15. China's Labour Market Tensions and Future Urbanisation Challenges[1]

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Introduction

Over the past few years, China's per capita GDP growth has slowed significantly but real wages of migrant workers have continued to increase at more than 10 per cent per annum. Between 2012 and 2013, per capita real GDP increased by 7.7 per cent, while monthly real wages of migrant workers increased by 12.3 per cent, based on the latest Rural Urban Migration in China (RUMiC) survey data. Other small-scale surveys reveal a similar pattern. For example, the global investment research firm Gavekal Dragonomics reports almost exactly the same level of migrant wage growth for 2013 as the RUMiC survey (Miller and Gatley 2014).[2]

Many regard this real wage growth as a clear sign of an unskilled labour shortage emanating from reduced labour supply from the rural sector (the Lewis 'turning point'). But I have always insisted that the shortage of unskilled labour in cities is a consequence of institutional restrictions, explicit or implicit, on rural–urban migration. In this chapter, I use the latest household survey and aggregated data to discuss possible reasons for recent migrant wage increases. I also discuss how misreading China's urban labour supply 'shortage' as an absolute shortage, rather than a result of institutional restrictions, has led to specific policy directions that, together with the traditional rural–urban divide mentality and politicians' reluctance to accept large city slums, may generate potential challenges to China's future urbanisation and economic development.

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1   I would like to thank Bob Gregory for his helpful comments and Sen Xue for his excellent research assistance.

2   The data sources, however, were not cited in the article.

Urbanisation strategy and industrial upgrading policy

China has always envisaged a different urbanisation path from the historical experience of the West. Ever since the start of economic reform, the Government has insisted that although farmers need to leave agriculture to seek other employment, they should not leave their hometown, and that Chinese urbanisation should be well planned and controlled to focus mainly on small-city expansion in order to avoid large-city problems—namely, slum development.

Economic reform started in the agricultural sector in 1978. Soon after, a sharp increase in agricultural productivity created a large surplus in agricultural labour. Where should these excess workers go? At the time rural–urban migration was forbidden. The only way out for surplus labour was to develop non-agricultural industries in their hometown. Consequently, during the 1980s and early 1990s government policy encouraged rural non-agricultural sector development. As a result, rural township and village enterprises (TVEs) flourished (Meng 2000). Between 1980 and 1995, the share of rural *hukou* labour force employed in the TVEs increased from 9.4 per cent to 26.3 per cent.

From the early 1990s, China's 'open-door policy' encouraged large inflows of foreign direct investment, which, in turn, increased the demand for unskilled labour in cities. In response, the Government gradually relaxed previously rigid rural–urban migration restrictions to allow rural people to work in cities; however, after two decades of allowing farmers to work in cities and gradually changing restrictions, migrant workers, as a general rule, are still not allowed to become city residents. Reasons for this restriction are the potential financial burdens and complications of changing the current public finance system to accommodate rural workers as city residents. Another reason is the deep-rooted idea that farmers may leave the agricultural sector but not their hometown, so as to avoid 'city disease'. Indeed, the newly published *National New Urbanisation Plan (2014–2020)* (State Council of China 2014) reflects this idea and emphasises the orderly building of small cities and towns to accommodate the future excess supply of agricultural workers.

Accompanying this new urbanisation strategy of building small cities and towns is the large-city 'industrial upgrading' policy. It is argued that if China wants to become an economic superpower its industrial structure should be dominated by capital-intensive high-technology industry, and future Chinese economic growth should be based on innovation and sophisticated technology but not cheap labour. The industrial upgrading policy assumes that China has run out of low-skilled labour and the time has come for China to move from being the world's factory with cheap labour to being the world's laboratory,

employing more highly skilled workers. Since the GFC, many coastal cities have introduced industrial upgrading policies to actively push out low value-added firms and low-skilled labour.

These policies are having an increasingly significant impact on wages, labour supply and China's future urbanisation and economic development outcomes.

Changes in migrant wages

Facts

Since 2009, unskilled migrants' wages have increased at an above-average rate even though the real GDP growth rate has slowed. Figure 15.1 presents the growth rate of the real first month's pay for the first job for wage/salary-earning migrant workers—the most unskilled migrant workers—against average real per capita GDP growth. The figure clearly points to the fact that unskilled wage growth goes against the slowing trend of general economic growth.
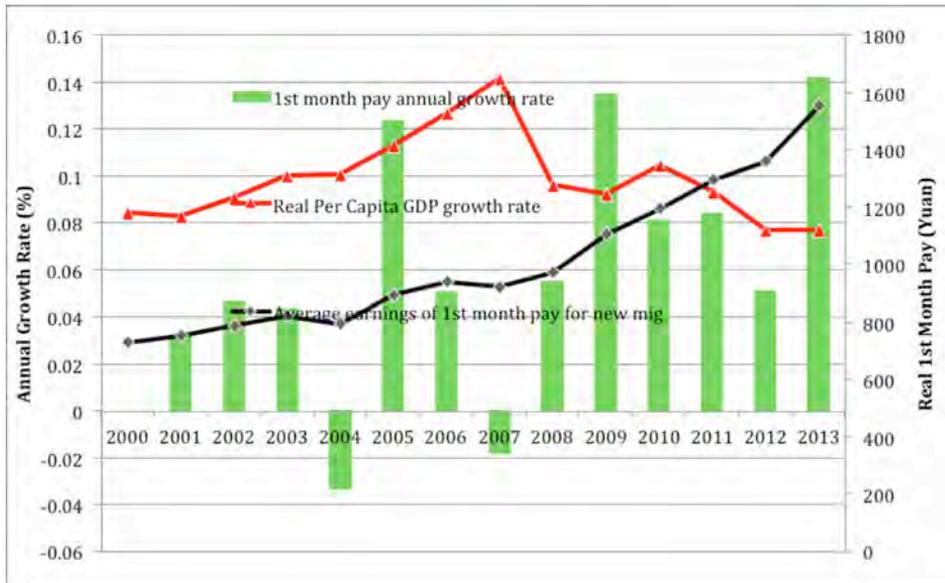

Figure 15.1 Per Capita GDP Growth and Migrant Wage Growth

Sources: Real GDP growth data are based on *China Statistical Yearbook*s (NBS various years). The real first-month earnings of migrants' first jobs are based on the RUMiC survey. Included in the sample are migrant workers who were sampled in each of the survey years (RUMiC New Sample). Consumer price indices used to calculate real earnings are province-specific annual CPI using year 2000 as the base (NBS various years).

