Regional Labour Market Integration since China's World Trade Organization Entry

Evidence from Household-level Data

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1. Introduction

For an economy in transition, development of the market is a sign of a successful transition and a premise for a sustainable form of economic growth. Development and integration of labour markets are key components that indicate the move towards a market system. Despite wide acknowledgement of success in China's market-oriented reform, there is disagreement about the effects of marketisation, especially in regard to the level of regional market integration. Reforms of production factor markets, for instance⎯especially in the labour and capital markets—have been considered less far reaching than the reform efforts made in commodity markets (Lardy 1994:8–4). There are also scholars who believe that segmentation of the market has become severe as a result of decentralisation in the reform process. Such scholars argue that although decentralisation rectified the concentration of decision making and resource allocation, it has also generated a 'border effect'—something present in independent economies and in administratively divided regions—thus preventing the labour markets of separate regions from integrating into a national market (Poncet 2001, 2003; Young 2000). Others suggest that the deepening of the Chinese reform process will increase the degree of marketisation in the country, including the regional integration of production factor markets (Fan and Wang 2001; Wang and Fan 2004; Fan et al. 2003).

Labour market integration is a historical concept. Studies in economic history show that during the era of pre-industrialisation, even in now-industrialised countries, labour markets were not integrated due to limited regional mobility. The process of labour market integration through industrialisation begins in the local labour market and then widens to regional labour markets and, finally, to the national labour market (Rosenbloom 1 990, 997). This process is integral to improving the market mechanism.

In addition to spontaneous forces of marketisation, outside shocks can be sources of encouragement for labour market integration. For example, the

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common market in Europe promotes labour market integration between member countries of the European Union. Another example is the impact that the North American Free Trade Agreement (NAFTA) has had on integration, bringing labour markets closer in border areas of the United States and Mexico (Robertson 2000).

China's transition from an administered labour system to a labour market is unique—not only because it is the largest economy in the world to experience such a process, but because it has adopted a typically Chinese style of gradual change. Three elements of China's labour market integration are important. Firstly, it has been carried out with an emphasis on incremental reforms, while not entirely negating the importance of shock reform. Secondly, economic globalisation has stimulated the process of labour market integration. Finally, the move towards a labour market parallels the transformation from a dual economy to one that is integrated.

As China's demographics change and the country approaches a turning point that will lead to a labour shortage, the speed of labour market integration has increased. Through integration into the global division of labour, China has increased its production of labour-intensive exports and accepted world-wide employment opportunities. As a result, more than 00 million rural labourers have migrated to urban jobs, and laid-off and unemployed workers have been re-employed in an economy with high growth rates. With economic development, the pattern of resource endowment in China is being restructured, implying the coming of a historical turning point.

According to population predictions, the desirable population structure that has brought about a demographic dividend in the past three decades will disappear within the next 0 years. At this point, the dependant population ratio (the ratio of the population aged younger than 6 and older than 64 with respect to those aged between 6 and 64) will stop decreasing and begin increasing. When comparing the growth rates of labour forces in other countries, it becomes clear that China will have no advantage in labour supply within two decades. While the population shift will not occur overnight, it will be necessary to drink from the river while the water levels are high: labour abundance must be taken advantage of while it still exists. In fact, the outcome of demographic changes has already appeared in the labour market. The spread of labour shortages from coastal areas to the rest of the country not only indicates the end of an era of unlimited labour supply, it marks the coming of a 'Lewisian turning point'. This is also a driving force behind labour market integration, given that the competition for skilled and unskilled workers has intensified the level of labour mobility.

This paper seeks to demonstrate that economic reform, opening up and the transition from a dual economy have all encouraged integration of the labour market. Firstly, we explain how the labour market has developed and integrated with respect to three distinct changes in the economic order: the move from a planned labour system to market-based labour allocation; the move from a closed economy to one that is increasingly globalised; and, finally, the move from a dual economy characterised by unlimited labour supply to a Lewisian turning point. Secondly, we introduce briefly the effects on the urban labour market of migrant labour. The third section demonstrates empirically that the

wages of migrant workers have converged, which is evidence of labour market integration.

