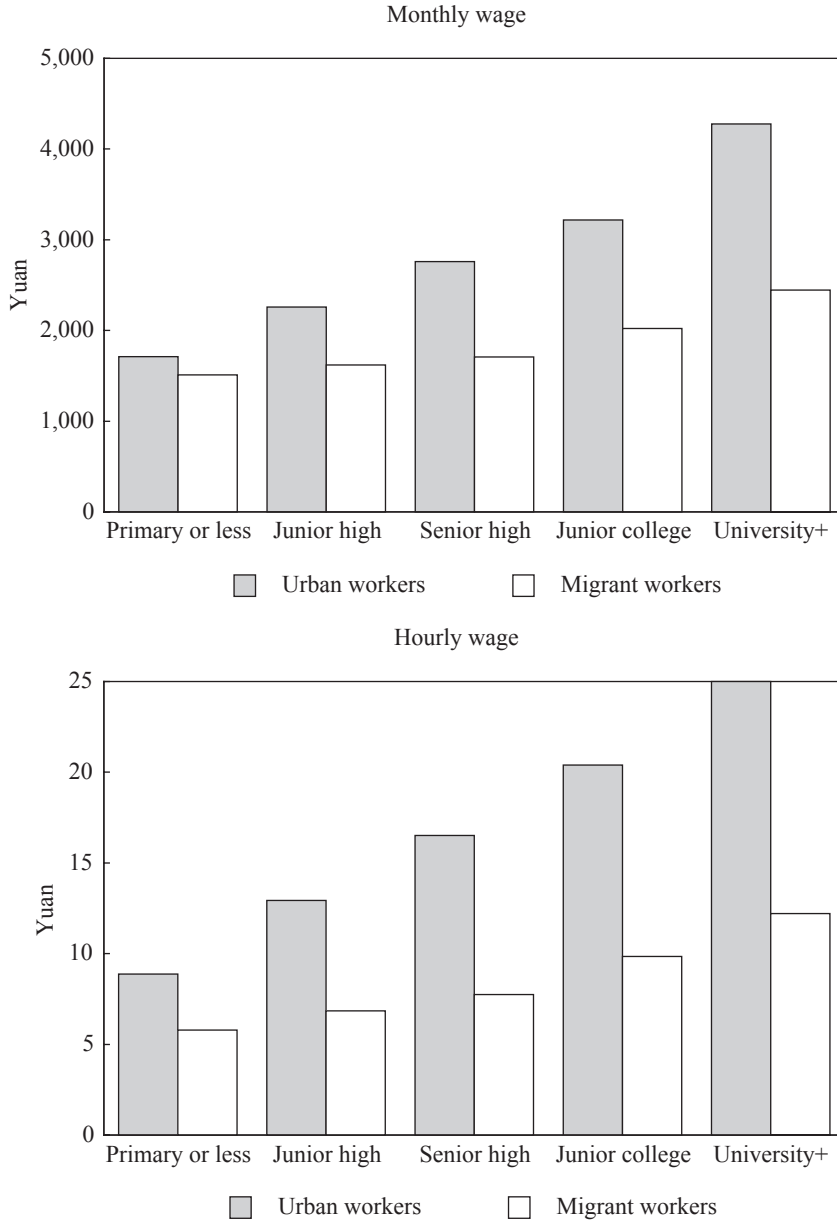
Monthly wage

Hourly wage

Figure 4.2   China: Monthly and Hourly Wages of Urban and Migrant
*   Workers by Age*

Monthly wage

Hourly wage

Source: Urban Household Survey, 2008; Urban Migrant Survey, 2008.