The high rates of wage growth could be due to the changing composition of workers. If, from one year to another, the proportion of educated workers increased, for example, the wage increase may not reflect the increase in return to the same quality of workers. To eliminate this possibility, I estimate wage equations standardising for age, gender, marital status, education, year since first migration and city fixed effects. The coefficients on the year fixed effects can be used to indicate the annual wage growth, standardising for workers' quality. These coefficients are plotted together with the growth rate of unadjusted real first-month first-job pay for migrants in Figure 15.2. The standardised wage growth rate differs somewhat from the raw growth rate, but the trend is consistent in suggesting that recent wage growth is much higher than at the beginning of the decade.
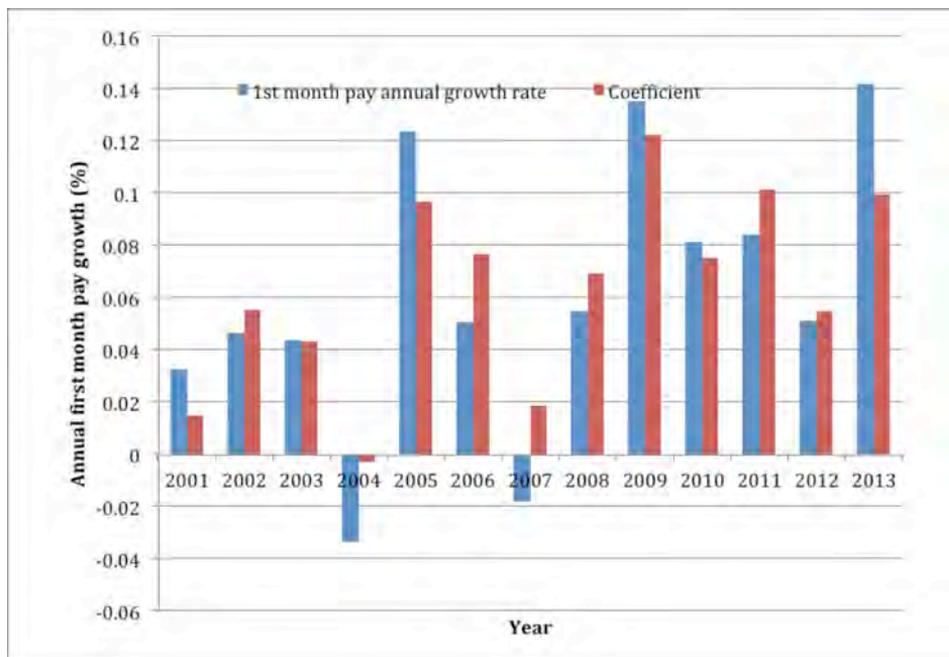

Figure 15.2 Comparison of Raw Wage Growth with Standardised Wage Growth

Sources: The real first-month earnings of migrants' first jobs are based on the RUMiC survey. Included in the sample are migrant workers who were sampled in each of the survey years (RUMiC New Sample). The adjusted wage growth rates are obtained from the author's estimations.

Reasons for real wage growth

The acceleration of real wage increases can be the result of: 1) labour shortages; and/or 2) direct government action on wages. I examine these potential causes in this subsection.

Labour shortage

Aggregated data published by the National Bureau of Statistics (NBS 2014) suggest that in 2013 China had 770 million workers. Of those, 72 per cent had rural *hukou*. Of the total 552 million with rural *hukou*, 283 million or 51 per cent remained employed in the agricultural sector. Of the 269 million classified in the non-agricultural sector, 166 million migrated to various levels of cities (including small county-level cities) to work (rural–urban migrants),[3] while the rest—103 million—worked in the non-agricultural sector in rural towns near their home village. Thus, unlike the common belief that there are 260 million rural–urban migrants working in Chinese cities, the actual number in 2013 was 166 million (see Table 15.1 for a detailed description). In other words, only 30 per cent of rural *hukou* workers migrated to county-level or larger cities in 2013, leaving 70 per cent of rural *hukou* workers employed outside those cities. This suggests there is considerable scope for future migration into cities if the institutional environment were to change and discrimination against these workers in cities were reduced.

Table 15.1 Labour Force Sector of Employment, 2013

	Frequency	% of rural *hukou* workers	% of total labour force
Total labour force	76 977		
Working in cities (both rural and urban *hukou*)	38 240		
Urban *hukou* workers	21 630		0.28
Rural *hukou* workers	55 347		0.72
Of which: working in various levels of city	16 610	0.30	0.22
working in rural non-agricultural sector	10 284	0.19	0.13
working in agriculture	28 453	0.51	0.37

Source: Author's interpretation from NBS (2014).

Household survey data tell a similar story. Using data from the Chinese Family Panel Studies (CFPS) conducted by Peking University in 2012 (ISSS 2012), I examine this issue again.[4] The survey comprises 14 630 rural *hukou* individuals aged sixteen to sixty-five who are currently working. Among them 22 per cent

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3 Chinese cities have four different administrative levels, which also capture the size of the cities: 1) province-level municipalities including Beijing, Shanghai, Tianjin and Chongqing; 2) provincial capital cities; 3) prefecture-level cities; and 4) county-level cities.

4 Due to funding limitations, RUMiC Urban and Rural Household surveys were terminated in 2011. In addition, the RUMiC Rural Household Survey uses the same sample as the NBS survey. In case the sampling is biased, as many are currently arguing, it is important to use an independent survey with a different sampling frame to examine this issue.

migrated for work purposes (not living at home),[5] 28 per cent had a non-agricultural job at some time during the past year (but lived at home) and the remaining 50.3 per cent only had an agricultural job—again suggesting a large endowment of agricultural workers.

It is often argued, however, that this large supply of agricultural labour is not really employable in cities and therefore is not a labour supply that cities can easily tap. The evidence cited for this view is that these workers are on average older (see Figure 15.3a for the age distributions and Figure 15.3b for the actual numbers within each group) and therefore less educated. This description of remaining rural workers may to some extent be true but it misses two important points.
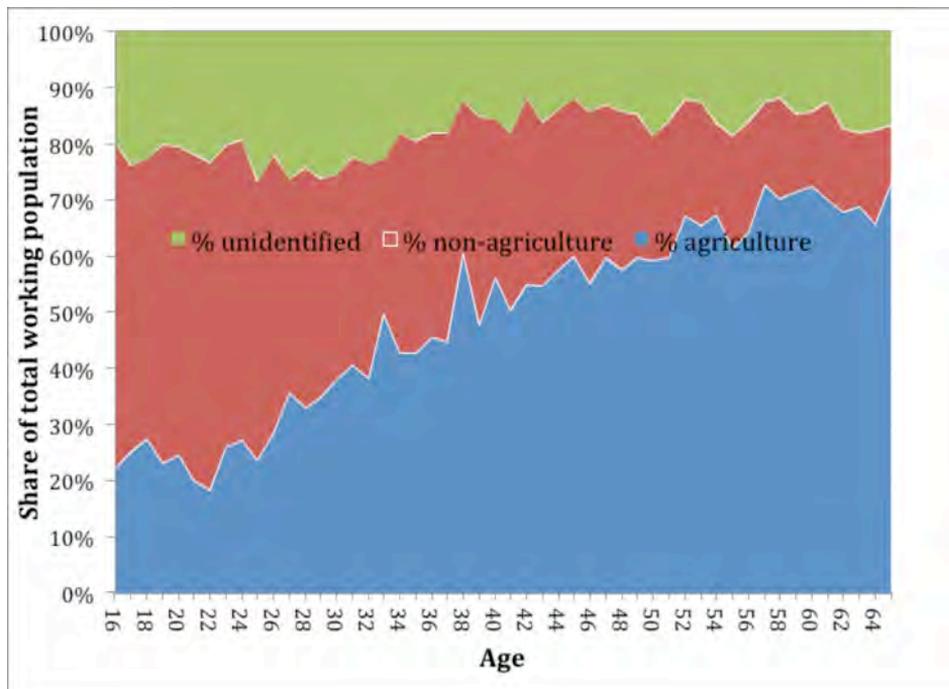

Figure 15.3a Age Distribution of Rural *Hukou* Workers by Sector of Employment, 2012