The labour market in China has developed in two ways. Firstly, the expansion of the private sector has absorbed labourers made redundant as the planned system came to an end. Secondly, there has been competition from the private sector to force state-owned enterprises to reform their employment system and the State to deregulate the labour market. These aspects of reform tend to promote labour market integration, with an additional incentive provided by the pressures of a coming labour shortage. By employing a statistical method to household-level data, we are able to test the points made above. The final section concludes with some suggestions for further reform to the labour market.

2. Labour market integration as reform, opening up and growth move on

Like related institutional arrangements in China, labour policy under the planned system resulted in two kinds of inefficiencies. Firstly, the inherent lack of labour supervision and lack of an incentive mechanism in the micro-management system led to low technical efficiency. Secondly, the distorted allocation of labour, capital and other resources between regions and sectors led to low allocative efficiency. Accordingly, the subsequent incentive mechanism and allocation system reforms have improved technical and allocative efficiencies, and have become dominant drivers of the high economic growth that has occurred during the post-reform period in China. Changes in labour policy have played an important role during the whole process of reform—contributing directly and indirectly to efficiency improvements.

China's gradual institutional changes embodied two initiatives: a 'bottom-up' initiative and one that is 'top-down'. In the first case, once the political climate at large began to change, producers who had previously suffered under the strict constraints of the old system and who could see the potential gains from the new system actively encouraged reform. In the second case, the government perceived the way in which the old institutions constrained productivity, and the potential efficiency gains of a new institution, and after comparing the costs and benefits of an institutional change, it implemented the policy reform on its own initiative. The formation of labour markets in China came about this same way: the implementation of the Household Responsibility System meant that rural labourers were released from their engagement in only the agricultural sector, and began migrating between villages and towns and even provinces. When a large number of migrant workers found jobs in urban sectors, competition began between the state-owned sector and the non-state sector, forcing the former to consider reform of the labour recruitment and hiring system. Partly as a response to this—and partly because of the problem of low productivity—the government gradually relaxed its labour policy. Since policymaking is, after all, a function of government and since it is a decisive force in the liberalisation of a labour market, the intention and the extent of reforms of government labour allocation policies will determine the pace of labour market formation.

In the process of institutional change, playing the role of supplier of the

institution, government is also a rational agent, taking into consideration economic and political aspects in its decision making. Whether or not to abolish an old policy while adopting a new one depends not only on the revealed efficiency gains, it must be restrained by the costs and benefits of this change. The terms 'cost' and 'benefit' here can refer to economic and political effects. Increasingly deepened reform brings about an expansion in the market as a principle force of allocating resources. To avert conflict between traditional government methods and market forces, the Chinese government has duly adjusted its policies in response to market development. Labour policy reforms have depended directly on the overall extent of market maturity. While on the one hand, the development of the labour market makes up a key part of the economic reform as a whole, on the other, it goes only as far as the reach of the overall reform.

As discussed above, during the process of labour policy reform, the Chinese government and other players interacted with one another by following the rationale of political economy. As part of marketisation, the reform of labour policy and the implementation of other related reforms are pre-conditional on each other. Following this framework, the deregulation of labour mobility has been embodied mainly in rural-to-urban migration, characterised as gradual abolition of the 'hukou' system.

The gradual reform of hukou can be characterised by a bottom-up process since the beginning of the twenty-first century: that is, relaxation of hukou control began in small towns and gradually extended to medium-sized towns and big cities. Hukou reform in more than 20,000 small towns was characterised by 'minimum criteria and complete opening-up'. After years of experimentation in some regions, in 2001, the Ministry of Public Security initiated action to reform the hukou system in small towns. In most small towns, the minimum requirement for receiving local hukou is that the applicants must have a permanent source of legal housing in the locality. This was considered one of the greatest and most complete steps in hukou reform since the system was formed in 1958. Hukou relaxation in some medium-sized cities (even in some larger cities and provincial capitals) is characterised by 'abolishing quota and conditioned entry'. The threshold for settling in those cities with hukou status has been lowered substantially. This approach to reforming the hukou system meets the needs of maturing labour markets and corresponds with gradualism. Hukou relaxation in especially large cities such as Beijing and Shanghai is characterised by 'lifting up the threshold and opening the gate'. Those cities have actively encouraged the arrival of intellectuals and professionals, while imposing strict criteria of entry on ordinary migrant workers. In short, lifting the threshold means narrowing the doorway. Comparatively, hukou reform in those cities has not made progress.