Table 4.2   China: Wage Functions for Urban, Migrant and All Urban Workers

	Combined Regression			
	Log Monthly Earnings		Log Hourly Earnings	
	With Controls[a] (1)	Without Controls[a] (2)	With Controls[a] (3)	Without Controls[a] (4)
Migrant	–0.061 (0.015)***	–0.118 (0.014)***	–0.283 (0.017)***	–0.386 (0.015)***
Experience	0.019 (0.002)***	0.022 (0.002)***	0.019 (0.002)***	0.023 (0.002)***
Experience^2	–0.000 (0.000)***	–0.001 (0.000)***	–0.000 (0.000)***	–0.001 (0.000)***
Junior high school	0.064 (0.019)***	0.069 (0.019)***	0.123 (0.021)***	0.133 (0.022)***
Senior high school	0.147 (0.020)***	0.177 (0.021)***	0.243 (0.023)***	0.287 (0.024)***
Junior college	0.314 (0.025)***	0.425 (0.026)***	0.431 (0.029)***	0.573 (0.029)***
University or above	0.518 (0.029)***	0.692 (0.028)***	0.615 (0.032)***	0.830 (0.032)***
Received training	0.065 (0.010)***	0.077 (0.010)***	0.059 (0.011)***	0.074 (0.012)***
Male	0.184 (0.010)***	0.220 (0.010)***	0.156 (0.011)***	0.192 (0.011)***
Married	0.032 (0.014)**	0.039 (0.015)***	0.016 (0.016)	0.023 (0.017)
Han nationality	0.061 (0.038)	0.072 (0.040)*	0.101 (0.043)**	0.113 (0.045)**
Self-employed	0.368 (0.022)***	0.354 (0.014)***	0.130 (0.025)***	0.089 (0.016)***
Occupation	Yes	No	Yes	No
Ownership	Yes	No	Yes	No
Industry	Yes	No	Yes	No
City	Yes	Yes	Yes	Yes
No. of observations	11,832	11,832	11,758	11,758
R^2	0.36	0.31	0.44	0.39

*** = significant at 1 per cent; ** = significant at 5 per cent; * = significant at 10 per cent. Standard errors are in parentheses.
a   The control variables are occupation, enterprise ownership type and industry of employment.

Table 4.2 (continued)

	Separate Regressions			
	Migrant Workers		Urban Workers	
	Log Monthly Earnings (5)	Log Hourly Earnings (6)	Log Monthly Earnings (7)	Log Hourly Earnings (8)
Migrant				
Experience	0.018	0.019	0.022	0.021
	(0.002)***	(0.003)***	(0.003)***	(0.003)***
Experience^2	–0.001	–0.001	–0.000	–0.000
	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Junior high school	0.068	0.114	–0.044	0.009
	(0.019)***	(0.022)***	(0.048)	(0.054)
Senior high school	0.160	0.246	0.051	0.132
	(0.022)***	(0.025)***	(0.048)	(0.054)**
Junior college	0.267	0.391	0.238	0.344
	(0.037)***	(0.042)***	(0.051)***	(0.057)***
University or above	0.349	0.474	0.429	0.519
	(0.075)***	(0.086)***	(0.053)***	(0.059)***
Received training	0.076	0.093	0.064	0.047
	(0.014)***	(0.015)***	(0.015)***	(0.017)***
Male	0.155	0.134	0.214	0.185
	(0.012)***	(0.014)***	(0.015)***	(0.017)***
Married	0.056	0.048	0.035	0.027
	(0.017)***	(0.020)**	(0.035)	(0.039)
Han nationality	–0.013	0.036	0.082	0.097
	(0.043)	(0.049)	(0.069)	(0.076)
Self-employed	0.338	0.106	0.465	0.231
	(0.021)***	(0.024)***	(0.120)***	(0.137)*
Occupation	Yes	Yes	Yes	Yes
Ownership	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
City	Yes	Yes	Yes	Yes
No. of observations	6,308	6,274	5,524	5,484
R^2	0.29	0.26	0.40	0.38

Source: Urban Household Survey, 2008; Urban Migrant Survey, 2008.

migrant dummy variable with and without these variables, we observe that the negative earnings premium for migrants increases from 6 per cent to 12 per cent in the case of monthly earnings (see columns 1 and 2) and from 28 per cent to 39 per cent in the case of hourly earnings (see columns 3 and 4). This suggests that, conditional on other control variables, around half (six percentage points) of the monthly earnings gap and slightly more than one-quarter (11 percentage points) of the hourly earnings gap can be explained by employment-related factors.