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5 This proportion is almost the same as the proportion calculated using RUMiC survey data (see Meng 2012).
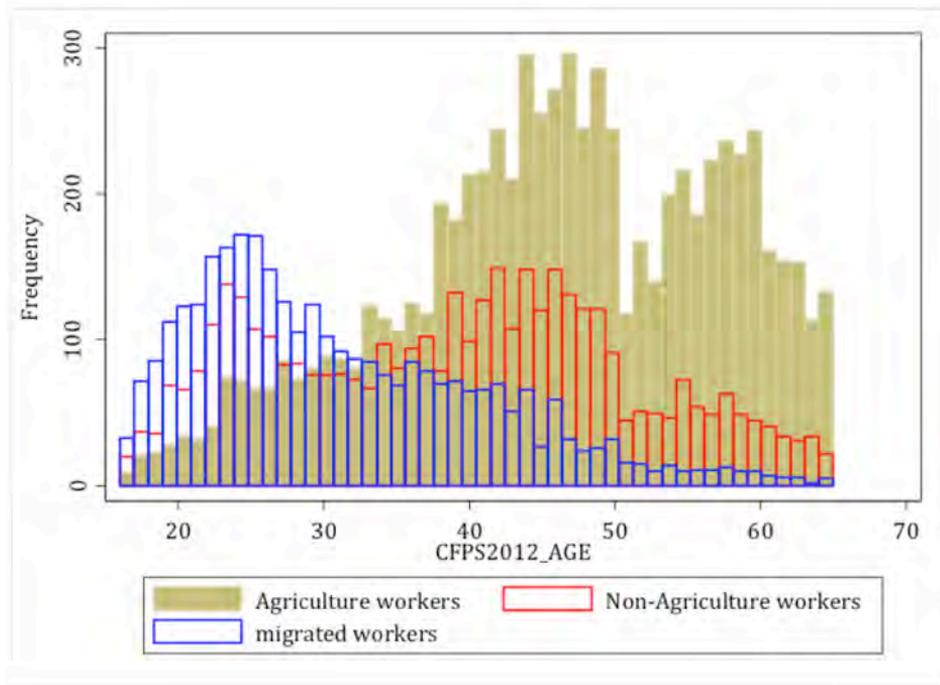
Figure 15.3b Number of Rural *Hukou* Workers as Migrants, Rural Non-Agricultural
Source: Author's calculations from CFPS (ISSS 2012).

First, when these workers were young a large proportion worked in cities. The data from the RUMiC Rural Household Survey indicate that 34 per cent of those who ever migrated have returned to rural villages (Meng 2013). Had there been no discriminatory policy hindering their ability to live in cities with their family they would probably have remained there and built up human capital by accumulating labour market experience. Hence, not only did the restrictions on migration lead directly to the labour shortages, but, if the policy were to change, the current group of migrants in cities would not need to return home as they age and this reduced turnover would significantly increase city labour supplies and the average skill level of migrant workers (Meng 2012).

Second, even if this group of workers not employed in cities is low skilled, they are China's resource endowment. As agricultural productivity increases, these people will need to find other ways to make a living. Thus, economic policies should encourage job creation that matches China's resource allocation. Sadly, currently policy is moving in the opposite direction. I will discuss this in the next section.

Both the NBS aggregated data for 2013 and the CFPS individual-level data suggest at least 50 per cent of the rural *hukou* labour force is still working in the agricultural sector, and another 20 per cent is working in the rural non-agricultural sector. Given the considerable increase in agricultural productivity over past years and the large productivity increases that are likely to come, there is and will increasingly be a significant excess supply of labour in rural areas. Recently, I visited a village in Hubei province during the planting season (a relatively busy season in agriculture) and witnessed a large proportion of individuals spending much of their day sitting around mahjong tables, and was told that such activity is common among adults in the region and beyond. If institutional restrictions and discrimination against migrant workers in the cities can be eliminated many of these idle rural workers who have stayed in rural areas for family reasons, such as looking after children or the elderly, would be able to migrate and stay in the urban labour market and improve labour supply conditions in cities (see Meng 2012).

City labour shortage and wage growth

There is no doubt, however, that employers in Chinese cities have been feeling the squeeze in the labour market for a few years and from their perspective many believe that labour shortages are increasing. Nevertheless, the issue is whether the significant increase in migrants' real wages in recent years indicates a significant tightening of labour market conditions. Table 15.2 presents three different measures of unemployment based on the RUMiC survey to directly measure unemployed resources. Admittedly, due to migrants having limited access to urban unemployment benefits, most migrants who remain in cities are employed and unemployment for migrant workers is generally low. Nevertheless comparisons across different years of unemployment rates can still shed light on whether during high wage-growth years labour market conditions in our survey cities are particularly tight.

The three unemployment measures are generated from the following questions: the first is constructed from a normal 'current labour force status' question; the second is based on whether the respondent worked at least one hour in the previous week; and the third uses a retrospective question on the number of times the respondent was unemployed in past 12 months. I define a dummy variable equal to 1 if an individual was unemployed at least once in the past 12 months.[6]

Table 15.2 Different Measures of Unemployment Rates by Year (%)

	Unemployment measures		
	Are you currently employed?	Had a paid job last week?	Had at least one episode of unemployment in past 12 months?
	New sample		
2008	1.3	1.3	14.1
2009	1.1	2.1	14.5
2010	1.0	1.6	8.1
2011	0.8	2.2	9.8
2012	0.7	2.0	7.2
2013	0.9	2.2	12.0

Source: Author's calculations based on the survey data.

Table 15.2 shows that the unemployment rate based on the first measure has been very low and only increasing slightly in 2013.[7] The second and third measures of unemployment are somewhat higher and increasing over time for second and only since 2010 for third. In particular, if we examine the proportion of workers unemployed at least once during the past 12 months, the rate is between 7 and 14.5 per cent over this period. The highest unemployment period was during the GFC (2008 and 2009). After the GFC, however, although 2011 and 2013 saw the highest wage increases, the unemployment rates in these years were also the highest, at 9.8 per cent and 12 per cent, respectively.

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6 The labour force status question asks all individuals to state their current labour force status from among the following 10 choices: 1) working; 2) retired and re-employed; 3) unemployed; 4) retired; 5) house workers; 6) family labour; 7) disabled; 8) at school; 9) waiting for a job; and 10) other. Individuals who are aged sixteen to sixty-five and not in categories 4, 5, 7, 8 and 10 above are defined as being in the labour force. For those who are in the labour force, the unemployed are defined as those who are in category 3 or 9. In addition, the employment module of the survey asks all those in the labour force two questions: 1) Did you work for at least one hour last week for income? 2) If you did not, why? The answer options for the second question are: 1) on vacation; 2) at school; and 3) unemployed. I define those who did not work for at least one hour for income due to unemployment.

7 Note that the total sample in the RUMiC survey includes individuals we followed over the years (labelled 'old-sample'), and those we drew randomly each year (labelled 'new-'sample). The latter sample is more representative for the year. See Meng (2013) for a detailed discussion of the representativeness of the RUMiC sample. Table 15.2 here reports only the measures from the new sample. Results from the total sample are consistent and are available by request from the author.

These results seem to suggest that there is no obvious reduction in unemployment to imply an increased labour shortage in cities and therefore increasing labour shortages may not be able to explain the particular pattern of wage increases over the past six years for rural–urban migrants.

A minimum wage effect?