The reforms in urban employment, social security and welfare provision have created an institutional climate for rural-to-urban migration. Such reforms include the expansion of urban non-state sectors, the removal of rationing, the privatisation of the housing distribution system and changes in employment policies and the social security system. These reforms have reduced the costs of migrating to, working and living in cities. In the late 990s, while the urban employment 'iron rice-bowl' was broken, rural workers began to enter the

urban labour market on a massive scale. It is becoming more common and much easier for rural labourers to seek work and live in cities, even though the hukou system still functions. In short, labour mobility motivated by reforms of the hukou system and other institutions deterring migration is not only an important part of economic development, it is a significant process of the economic transition towards market forces. This transition has been pre-conditioned by the reforms in a much wider sphere. As the result of the reform in this respect, the allocation of the labour force across sectors and among regions is based increasingly on market forces. The characteristics of migration in transitional China reflect that of marketisation as a whole.

In the process of demographic transition characterised by a shift from a pattern of high death rates, high birth rates and high growth rates in the population to a pattern of low death rates, low birth rates and low growth rates, the time difference between the declines of birth and death rates leads to three phases of age structure characterised by a high dependency ratio of children, a high proportion of working population and a high dependency ratio of the elderly, respectively (Williamson 1 997). During the period between the earlier decline in death rates and the lagging decline of birth rates, the natural growth rate of the population climbed persistently and the share of dependant youth in the total population increased accordingly. As the fertility rate begins to fall, the share of working-age population increases in a lagging pace of about 20 years. The further drop in fertility rates will lead to a slower growth in population and the population will age. Therefore, two sequential inversely U-shaped curves, for the natural growth rate of the population and for the growth rate of the working-age population, can be expected if one tries to outline the experience of demographic transition by time series. In the entire period of reform, China has witnessed a continuing increase in the share of the working-age population and gained a demographic dividend from the productive population structure.

This demographic dividend, translated from success in demographic transition, has been capitalised on through reform of the resource-allocation mechanism. Furthermore, the comparative advantage of labour-intensive products has been realised by China's integration into economic globalisation, and thus, the phenomenon of diminishing returns to capital has been deterred by the extra sources of growth. While the total volume of global international trade has expanded rapidly, in just more than one-quarter of a century of reform in China's economy, the country's trade volume has increased at a much faster rate. China's share of commodity imports and exports as a proportion of the world total has been enhanced from only slightly more than per cent in the early 980s to more than 6 per cent in 2004. The high revealed comparative advantage in labour-intensive commodities clearly links trade expansion to China's advantageous population structure (Yue 2001 ; Batra and Khan 2005). The world-wide allocation and flows of international capital make it possible for China to utilise more efficient capabilities of resource allocation from outside investors and to fill up its twin gaps in domestic savings and foreign exchange at the early stage of reform and opening up. Taking the total dependency ratio as a proxy of the advantageous population structure in the period between 1 982 and 2000, each per cent decrease in the dependency ratio led to 0.115 per cent of growth in per capita gross domestic product (GDP); that

is, the decline in total dependency rates contributed to more than one-quarter of the per capita GDP growth in the reform period (Cai and Wang 2005).

Under a dual economy, wage rates will persist at a subsistence level until the expanding modern sector exhausts the surplus labour. As a consequence of the emerging labour shortage, competition for the labour force will inevitably lead to wage rises in the modern sector and, in turn, in agriculture, and the relationship between wage rates and productivity in agriculture will become close to economists' expectations (Watanabe 994). In other words, once the demographic transition occurs, the Lewisian turning point—characterised as a transition from an unlimited labour supply to labour scarcity—will lead to an increase in wage rates and hence labour costs. The result of higher wages and the Lewisian turning point is an increase in competition for unskilled workers. Employers, sectors and regions will compete for labour and this will lead to a more integrated labour market.

3. Migrant workers in the urban labour market

Due to the dual economic system implemented in China, there is significant segmentation between the rural and urban labour markets. The two markets have different levels of regulation—leading to migrant and local workers being employed in two separate labour markets within the same city. Governments tend to have less regulation for migrant workers, protecting them less than local workers. For this reason, employment and wage formation for migrant workers are determined mainly by market forces. Since the mid 980s, migrant workers have been the major components of labour flows between urban and rural areas and across regions. We can take this group of workers as those whose behaviour was the first to be marketised in China. The following features of migrant workers could reflect the mechanism of labour market integration across regions.