Recognizing that the wage determination process for urban and migrant workers may not be the same, we also estimate the wage equation for the two groups of workers separately (see columns 5–8 of Table 4.2). After controlling for all independent variables, we find that wages rise with experience for both samples, then peak and finally decline. The inverted-U-shaped relationship between experience and wages suggests the existence of a learning process up to a certain number of working years. The profile peaks earlier for migrant workers than for urban workers but the difference in the profiles for the two groups is not statistically significant.[4]

Compared with the reference group (workers with a primary school education or less), urban workers with a junior college education receive a 24 per cent premium in monthly wages and a 34 per cent premium in hourly wages, while those with a university degree earn a premium of 43 per cent in monthly wages and 52 per cent in hourly wages. Migrant workers with more than a primary school education receive both a monthly and an hourly wage premium. Training is another strong predictor of monthly and hourly wages for both groups, in line with Knight, Song and Jia (1999). The coefficients suggest that training is more important for migrant workers than it is for urban workers.

Self-employment provides a significant monthly and hourly earnings premium, for both migrant and urban workers. This may be related to the fact that we are only able to observe the net income of self-employed individuals rather than their labour earnings; the contribution of unpaid family labour is another part of the explanation (Strauss and Thomas 1995: 1,960).

Men earn more than women, but the wage gap between males and females is greater among urban workers.[5] Unlike urban workers, migrant workers are rewarded for marriage. This may indicate a greater increase in the work aspirations of migrant workers after marriage or self-selection into marriage by individuals with a greater earning capability.[6]

We find that occupation is a significant indicator of earnings for both migrant and urban workers. Among both groups, managers receive the highest monthly and hourly wages, and service workers the lowest.[7] In the case of urban workers, foreign enterprises pay higher wages than the reference group (governments and public institutions); all other types of enterprises offer lower wages. For migrant workers, most ownership categories provide the same level

of pay as the reference group.[8] Employment in different industries does not affect the earnings of migrant workers. Among urban workers, however, those working in electricity, gas and water, information and computer services, and finance and real estate earn more than their counterparts in the manufacturing sector (the reference group), while those working in wholesale and retail trade, accommodation and catering, and residential services earn less.

4   WAGE INEQUALITY AND ITS COMPONENTS

Although wage functions reveal useful information about the conditional mean of wages, a more interesting issue in understanding wage structures is to study the distribution and dispersion of wages within and between migrant and urban workers. In this section, we examine wage inequality and decompose the factors that contribute to it.

Figure 4.3 plots monthly and hourly wage distributions for urban workers, migrant workers, and urban and migrant workers combined. It is apparent that the distributions of both monthly and hourly wages are more concentrated for migrant workers than for urban workers. However, the effect of migration on the distribution of monthly and hourly wages in urban areas is not so easy to detect. To shed light on this, we provide summary measures of wage inequality in Table 4.3. To increase understanding of the monthly and hourly wage distributions, in Figure 4.4 we also plot the Kernel density distribution curves for the weekly working hours of urban and migrant workers. As Figure 4.4 suggests, the distribution of hours worked per week is more equal for urban workers than for migrant workers.[9]

The measures selected for presentation in Table 4.3 are the Gini coefficient, the Theil index and the mean logarithmic deviation (MLD). Urban workers have a Gini coefficient of 0.38, a Theil index of 0.28 and an MLD of 0.24 for monthly wages, and a Gini coefficient of 0.39, a Theil index of 0.26 and an MLD of 0.26 for hourly wages. It seems that wages are more equally distributed among migrant workers: they have a Gini coefficient, Theil index and MLD of 0.29, 0.17 and 0.14 respectively for monthly wages, and 0.31, 0.17 and 0.16 respectively for hourly wages.

The inclusion of migrant workers in the urban labour market alters the pattern of the urban wage distribution. When we compare wage inequality among urban *hukou* holders with that among all urban workers, we find that the Gini coefficient for monthly wages falls from 0.38 to 0.37 with the presence of migrants in urban areas. However, migration slightly widens the distribution of hourly wages: the Gini coefficient for hourly wages rises from 0.39 for urban *hukou* holders to 0.43 for all urban workers.