China issued its first minimum wage regulation in 1993 and by July 1994 it became part of China's Labour Law. As living standards, prices and labour market conditions differ considerably across different regions, provincial and city governments are delegated to set their own minimum wages. The regulation specifies that local governments should do this in accordance with their own minimum living costs, productivity, unemployment, economic development and local average wages. The Minimum Wage Regulation was revised in 2004, and increased the penalty rate for violation from the original 20–100 per cent of the wage owed to 100–500 per cent of the wage owed.[8] According to the country's Twelfth Five-Year Plan, minimum wages are planned to increase by at least 13 per cent through 2015 (Lau and Narayanan 2014).

Among the 15 cities we surveyed, the minimum wage level over the past two decades has tripled (Figure 15.4). At the beginning of the period the minimum wage dispersion across different cities was fairly narrow and after 2005 the dispersion begins to widen, suggesting local government flexibility in setting minimum wages (Wang and Gunderson 2011).

During the past six years, many coastal cities have made the decision to upgrade their industrial structure from labour-intensive to technology and capital-intensive industries. One important policy tool used to achieve this is to significantly increase the minimum wage to make low-skilled labour-intensive firms, which are only marginally profitable, unviable in these cities.

In many developing countries, however, it is difficult to enforce minimum wage laws and, as a result, the minimum wage is often not binding. In the literature, economists often look into the distribution of wages to identify whether the minimum wage law is binding (see, for example, Brown 1999; Alatas and Cameron 2008).

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8   The new regulation also specifies that subsidies and bonuses are not to be included in the calculation of wages (Frost 2002; Zhao and Zeng 2002; Wang and Gunderson 2011).
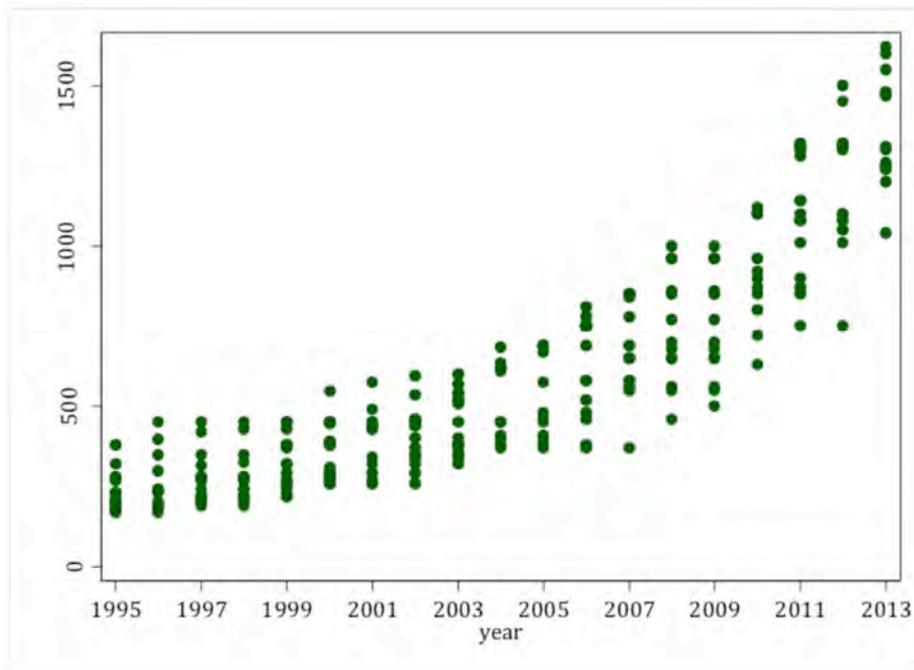
Figure 15.4 Fifteen-City Minimum Wage Changes
Source: Data collected from the official government web site for each of the 15 cities.

Figures 15.5a and 15.5b are presented to examine if the minimum wage law in China is binding. Because the minimum wage for different cities and years is set at a different level, I standardise monthly wages and the first month's pay for the first job using the following formula, which sets the minimum wage at zero for each distribution (Equation 15.1).

Equation 15.1

$$STANDARDIZED\,WAGE_{ijt} = \frac{Wage_{ijt} - Mini\_Wage_{jt}}{SD(Wage)_{jt}}$$

Figure 15.5a plots the minimum wage against the distribution of monthly wages while Figure 15.5b plots the minimum wage against the distribution of the first month's pay for the first job. The latter represents the most unskilled workers, and if the minimum wage is binding it should have the most effect on this group. Indeed, if we compare the two figures it is clear there is a large spike at the minimum wage for the individual's first month's pay from their first job, suggesting the minimum wage is binding for very low-skilled workers. Interestingly, when I separately plot the first month's pay for the first job by coastal and inland cities (Figure 15.6), it seems the spike is more obvious in coastal cities than in inland cities.
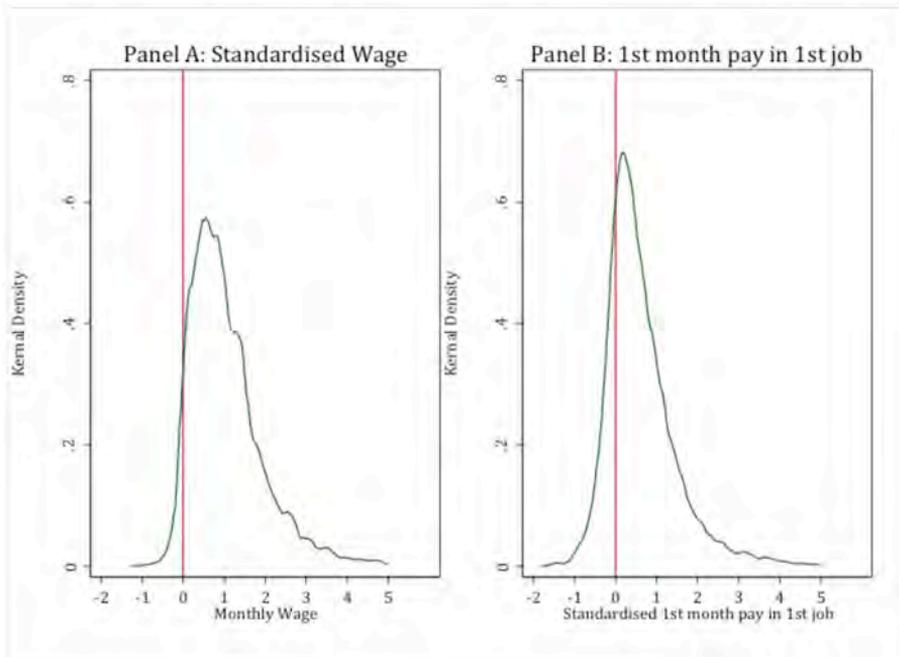
Figure 15.5 Wage Distribution against the Minimum Wage