First of all, as mentioned, migrant workers have already been the major component of the urban labour market. Rural-to-urban migration began in the 1980s, and since then migration has continued to increase. On the one hand, this has been because a fast-growing economy creates increasing labour demands in non-agricultural sectors; on the other hand, the urban labour market tends to be friendlier to migrant workers. Since China's entry into the World Trade Organisation (WTO), the labour-intensive industries in which China possesses international competitiveness have grown, intensifying the demand for the agricultural labour force. As Table 1 demonstrates, migrant workers in the urban labour market provide an important human resource that supports rapid economic growth. In 2006, migrant workers accounted for 46.7 per cent of total employment in urban areas. Therefore, it makes sense to understand regional labour market integration through the examination of employment and wage levels for migrant workers.

Table 1   Number of Migrant Workers in the Urban Labor Market

Year	Migrant workers [1] (thousand)	Urban employment [2] (thousand)	Ratio（1/2, %）
2000	78,490	212,740	36.9
2001	83,990	239,400	35.1
2002	104,700	247,800	42.3
2003	113,900	256,390	44.4
2004	118,230	264,760	44.7
2005	125,780	273,310	46.0
2006	132,120	283,100	46.7

Sources: The size of the migrant workforce from National Bureau Statistics (NBS), various years (a). *Yearbook of Rural Household Survey*, China Statistical Press. Data on urban employment are from NBS, various years (b). *Yearbook of Labor Statistics in China* (various years), China Statistical Press.

Secondly, the wage rates of migrant workers are a good indicator of the relation between the supply of and demand for labour. Despite informal employment, the market mechanism plays an active role in migrant workers' employment determination and wage formation. Relative to that for urban residents, the market for migrant workers is more flexible. In particular, institutional factors intervene less in wage formation. Therefore, it is useful to analyse labour market integration across different regions from the perspective of the wage inequality of migrant workers.

Finally, migrant workers mobilise across regions frequently. In the beginning of the reform period, society was sensitive to migration from the country to the city, and disputes arose about how best to judge migration. Labour mobility across regions did, however, reflect the fact that migrant workers were responsive to market signals while the most concentrated areas of migrant workers had always been the ones with fast growth rates and strong labour demands. Meanwhile, migrants moving back and forth between their place of work and their home towns pass market information to one another, which helps to inform new entrants into the labour market. Labour mobility across regions is the premise for labour market integration. It is migration that makes labour market integration possible.

4. Convergence of wages among regions

As one of the key outcomes of labour market reform, the wage rate is the most important indicator available to observe the interaction between labour markets of different regions. Similarities and differences are evident in research on labour market integration and on the product market or the capital market. If wages converge between regions, the trend implies a process of labour market integration that is similar to the integration of the product market, reflected by the law of one price. There is, however, a certain degree of uniqueness in each labour market, particularly when discussing integration. Hiring or firing is often an issue of political economy, which means that changes in the price of labour tend not to be reflected immediately in the market. The market for migrant

workers undergoes dramatic shifts about the time of Chinese New Year, when it is often considered important to adjust labour allocation for the coming year. For this reason, annual data on product markets, rather than quarterly, monthly or even weekly data, could be more helpful for understanding why there are regional movements of migrant workers.

Depending on the availability of data, two possible methods are employed when exploring wage changes and labour market integration. First of all, analysis on long time series among various labour markets explores whether the link exists between markets. When price changes in one market are reflected in another market, the two markets are regarded as integrated. Based on this idea, Robertson (2000) studied the impact of NAFTA on labour market integration between the United States and Mexico in border areas. Secondly, we can also take advantage of data that reflect long-term trends in labour markets and apply the law of one price. Since the migration flow between markets eliminates the wage difference, the convergence of wages between markets will eventually reflect market integration when controlling the disparity caused by individual characteristics.