*Figure 4.3   China: Kernel Density of Monthly and Hourly Wages for Urban,
            Migrant and All Urban Workers*

Monthly wage
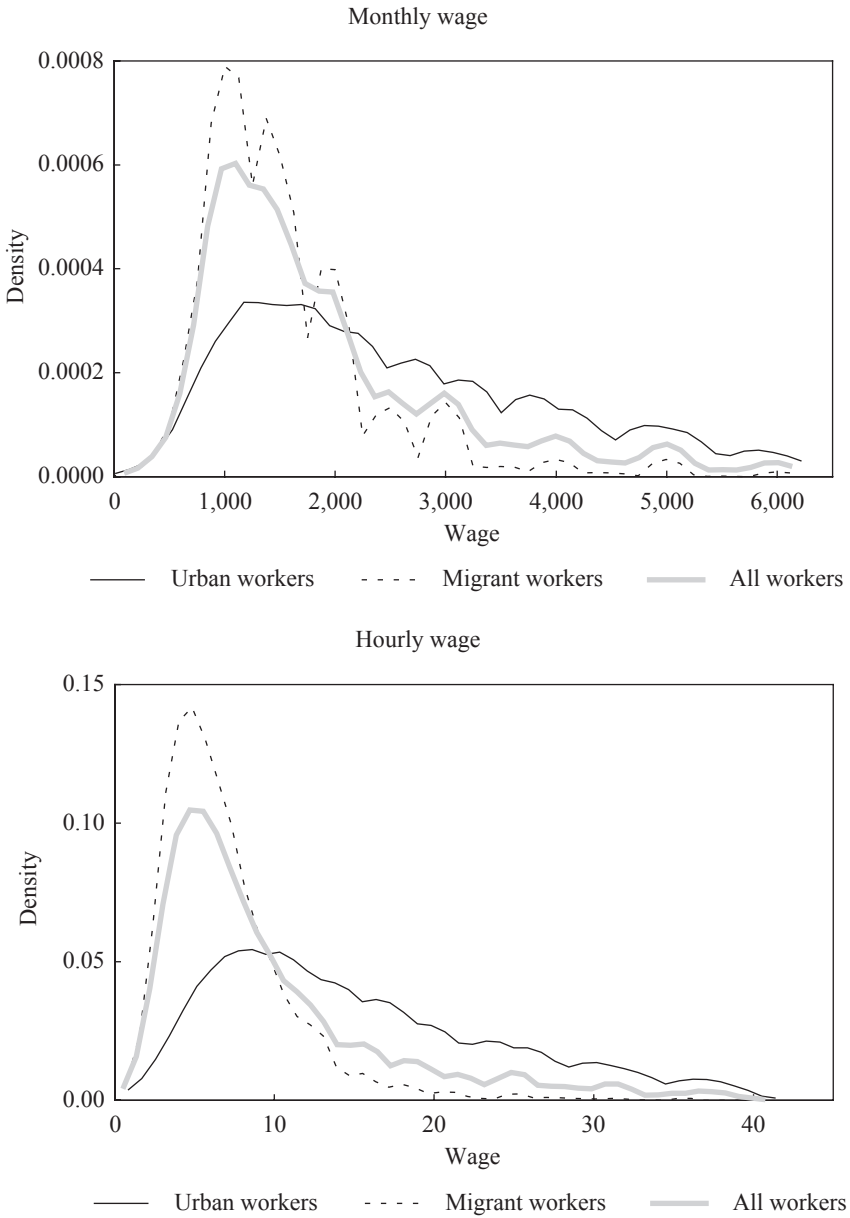
Hourly wage

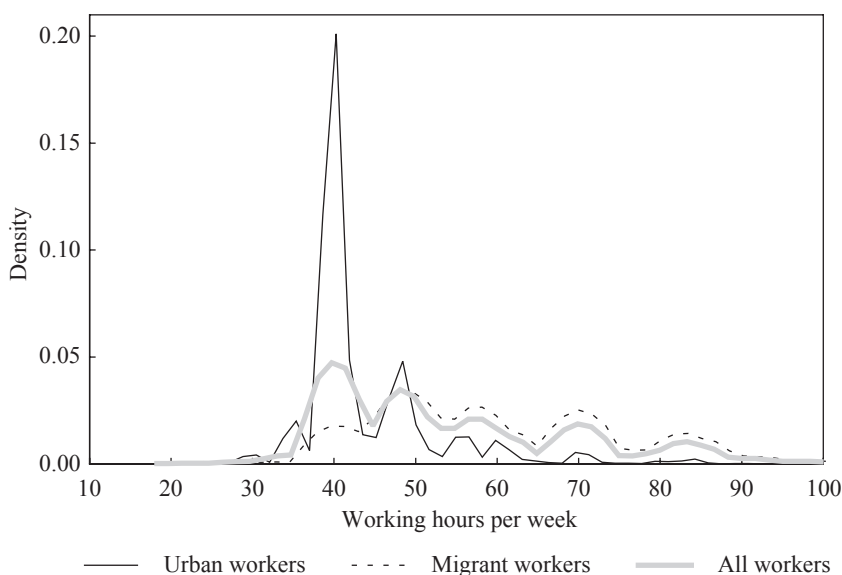*Source:* Urban Household Survey, 2008; Urban Migrant Survey, 2008.

Table 4.3   China: Inequality Indices for the Monthly and Hourly Wages of Urban, Migrant and All Urban Workers

	Urban Workers		Migrant Workers		All Urban Workers	
	Monthly Wage	Hourly Wage	Monthly Wage	Hourly Wage	Monthly Wage	Hourly Wage
Gini	0.38	0.39	0.29	0.31	0.37	0.43
Theil	0.28	0.26	0.17	0.17	0.27	0.34
MLD	0.24	0.26	0.14	0.16	0.22	0.30

MLD = mean logarithmic deviation.
Source: Urban Household Survey, 2008; Urban Migrant Survey, 2008.

Figure 4.4   China: Kernel Density of Working Hours per Week for Urban, Migrant and All Urban Workers

Source: Urban Household Survey, 2008; Urban Migrant Survey, 2008.

To explore the underlying factors contributing to wage inequality in the urban labour market, we decompose the inequality measures presented above by various contributing factors. Decompositions of wage inequality by wage source and population group have been implemented in the past (see, for instance, Gustafsson and Li 2001). However, as Fields (1998), Morduch and

Sicular (2002), Wan (2004) and others have pointed out, decomposition by wage source cannot reveal the effect of factors such as gender, education and occupation on the wage distribution, although it does shed light on the contribution of wage components to wage inequality. Decomposition by population group is not immune to this flaw either; the grouping variables tend to become confounded with other factors that contribute to wage inequality, with the result that the decompositions convey little information. Moreover, when decomposing inequality by