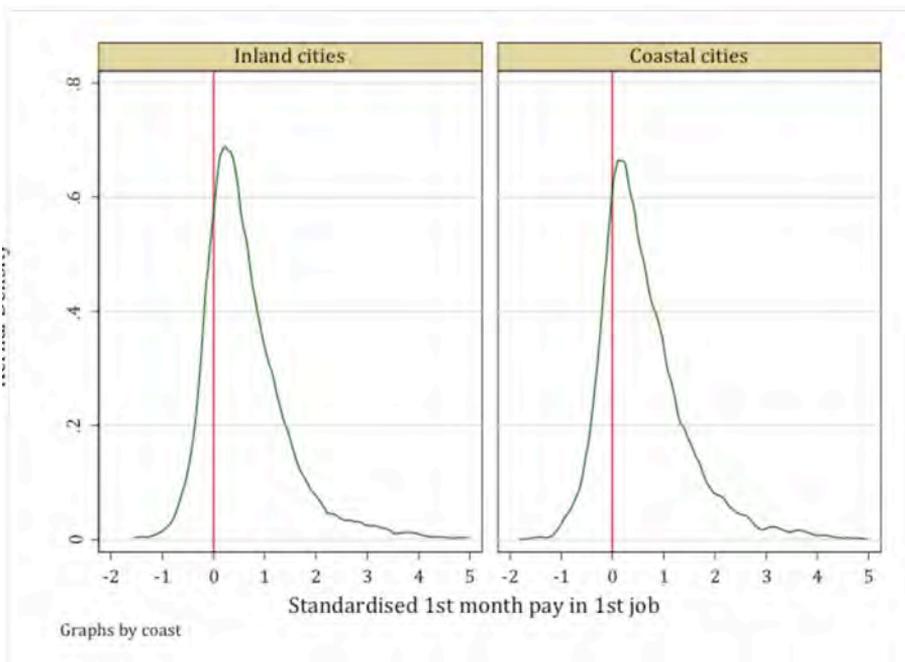Source: Author's calculations using RUMiC survey data, 2008–13.

Figure 15.6 Standardised First Month's Pay by Region

Source: Author's calculations based on RUMiC survey data, 2008–13.

A recent study by the Standard Chartered Bank indicated that of 356 firms surveyed in the Pearl River Delta more than 60 per cent identified the minimum wage increase as one reason for continued wage growth in 2013; 10 per cent of these firms indicated that the minimum wage hike had a huge impact on wage levels and another 52 per cent answered that it had some impact and led to them increasing wages more than they initially planned (Lau and Narayanan 2014). This, from another angle, is indicative of a binding minimum wage. The question, however, is the size of the effect of the minimum wage increase and also if the effect is restricted to those earning just below and just above the minimum wage or whether the minimum wage increase has spillover effects further up the earnings distribution chain.

Using the latest RUMiC survey data, I examine these questions. Modifying Neumark et al. (2004) and Stewart (2012), I estimate Equations 15.2 and 15.3.

Equations 15.2 and 15.3

$$lw_{ijt} = \alpha + \beta_k lm_{jt} * \sum_{k=1}^{K} D_k(w_{ijt}, m_{jt}) + \sum_{k=1}^{K} \eta_k \, D_k(w_{ijt}, m_{jt})$$

$$+ \gamma X_{ijt} + \kappa CPI_{jt} + \delta_j + \theta_t + \sum_{j=1}^{15} \lambda_j T_j + \varepsilon_{ijt}$$

$$\frac{\Delta w_{ij}}{w_{ijt-1}} = \alpha' + \beta'_k (\frac{\Delta m}{m_{jt-1}}) * \sum_{k=1}^{K} D_k(w_{ijt}, m_{jt}) + \sum_{k=1}^{K} \eta'_k \, D_k(w_{ijt}, m_{jt})$$

$$+ \gamma' X_{ijt} + \kappa' \Delta CPI_{jt} + \delta'_j + \theta'_t + \sum_{j=1}^{15} \lambda_j T_j + e_{ijt}$$

Equation 15.2 uses repeated cross-section data to examine the effect of the current year minimum wage *level* on the *level* of earnings in the current year, while Equation 15.3 examines the effect of the *change* in the minimum wage over two years on the *change* in earnings.

In Equation 15.2, lw_{ijt} refers to the log of monthly earnings for individual *i* in city *j* at time *t*, *while* lm_{jt} is the log of the minimum wage for city *j* in time *t*.

D(.) is a vector of seven dummy variables indicating individual *i*'s position in the earnings distribution, relative to the minimum wage. Specifically, the earnings distribution is defined as (insert equation). The first dummy variable includes individuals whose earnings are below or equal to the minimum wage, which happens to coincide with the fifth percentile in the distribution. The second dummy variable equals 1 if the individual's earnings fall between just above the

fifth and the tenth percentiles of the distribution. The third dummy covers the second decile. The next two dummies each capture two deciles, while the final dummy variable captures the three highest earnings deciles.

X_{ijt} is a vector of individual-level control variables, including age, its squared term, years of schooling, gender and year since the individual first came to a city. *CPI* is measured at the provincial level to capture price changes over time; δ_j is the city fixed effect; θ_t captures the year fixed effect; while T_j is a vector of city-specific time trends to eliminate city economic growth trends.

Equation 15.3 has the same specification, except that the dependent variable (monthly wages) and the main independent variable (city-level year-specific minimum wages) are the result of taking first differences.

The two equations capture the minimum wage impact on earnings of individuals at different positions on the wage distribution scale. Theoretically, one would expect that the effects are highest for those whose earnings are closer to the minimum wage, and gradually the effect dissipates as the distance between the minimum wage and individual earnings increases.

Equation 15.2 is estimated using the total sample of employed wage/salary earners. Equation 15.3 is estimated using a smaller sample of individuals for whom we have more than one year's information. Because minimum wages vary only across cities and over years, the standard errors in the regression are clustered at the city-year cell level. The selected results for Equation 15.2 are reported in Column 1 of Table 15.3. In general, the level effect is statistically significant for all groups, but it is strongest for the group which is just above the minimum wage. For individuals in this group, every 10 per cent increase in the minimum wage increases earnings by 9.8 per cent—almost a full spillover. The effect drops to around 5 per cent and stays that way for the next five deciles and then falls further to 3.9 per cent.

Table 15.3 Selected Results from Estimation of Equations 15.2 and 15.3

	Level effect		Change effect
	Full sample	Panel sample	Panel sample
Monthly wage < = minimum wage	0.403* (0.215)	0.407 (0.265)	0.024 (0.174)
Wage at fifth–tenth percentiles	0.977*** (0.288)	1.404*** (0.322)	0.579*** (0.194)
Wage at second decile	0.494** (0.211)	0.703*** (0.212)	0.392** (0.150)
Wage at third decile	0.480** (0.211)	0.671*** (0.205)	0.215 (0.187)
Wage at fourth–fifth deciles	0.500** (0.206)	0.671*** (0.193)	0.185 (0.151)
Wage at sixth–seventh deciles	0.483** (0.205)	0.685*** (0.191)	0.157 (0.188)
Wage > seventh decile	0.387* (0.204)	0.571*** (0.190)	0.135 (0.142)
Observations	28 930	11 306	11 306
R^2	0.861	0.788	0.168

Source: Author's own estimates.

As in any correlation analysis, the critical issue is causality—that is, do the minimum wage increases cause wages to increase or are minimum wage increases a response to increases in average wages? There is no perfect way to address this issue. In my estimation, I try to absorb potential endogenous effects by including city and year fixed effects as well as city-specific time trends. Nevertheless, inevitably, there will be remaining government intended policy changes (time-varying city effects) not controlled for. To further pin down the minimum wage causal effect, Equation 15.3 examines the impact of changes in the minimum wage on the changes in wages at different earnings deciles. These results are reported in Column 3 of Table 15.3. Taking changes (which require panel data) reduces our sample by half. To ascertain that the difference between the two estimations is not due to different samples, I estimated Equation 15.2 using the panel sample (see Column 2 of Table 15.3). The results show that the panel sample increases the estimated results on the minimum wage level effect, but it does not change the pattern of impact across different earnings deciles. The estimated results from Equation 15.3, however, show a significant reduction in the size of the impact. The intra-city changes in minimum wage affect just less than 60 per cent (58 per cent) of the changes in earnings for the fifth to the tenth percentile groups. Further up the earnings distribution ladder, the effect reduces to 38 per cent. And then from the third earnings decile onwards, the effect becomes smaller (between 20 per cent and 13 per cent) and is statistically insignificant.