There are advantages and disadvantages when applying the two methods above. The time series analysis is useful for observing the dynamics of the labour market, although long time series data are not usually rich in individual information. As is the case with China, the long time series data between various markets are not currently available and won't be in the near future. Therefore, it is all but impossible to analyse regional labour market integration in China based on such an idea. The disadvantage of cross-sectional data with short time series is obvious: it is hard to observe long-term trends in short periods. When, however, the individual characteristics are controlled in the wage equation, we can exclude the impact of individual factors on wage inequality and observe the role of regional factors more precisely.

In our previous study, we used aggregated wage data on sub-sectors in manufacturing to analyse the deviation of average wages by province and found that markets were integrated between regions (Cai and Du 2004). Although industrial factors that affect wages are controlled, the study cannot reflect the impact of purely regional effects since, with aggregated data, it is impossible to control individual characteristics. Hence, we take advantage of data at a micro level and expect to observe impacts of regional factors on labour market integration since China's WTO entry.

Data

Data in this paper were collected by the Research Center of Rural Economy, in the Ministry of Agriculture. In the past decade, the centre has fixedly surveyed 20,000 households distributed through 300 villages. In each household, a basic form was filled in that included information such as level of education, age, gender and health status. Since 2003, a complementary labour survey has been done in order to gain more information about labour migration. From the individuals surveyed, we can gain information about the destinations in which migrants go to work. Combining the household and individual data, we can gain information on individual characteristics, wages and working

places so we can begin to understand the impacts that geographic factors have on wage inequality.

Inequality measures and decomposition: regional effects

In general, the disparities of individual earnings can be attributed to factors in three categories. The first is individual characteristics, including human capital, and demographic characteristics such as age and gender. The second is industrial and occupational features. Even in industrialised countries, where labour markets functions very well, earning disparities between industries exist persistently: that is, workers in different industries with similar individual characteristics can earn different incomes. The last factor is regional. Regional disparities do not easily disappear when labour mobility between regions does not occur. As we saw before, the market mechanism plays an active role in the market for migrant workers and the industrial and occupational distribution of migrant workers concentrates in a few industries and occupations. It is therefore plausible to explore the role of regional effects of market integration when individual features of particular markets are controlled.

As Table 2 shows, the wages of migrant workers have converged in recent years. No matter which inequality measure was applied, we find that wages were more equal in 2006 than in 2003. Theil entropy went down from 0.27 to 0.1 96 and the Gini coefficient went from 0.374 to 0.332; the other general entropy and Atkinson indices also decreased. Percentage ratios showed that the gap between the top 1 0 per cent and the bottom 0 per cent was slightly smaller in 2006 than in 2003, which could be a result of more protection for migrant workers in recent years. Despite the decreasing trend in income inequality indices, there is a need to look further into the role of geographic factors in inequality, which should be found by inequality decomposition.

Table 2   Income Inequality Measures: 2004~2006

	2003	2004	2005	2006
Percentile ratios				
p90/p10	4.469	4.444	4.436	4.232
p90/p50	2.083	2.222	2.096	2.081
p10/p50	0.466	0.500	0.472	0.492
p75/p25	2.143	2.143	2.013	2.083
General entropy				
GE(-1)	0.299	0.285	0.236	0.232
GE(0)	0.240	0.226	0.192	0.189
Theil	0.270	0.246	0.204	0.196
GE(2)	0.436	0.377	0.282	0.258
Gini	0.374	0.360	0.334	0.332
Atkinson indices				
A(0.5)	0.119	0.110	0.093	0.091
A(1)	0.214	0.202	0.175	0.172
A(2)	0.374	0.363	0.321	0.317

Source: Authors' calculations.

The data we use in this paper include information on distribution of destination provinces, so we can simply decompose those decomposable inequality measures as inequality within provinces and inequality between provinces. Table 3 presents the decomposed inequality measure of general entropy by province. It is evident that, in general, inequality within provinces dominates inequality between provinces, regardless of which index of general entropy is considered. For example, about 90 per cent of Theil entropy came from within provincial factors and 0 per cent was between province factors in 2003; and the shares were 93.4 per cent and 6.6 per cent respectively in 2006. The table also indicates that the share of regional factors fluctuates instead of monotonically decreasing. Therefore, we cannot infer that the labour market is more integrated based simply on such decomposed results, because it is possible to correlate some regional factors with individual characteristics—for example, more-able people are more capable of migrating to a place with high wage rates.