population group, the grouping variables are dichotomous while the continuous variables have to be grouped artificially. Also, when multiple grouping variables are used, the decompositions become increasingly difficult, because the number of observations within each cell decreases multiplicatively.

To overcome the drawbacks of traditional decompositions, researchers have developed several regression-based decomposition approaches.[10] This chapter adopts the approach used by Shorrocks (1999) to disentangle the contribution of constituent elements to earnings inequality. The basic idea is to estimate the income flows associated with certain characteristics, compute the marginal contribution of each income flow to total inequality in consideration of all possible decomposition sequences and, finally, derive the contribution of each income flow by taking the average of its marginal contributions in all possible sequences.[11]

To implement the Shapley-value decomposition approach proposed by Shorrocks (1999), the first step would be to generate the predicted wage attributable to each independent variable. It is well known that the choice of reference groups of dummy variables will affect the estimate of the constant term, which eventually influences the decomposition results. To get around this problem, we obtain predicted wages from the estimates of the log of monthly and hourly wages, shown in Table 4.2. After anti-log, the constant term becomes a multiplier of predicted income, which has no effect on wage inequality.

Table 4.4 reports the Shapley-value decomposition results for wage inequality, measured by Gini coefficients. It is noteworthy that a significant proportion of wage inequality remains unexplained, reflecting the inability to control for the exhaustive list of factors that might explain inequality.