These results (also presented in Figure 15.7) indicate that the minimum wage regulation has a strong impact on those at the minimum wage (the spike presented in Figure 15.5b) and just above. The effect dissipates somewhat for the level effect beyond the first two earnings deciles, but is still strong throughout the distribution. For the change effect, though, it becomes statistically insignificant after the twentieth percentile.
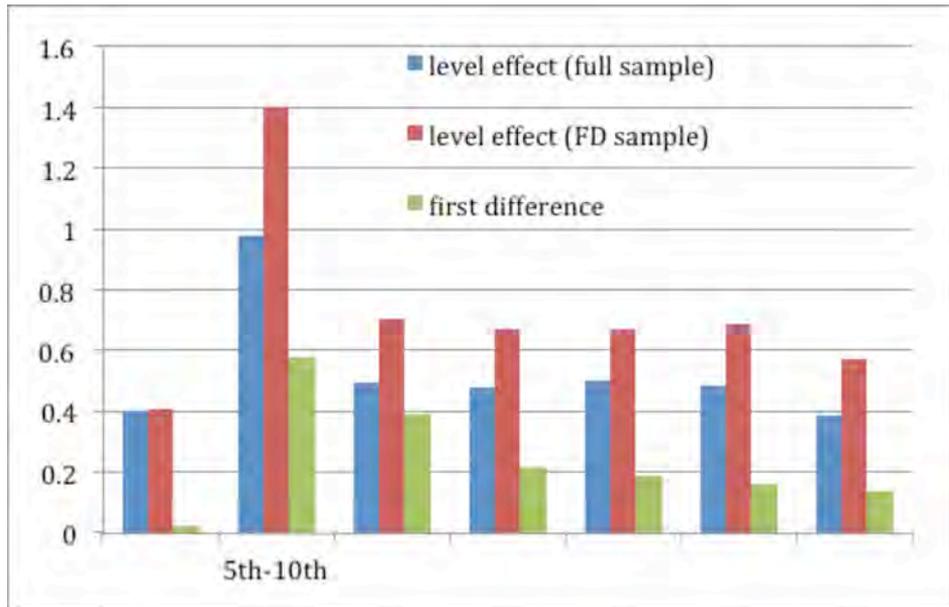

Figure 15.7 Estimated Minimum Wage Effects

Source: Author's estimation results (Table 15.3).

Agricultural subsidy and rural welfare provision

Other possible impacts on the increase in migrant wages are the changes in the agricultural subsidy and the increase in rural welfare provisions. These changes increase the opportunity cost of migration and migrant workers' reservation wages. They can act to slow the flow of rural workers to cities and put upward pressure on migrant wages in the city.

These changes in the agricultural subsidy and rural welfare provision over the past decade were in response to the increase in rural–urban income inequality. In 2004 China abolished the agricultural tax completely. In addition, the rural *hukou* population received increases in various agricultural subsidies. Based on an NBS report (2014), the total cost of subsidies to farm production amounted to more than RMB200 million in 2013, or equivalent to more than RMB360 per agricultural *hukou* worker. In addition, as part of the strategy of making rural

areas richer and more livable, social welfare provisions, such as free education, pensions for the sixty-and-over age group and healthcare subsidies are gradually being put in place.

To sum up, many government policies—minimum wage increases, and increases in agricultural subsidies and rural welfare provision—are putting upward pressure on urban wage costs. The factors underlying the real wage increases for unskilled rural workers in cities are the result of many policies that effectively induced shortages of rural migrant labour.

New urbanisation strategy and its potential challenges

Over the past decades rural–urban migration restrictions have come under strong criticism, and reform of the system is inevitable. It is under this pressure that the *National New Urbanisation Plan (2014–2020)* was established (State Council of China 2014). The sad thing is that the original mentality that held that 'farmers should not live in cities' still plays an important role in designing the new urbanisation strategy of the orderly building of small cities and towns. The new idea is that 'farmers should not live in *large* cities'. This new urbanisation strategy may cast long shadows on China's future development path, just as the old rural–urban restrictions shaped China's current development path.

Migration restrictions, industrial upgrading and the change in industrial structure

China's rural–urban divide policy prohibited any rural–urban migration for 30 years starting from the early 1950s. Although economic growth over the past 30 years has led the Government to relax restrictions on rural–urban migration, workers born in rural areas are still treated differently in cities than their urban-born counterparts and rural workers are still regarded as temporary migrants. Because of this discriminatory policy, migrants could not permanently move to cities with their families. This has generated a special feature of rural–urban migration in China—that is, a very high turnover rate, as migrants who come to cities do not stay very long. If a normal working life is supposed to be 35 years, on average migrants stay in cities for less than 10 years, or less than one-third of their working life. When individuals are unable to bring their family with them, they inevitably need to go home to marry, when children are born and during the child-raising and schooling periods. Migrants also need to return home when parents are sick and need to be looked after. These life events

should not substantially cut short people's working lives in a normal situation, but they do for migrant workers because they cannot live in the same place as their families. The higher turnover rate reduces the stock of migrant workers in the cities. This is probably the primary cause of China's current labour supply 'shortage' (see Meng 2012).

When the 'shortage' first became evident, the Government did not realise that it was a self-inflicted shortage and consequently did not move to systematically change restrictive migration policies. Instead, it was believed that China had come to the 'turning point' and it was time to upgrade industry and switch towards a high technology–high capital-intensive industrial structure and become a more service-driven economy. To do so, many cities, in particular coastal cities, used the minimum wage policy to actively push out low-tech industries.

This change is evident in the RUMiC data. Over the past six years there has been a significant switch in the industrial structure among RUMiC survey cities. Using the data from RUMiC censuses, conducted in 2007 (before the first wave of the survey) and in 2012,[9] I compare the change in industrial structure among the 15 cities. The first finding is that the total number of migrant workers in our survey cities reduced by 18 per cent. In addition, the proportion of migrants working in manufacturing and construction sectors reduced from 27 per cent to 15 per cent—a 12-percentage point reduction—while the share of those working in service/retail/wholesale trade increased by the same proportion. Figure 15.8 presents these changes for coastal and inland cities. It shows that the construction and manufacturing sectors reduced in both types of cities, but more so in coastal cities.