Table 3   Inequality Decomposition by Provinces: General Entropy

		2003	2004	2005	2006
GE(-1)		0.299	0.285	0.236	0.232
	Within	0.275	0.258	0.223	0.219
	between	0.024	0.027	0.012	0.013
GE(0)		0.240	0.226	0.192	0.189
	Within	0.215	0.197	0.18	0.176
	between	0.025	0.029	0.012	0.013
Theil		0.270	0.246	0.204	0.196
	Within	0.244	0.215	0.191	0.183
	between	0.027	0.031	0.013	0.013
GE(2)		0.436	0.377	0.279	0.258
	Within	0.407	0.342	0.268	0.245
	between	0.029	0.035	0.011	0.013

Source: Authors' calculations.

To further explicate the components of income inequality, we will decompose those decomposable indices based on regression of earnings of income determinants. According to Shorrocks (982), the inequality indices can be expressed as a sum of weighted incomes:

$$I(\mathbf{y}) = \sum a_i(\mathbf{y}) y_i \qquad (1)$$

In this equation, $I(\mathbf{y})$ is the total inequality index—such as Theil entropy, Gini coefficients and coefficients of variation—and y_i is the income of individual i and $a_i(\mathbf{y})$ is the weight applied to every individual, which varies with choice of indices. In the regression equation, every regressor contributes to inequality. The symbol s^k is the contribution of factor k, which is an explanatory variable or is residual to the total income inequality.

$$s^k = \frac{\sum_{i=1}^{n} a_i(\mathbf{y}) y_i^k}{I(\mathbf{y})} \qquad (2)$$

Since y_i^k in Formula (2) is determined by coefficients of the explanatory variables and the magnitude of x_i^k, the income inequality based on regression can be decomposed as:

$$s^k = \hat{\beta}_k \left(\frac{\sum_{i=1}^{n} a_i(\mathbf{y}) x_i^k}{I(\mathbf{y})} \right) \qquad (3)$$

Following Morduch and Sicular (2002), in this paper we decompose Theil entropy and the index can be decomposed by sources based on regression results that are presented in Table 4.

$$I_{TT}(\mathbf{y}) = \frac{1}{n} \sum_{i=1}^{n} \frac{y_i}{\mu} \ln(\frac{y_i}{\mu}) , \qquad (4)$$

Therefore, the component of each source of inequality is expressed as:

$$s_{TT}^k = \frac{\frac{1}{n} \sum_{i=1}^{n} y_i^k \ln(\frac{y_i}{\mu})}{\frac{1}{n} \sum_{i=1}^{n} y_i \ln(\frac{y_i}{\mu})} \qquad (5)$$

Table 4　　Regression Results of Linear Wage Equation: 2003~2006

	2003	2004	2005	2006
Years of schooling	37.63	29.66	20.11	34.94
	(3.08)	(3.17)	(3.27)	(2.71)
Gender (1= male)	197.44	197. 86	54.33	231.78
	(15.96)	(15.56)	(15.81)	(13.84)
Age	10.41	10.02	6.93	9.35
	(0.71)	(0.69)	(0.69)	(0.60)
Self-reported　health Status	-59.97	-74.94	-17.37	-108.19
	(12.72)	(12.70)	(13.30)	(11.21)
Provincial dummies	yes	yes	yes	yes
R^2 (adj-R^2)	0.13	0.15	0.061	0.12
	(0.12)	(0.15)	(0.056)	(0.12)
No. of observations	8372	7986	6040	10094

Notes: Standard errors in parentheses. Health status is self-reported in five ranks, which one is healthier than five.
Source: Authors' calculations.

Regression based decomposition

A linear earning regression model is used in this paper to facilitate decomposition of inequality measures.

$$E_i^t = \alpha_0^t + \alpha_1^t edu_i^t + \alpha_2^t sex_i^t + \alpha_3^t age_i^t + \alpha_4^t heath_i^t + \sum_{j=1}^{29} \beta_j^t d_j^t + \varepsilon_i^t \qquad （6）$$

where the left-hand side variable is monthly earnings of a migrant, and the first four right-hand side variables are individual characteristics, including years of schooling, gender, age and self-reported health status. Except for an error term, the last two terms include the sum of provincial dummies. Unlike typical earnings equations using a log of wages as a dependent variable, for the purpose of decomposing the inequality index—such as Theil entropy—we sacrifice the advantage of a semi-log equation since the main goal in this research is to look at the role of geographic factors in wage inequality, instead of returns to human capital. Table 4 presents some of the regression results on individual characteristics; the provincial dummies are not included in order to save space, while the effects of specific provinces are not of interest here. The regression results are generally consistent with traditional predictions: that is, educated, healthy, male and aged labour have a relatively better economic performance in the labour market.