City dummies play the most important role in explaining inequality of monthly and hourly wages among migrant workers as well as inequality of monthly wages among urban workers, implying that unobserved factors at the city level are a vital driving force of wage inequality. There are several ways to explore, at least in part, unobserved factors at the city level. If spatial price deflators are taken into account, the contribution of city dummies to wage inequality would be expected to decrease.[12] The movement of workers across cities in response to spatial variations in living costs is another way of shedding light on this 'black box' (Moretti 2008), but this is beyond the scope of this chapter.

Table 4.4   China: Shapley-value Decomposition of the Gini Coefficient for Wages (%)

	Urban Workers		Migrant Workers		All Urban Workers	
	Monthly Wage	Hourly Wage	Monthly Wage	Hourly Wage	Monthly Wage	Hourly Wage
Migrant					2.13	14.57
Experience	2.29	1.97	3.51	3.21	2.67	2.31
Gender	5.41	4.13	5.64	3.93	4.58	3.09
Marital status	0.06	0.07	1.51	0.79	0.83	0.45
Education	13.99	16.25	3.28	6.33	12.01	17.22
Training	1.10	0.78	1.33	1.70	1.22	1.26
Occupation	8.69	10.39	5.44	6.02	9.27	11.83
Ownership	4.62	6.33	1.02	3.22	3.38	7.14
Sector	6.73	6.64	3.74	4.38	3.35	3.49
City	14.70	13.84	12.88	18.24	13.44	16.35
Han	0.01	0.01	0.02	0.04	0.04	0.12
Self-employed	3.40	0.43	11.77	1.13	4.96	0.07
Residual	39.00	39.15	49.87	51.01	42.11	38.26
Constant	0	0	0	0	0	0
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Source: Urban Household Survey; Urban Migrant Survey.

While education plays a vital role in explaining wage inequality among urban workers, it explains only a small share of the wage inequality among migrant workers. Possibly this is because education is more equally distributed across migrant than urban workers. The combined contribution of occupation, enterprise ownership and industry of employment to wage inequality is large in magnitude, and bigger for urban workers than for migrant workers. The reason may be that migrants are more concentrated in certain employment categories, as reflected in the summary statistics.

Among urban and migrant workers combined, the decomposition results suggest that the presence of migrants tends to increase the Gini coefficient for hourly wages—that is, increases inequality. In the case of monthly wages, however, migrants help to mitigate inequality by working longer hours, which lends further support to the findings in Table 4.3.[13] Education and city are the two most important factors explaining inequality of wages among urban and migrant workers combined. Occupation, ownership and industry sector together account for 16 per cent of monthly wage inequality and 22 per cent of hourly wage inequality.

5 CONCLUSIONS

Based on large-scale data from two surveys conducted in 2008, this chapter has investigated wage structures and wage inequality among urban and migrant workers. We estimated the wage functions for urban workers, migrant workers, and urban and migrant workers combined, and compared the wage determination processes for each group. We then quantified the extent of wage inequality and conducted a Shapley-value decomposition to explore the constituent elements of wage inequality. The results support the following conclusions.

First, there are significant differences between urban and migrant workers, in terms of both demography and employment structure. Migrant workers are younger, less well educated and less likely to have received training; they are more concentrated in the private sector and in service industries.

Second, there are unconditional monthly and hourly wage gaps between urban and migrant workers, which persist even when certain factors are controlled for. The hourly wage gap is greater than the monthly wage gap, both unconditionally and conditionally.

Third, wage inequality is greater among urban workers than among migrant workers. The regression-based decomposition results suggest that the inclusion of migrant workers in the urban labour force decreases monthly wage inequality but increases hourly wage inequality.

Fourth, the regression-based decomposition results suggest that location and education play an important role in explaining wage inequality among urban workers. However, education is much less important in explaining wage inequality among migrant workers.

Finally, for urban and migrant workers combined, education and city are the most significant factors in explaining wage inequality. Occupation, enterprise ownership and industry of employment also account for a significant proportion of wage inequality.