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9   To establish a sampling frame for the RUMiC survey, the RUMiC team conducted a census within the randomly selected grids of each of the 15 survey cities. Within each grid, every workplace, including street vendors, was interviewed to inquire about the number of migrant workers employed in the factory/shop/construction site/restaurant/market or on the street (see <https://rse.anu.edu.au/rumici/> for a detailed discussion of the census procedure). We repeated this census procedure at the end of 2012 to make sure our sample continued to be representative.
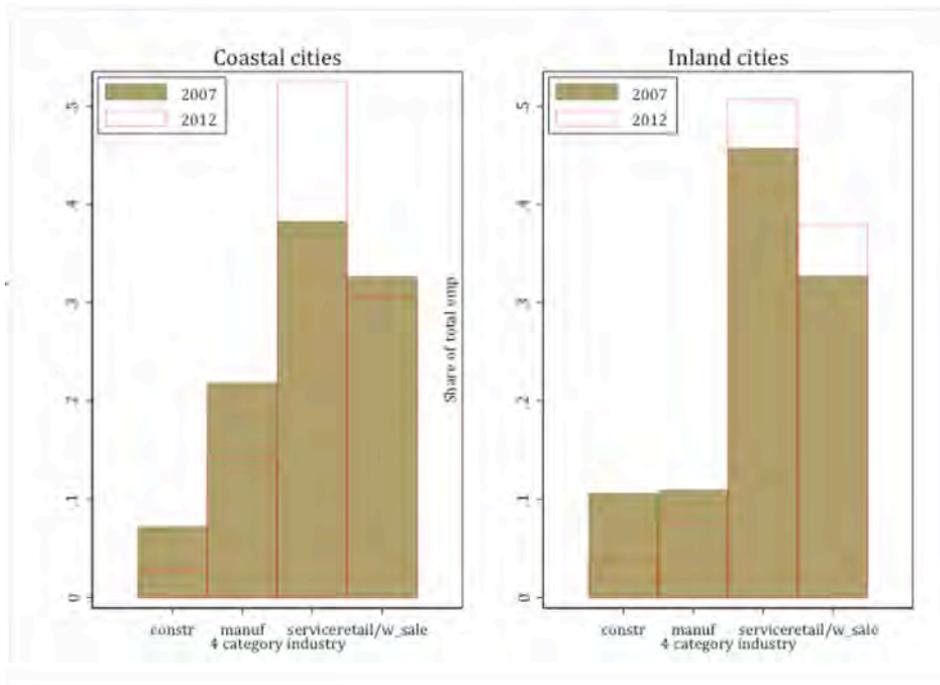
Figure 15.8 Industrial Structural Changes

Source: Author's calculations based on RUMiC survey data, 2008–13.

In addition to the significant reduction of manufacturing employment, we also observe a change in migrant occupations (Table 15.4). Due to differences in occupational coding, I present consistent coding for three survey years: 2008, 2009 and 2013. Over this period, the proportion of migrant workers working as private business owners, professionals and in other white-collar jobs increased from around 10 per cent to 20 per cent, while at the same time the proportion in production work reduced from 27 to 17 per cent. What is more important to note is that the average years of schooling for the private business owners and other white-collar workers are much higher than those for production workers. This change in the occupational distribution among migrant workers may imply an increasing demand for skilled workers rather than unskilled workers. This is consistent with the policy of industrial upgrading.

Table 15.4 Occupation Distribution (2008–13)

Occupation distribution	Total sample			New sample		
	2008	2009	2013	2008	2009	2013
Business owner or white-collar worker:	9.87	10.51	21.84	9.87	9.90	15.45
owner of private business	3.30	1.82	7.11	3.30	1.80	2.96
professional	0.79	0.61	1.96	0.79	0.37	1.42
manager, clerk or officeworker	5.79	8.08	12.77	5.79	7.74	11.07
Retail, wholesale trade	15.95	20.23	25.00	15.95	17.83	13.35
Service sector worker	33.42	35.39	23.21	33.42	38.16	33.00
Production workers	26.61	22.42	16.62	26.61	24.46	21.59
Self-employed	10.93	10.36	11.93	10.93	8.84	16.14
Others	3.21	1.09	1.39	3.21	0.80	0.47
Average education for each occupation:						
Business owner or white-collar worker	9.38	9.74	9.56	9.38	9.84	9.88
Retail, wholesale trade	8.85	8.78	8.44	8.85	9.08	8.96
Service sector worker	8.83	8.73	8.25	8.83	8.78	7.99
Production worker	8.76	8.78	8.60	8.76	8.72	8.34
Self-employed	8.03	8.08	8.28	8.03	8.26	8.08
Others	6.99	6.69	8.06	6.99	7.57	7.36

Source: RUMiC Survey.

There could be three reasons why we observe a reduction in total migrant numbers and a significant reduction in the proportion of migrant workers employed in construction and manufacturing. One possibility is that many of the city factories have been pushed outside our city boundaries. Initial survey boundaries were determined in 2007. To establish a complete sampling frame so that the survey can be representative within each surveyed city, the RUMiC team drove around each city boundary. The boundaries were drawn based on the rule that within 1 km of the boundary there should be no buildings or establishments that could hire migrant workers. We then divided the cities within our boundaries into grids and randomly selected grids in which to conduct the census. In 2009, due to the GFC, many factories were bankrupted and many were moved. To understand this effect, we redrew the boundaries. We found some effect of moving outside the boundary but it was quite small. The 2012 census was based on the new 2009 boundaries. It could be that as many cities have expanded, this boundary effect could be stronger.

The second possibility is that many manufacturing jobs have been pushed to smaller cities and towns, which the RUMiC survey does not cover. China has five tiers of cities: megacities (Beijing, Shanghai, Tianjin and Chongqing), provincial

capital cities, prefecture-level cities, county-level cities and rural towns. Among the 15 cities included in our survey, nine belong to the first two tiers and the remainder belongs to the third tier. Based on the *China Statistical Yearbook* data (NBS various years), between 2008 and 2012, the manufacturing share of total non-agricultural employment at the aggregated level reduced from 27.6 per cent to 24.8 per cent—a 2.8 percentage point reduction—whereas the reduction of manufacturing share of the total urban non-agricultural employment was slightly less, at 2.3 percentage points. Because the first measure includes small towns while the second does not, this seems to suggest that even if there is movement of manufacturing factories to small towns, the effect cannot be large.[10]

The third possibility is that due to China's self-inflicted labour shortage in cities and the industrial upgrading policy, many labour-intensive manufacturing firms have moved to other countries where labour costs are much lower.

Given the nature of the available data it is not possible to precisely measure the size of these different effects although it is clear that manufacturing as a proportion of the Chinese economy and low-skilled employment has fallen over this period.

Potential challenges

Labour market myths due to industrial upgrading

As demand for low-skilled workers in medium and large cities falls as a result of industrial upgrading, the main question becomes whether this will bring China to a new equilibrium point with regard to migrant labour supply and demand. Two important issues come to mind: 1) is it true that China has run out of low-skilled labour and hence reducing demand for unskilled labour will resolve the 'shortage' problem; 2) if not, can unskilled workers who remain in the countryside be employed in cities where the industrial upgrading policy has significantly changed the type of workers needed?

My discussion in the 'Labour supply' subsection touched upon the first question. There I stressed that the institutional restrictions on migration and recent policy directions have contributed to the reduction in labour supply to cities. I also showed that more than 50 per cent of rural *hukou* workers are still mainly engaged in the agricultural sector. Does agricultural production require some 283 million workers? The short answer is no. Using RUMiC Rural Household Survey data, Kong et al. (2010) show that individuals mainly

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10 The reason for the difference between the substantial reduction in manufacturing jobs in our survey cities and that observed from the aggregated data at this stage is unclear.

engaged in agricultural production on average worked 154 days a year in 2009. Using CFPS data, I calculate this figure again for full-time agricultural workers in 2012 and find that on average they were employed for 6.5 months in both busy and non-busy seasons, which amounts to 150 working days.[11] If we assume that a full-time worker should work 300 days a year then half of the 283 million workers who are currently fully engaged in agricultural work could be made more productive if they move out to become employed in the non-agricultural sector.

The above calculation is very conservative because it is likely the future will bring substantial increases in agricultural labour productivity. The village head in the village (Jiaoti) I recently visited in Hubei province told me the village is engaged in negotiation with a farming company that hires 14 people to plant 4000 mu[12] of farmland. Jiaoti village has around 1000 mu of farmland and the net income per mu is currently around RMB1300 per mu per year. The farming company has agreed to rent all the land from Jiaoti village at RMB1300 per mu per year. This seems to be a quite attractive deal for the village. If it is successful, almost all the workers from the village currently engaged in agricultural work (around 300) will be made redundant. According to the village head, many surrounding villages have successfully rented out their land. If the negotiation is successful in Jiaoti village, the remaining farm labourers will have nothing to do in the village.

Can these farmers be employed in cities? Perhaps not in the short to medium runs. Currently, the proportion of individuals aged sixteen to sixty-five not at school and not retired, but not at work, is around 29 per cent among the urban and 27 per cent among the rural *hukou* populations (ISSS 2012). Although the official unemployment rate is not high, the rate of the non-working population is high and may be a reflection of the high rate of discouraged workers. These circumstances would make it more difficult to absorb large numbers of surplus agricultural workers.

In addition, the skill level of the current agricultural workers may not suit the 'upgraded' city jobs. Panel A of Table 15.5 compares the distribution of education levels for those who are currently mainly engaged in agricultural work with those who are engaged in non-agricultural work or have migrated. Just a little more than 60 per cent of the former group has only primary school or below education whereas more than 65 per cent of the latter two groups has junior high school or above education. As indicated earlier, the current industrial upgrading movement in cities has already led to a change in industrial

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11 Assuming two-thirds of their work period was during the busy season and one-third was during the normal season.

12 'Mu' is the land measurement unit used in China.

structure and an increase in demand for skilled workers. The continuation of this upgrading will worsen the employability of the remaining group of low-skilled agricultural workers.

Table 15.5 Education Distribution of Rural *Hukou* Workers in Different Sectors

	Total sample					
	Agricultural workers		Non-agricultural workers		Migrated workers	
	Frequency	%	Frequency	%	Frequency	%
Illiterate	2818	36.96	870	13.94	124	9.96
Primary school	2022	26.52	1345	21.55	291	23.37
Junior high	2163	28.37	2395	38.38	503	40.4
Senior high	553	7.25	1127	18.06	211	16.95
Three-year college	57	0.75	326	5.22	73	5.86
University	11	0.14	167	2.68	40	3.21
Masters	0	0.00	10	0.16	3	0.24
	Age 30–45					
	Agricultural workers		Non-agricultural workers		Migrated workers	
Illiterate	839	30.42	379	14.98	166	19.51
Primary school	883	32.02	640	25.30	260	30.55
Junior high	867	31.44	991	39.17	307	36.08
Senior high	141	5.11	330	13.04	75	8.81
Three-year college	26	0.94	128	5.06	27	3.17
University	2	0.07	57	2.25	15	1.76
Masters	0	0.00	5	0.20	1	0.12
	Age <30					
	Agricultural workers		Non-agricultural workers		Migrated workers	
Illiterate	106	15.59	53	2.82	54	4.92
Primary school	187	27.50	284	15.11	241	21.95
Junior high	301	44.26	785	41.78	503	45.81
Senior high	64	9.41	488	25.97	205	18.67
Three-year college	16	2.35	167	8.89	65	5.92
University	6	0.88	98	5.22	27	2.46
Masters	0	0.00	4	0.21	3	0.27

Source: Author's own calculations from CFPS (ISSS 2012).

One might argue that those who remain in the agricultural sector are less educated because they are older, and when older workers retire younger rural workers should better fit the demand for relatively high-skilled workers in cities.

But this may not be the case. I compare the education distribution for different age groups (Panels B and C of Table 15.5) for those working in agricultural and those working in non-agricultural sectors. For all age groups the agricultural workers are considerably less educated. So, it seems that the more educated rural *hukou* workers are more likely to be currently engaged in non-agricultural work or have migrated already and the less educated, be they old or young, have remained in agriculture. Thus, time and generational change will not quickly solve the problem. If the industrial upgrading policy continues, the situation will worsen for the less-educated group. In addition, rural education quality has always been poorer than that provided in cities, adding another obstacle to the demand for skilled rural labour.

In sum, the current industrial upgrading policy will not provide favourable labour market conditions for those currently engaged in agricultural work and who soon will be made redundant from the agricultural sector.

Small-city policy and its implications for China's future growth

Can the new urbanisation strategy be a solution? Will moving so many farmers to local towns create enough jobs for them?

In the *National New Urbanisation Plan (2014–2020)*, the words used to describe *hukou* permit access for megacities (five million people and above) are 'strictly restricted'; for large cities (three–five million) the term used is the very vague 'reasonably contained'; for cities with one–three million population, the document states that *hukou* restrictions can be relaxed slightly; for cities with 0.5 to one million population, *hukou* restrictions can be relaxed in an 'orderly' way; while for local towns there will be no restrictions. The intention seems to be to redirect current migrants to medium-sized cities and to reallocate many current farmers to small towns, but no concrete measures or indicative directions are given in the document. For example, it is unclear whether individuals and their families who are already working in megacities or large cities will be able to obtain *hukou* status there or will be redirected to medium or small cities.

The *National New Urbanisation Plan* documents at great length the *hukou* permit restrictions at different levels of cities, but very little is said about where the jobs will come from. In a normal urbanisation process, individuals choose to go to cities where they can survive or thrive, mainly through obtaining jobs, whereas the current plan uses permits for citizenship (*hukou*) to direct people where they can take their families to live with access to city privileges regardless of whether jobs are available. It is unclear whether the central planners are capable of designing such a large-scale social movement given the current less-planned nature of the Chinese economy.

There may be ways to redirect population movement towards medium-sized cities—for example, through building satellite cities near mega and large cities or by moving industries to medium and small cities. But all of these will involve some adjustment cost. Alternatively, using administrative tools, with which Chinese bureaucrats are familiar, may create more labour market tensions. The most important thing for policymakers is to understand the potential costs of each option. The new urbanisation document does not exhibit such understanding.

Moving farmers to local towns could be even more challenging. The main issue once again is when farmers are reallocated, where the jobs will come from. There are many anecdotes of such reallocation, most of which point to a deterioration of local communities and idleness of the workforce. Perhaps if farmers do not give up their rural land rights, having them live day-to-day in local towns will not be a huge problem for the time being, as rent from their land will support them. In the longer run, however, a large group of idle individuals of working age will be problematic. Thus, reallocation needs to be considered together with job opportunities.

In addition to the normal concerns of economic viability of small towns (too far away from the input and output markets, for example), the strategy of reallocating farmers to small towns may have long-term human capital accumulation implications. A recent paper has found that workers change occupation and industry less often in large cities than in small cities (Bleakley and Lin 2012). This is because there are just not enough firms in the same occupation or industry within small cities. As a result, individuals in less population-dense markets cannot be too specialised or they risk not being able to find another job once displaced. Consequently, encouraging the development of small towns in the long run may depress human capital investment.

Conclusions

Economic development paths in all countries are shaped by local institutional constraints. China's special rural–urban divide policies, which restrict rural labour supply to cities, have generated many past and future development challenges. In this chapter, I link a recent labour market phenomenon—namely, strong wage increases for migrant workers—to past and current institutional constraints and policy directions. I then discuss potential challenges for China's future development that will arise in response to the new urbanisation policy.

I reiterated in this chapter that China's urban labour shortage is a policy-induced phenomenon; however, previous misdiagnosis of the problem has led to special policy directions that in turn will generate future labour market friction and development challenges.

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