NOTES

1 Potential work experience is measured as age minus years of schooling minus six.
2 The monthly wage comprises the worker's basic wage and any subsidies and bonuses, but not the contributions an employer makes to various insurance schemes on the employee's behalf. The hourly wage is the ratio of monthly wages to hours worked per month.
3 The results reported in Table 4.2 are unweighted. The weighted results are available from the authors upon request.
4 To test for statistically significant differences between the urban and migrant wage structures, in a separate specification we included the interaction terms for the migrant dummy and each independent variable in the wage functions. The results are not reported here but can be obtained from the authors upon request.
5 The gender wage differential is revealed by a large body of literature. On the wage differences between male and female urban workers, see, for instance, Gustafsson and Li (2000) and Dém-

urger, Fournier and Chen (2005); on the gender wage differential among migrant workers, see Knight, Song and Jia (1999).

6 There is no consensus among researchers on the explanation for the marriage wage premium. See Krashinsky (2004) for a review.

7 Knight, Song and Jia (1999) and Démurger et al. (2009) also find that the occupation dummies in the wage functions are statistically significant for migrant workers. Although they do not report the results, Meng and Zhang (2001) estimate the earnings functions separately for each occupation, on the implicit assumption that wage determination processes differ across occupations.

8 Chen, Démurger and Fournier (2005) find that, for urban workers, foreign enterprises provide the highest wages, followed by state-owned enterprises, private or individual enterprises and collective enterprises. In the case of migrant workers, Knight, Song and Jia (1999) find that collective enterprises provide the highest wages, followed by foreign enterprises, private enterprises and state-owned enterprises. In this study, we find that the interaction terms for the migrant dummy and ownership are jointly significant in both the monthly and hourly wage functions.

9 The Gini coefficients for hours worked per week are 0.11 and 0.15 respectively for urban and migrant workers.

10 Knight and Song (2001) use the approach proposed by Fields (1998) to decompose urban earnings, and Meng (2004) uses it to decompose income inequality. Deng and Li (2009) employ the regression-based decomposition approaches developed by Fields (1998), Morduch and Sicular (2002) and Shorrocks (1999) to decompose earnings inequality in urban China in 1988, 1995 and 2002.

11 The marginal contributions of an income flow are calculated as the change in inequality after isolating the effect of this income flow from inequality. Morduch and Sicular (2002) provide two alternatives to isolation of factors: deleting the factors, and replacing the means of the factors with the factors themselves. The marginal contributions of each income flow always vary with the decomposition sequence.

12 Démurger, Fournier and Li (2006) find that income inequality in urban China is overstated if spatial price deflators are not used.

13 The decomposition results for total urban workers should be interpreted with care, since the decompositions of wage inequality for this group of workers are based on the wage functions in Table 4.3, which implicitly assumes that the wage determination processes for urban and migrant workers are the same.

APPENDIX A4.1   SURVEY WEIGHTS

The weights used in this study are designed to make the urban and migrant samples in each province representative of the respective populations in those provinces. To this end, we use the figures from the 2005 1% National Population Sample Survey for the total number of urban, and migrant, workers aged 16–60 who are working in cities to calculate the inverse probability of the urban and migrant workers in our sample being selected within each province. These weights are presented in Table A4.1.

Table A4.1   China: Weights for Urban and Migrant Workers by Province

	1% Population Survey		RUMiCI Survey		Weights	
	Migrant Workers	Urban Workers	Migrant Workers	Urban Workers	Migrant Workers	Urban Workers
Shanghai	10,898	20,540	772	677	14.12	30.34
Jiangsu	4,126	12,431	714	804	5.78	15.46
Zhejiang	6,120	6,133	696	833	8.79	7.36
Anhui	889	6,890	738	665	1.20	10.36
Henan	449	6,678	579	732	0.78	9.12
Hubei	1,254	8,837	419	495	2.99	17.85
Guangdong	38,971	45,468	904	1,267	43.11	35.89
Chongqing	965	5,893	499	565	1.93	10.43
Sichuan	1,078	6,995	326	516	3.31	13.56

Source: 2005 1% National Population Sample Survey; Urban Household Survey, 2008; Urban Migrant Survey, 2008.