Table 4 provides the basis for wage inequality decomposition. According to Equation 4 and Equation 5, combining the information in the right-hand side variables, it is possible to decompose Theil entropy into regional effects, which are the sum of provincial effects, individual effects, constants and residuals. The results are presented in Table 5. Our main interest in this paper is to look at the contribution of regional factors to general inequality measures when individual characteristics are controlled. In 2003, 28 per cent of wage inequality could be explained through regional factors, while the share was 20.3 per cent in 2006 (Table 5). A monotonic decreasing trend of regional inequality is also found during the years since China's WTO entry. Although only a few observations are available due to a very short time series, the first row of the table tells us that regional labour markets have been integrated, at least for migrant workers.

Table 5   Theil Decomposition Based on Regression

Components of inequality	2003	2004	2005	2006
Theil Entropy	0.270	0.246	0.204	0.196
Regional factors (%)	28.08	26.10	22.84	20.31
Individual factors (%)	-63.88	-52.92	-33.03	-44.49
Constant (%)	-11.16	-26.22	-60.89	-41.06
Residual (%)	146.96	153.04	171.08	165.24
Total (%)	100	100	100	100

Source: Authors' calculations.

The results of inequality decomposition are also consistent with some other observations. The shortage of unskilled workers, for example, was first

reported in coastal areas and then passed on to other parts of the country. The same pattern was found in changes of wage rates, which increased significantly in coastal areas first and then transmitted to the interior (Cai and Du 2007). Those stylised facts indicate that employment and wage information are passed on across provinces through migration flows, which is the basis of an integrated labour market.

5. Conclusions

China's employment expansion has kept pace with its unprecedented economic growth in the reform period. After accession to the WTO, China's reform and opening up has not only continued, it has intensified in a way that is consistent with globalisation. By breaking up the iron rice-bowl in urban employment policy and eliminating a series of hukou-related institutional barriers deterring labour mobility, more jobs have been created and more labourers now migrate from rural to urban sectors. Furthermore, as a result of substantial increases in employment in rural and urban China and a decline in the working-age population, labour shortage is becoming an issue for the labour market. All those changes have created necessary institutional and structural conditions for labour market integration and the analysis of wage convergence of migrant workers has proven that the Chinese labour market has in fact moved towards integration.

Labour market reform is, however, far from complete. In addition, the coming Lewisian turning point further challenges institutional reforms. Abolition of the various institutional obstacles that hinder the development of a labour market will not only enhance migration flows, they will make it a rational movement, by helping to create the developmental climate and job opportunities for labour mobility, which in turn matures the conditions for abolitionoftheabolition of the hukou system. The Chinese government, which has specific development goals for the next 0–20 years, should grasp every opportunity to push institutional reforms and to encourage labour migration once its importance is further realised.

In the course of China's dual-economy development, modern urban economic sectors expand rapidly and attract mass labour migration from rural to urban areas, supplying an inexhaustible labour force to urban sectors at a low cost. Thanks to the unlimited supply of labour, migrant workers in urban sectors have neither collective bargaining power for their wage determination, nor can they influence the labour market policies of local governments. At the development stage, therefore, rural-to-urban migrants confront a host of institutional obstacles, among which is the hukou system, dividing the rural and urban labour market. Legitimised by the hukou system and its resulting discriminatory institutions, local governments often blame urban employment pressure on competition from migrant workers and hence form a policy orientated towards discriminating against migrants, cycling in accordance with the fluctuation of the employment situation in urban labour markets (Cai et al. 2003). Every time labour mobility from rural to urban areas experiences systematic obstruction by government policy, migrant workers have no choice but to return to contracted land or other family businesses in their home villages,

which serve as a pool that cyclically absorbs the rural surplus of labour.

This Chinese-style wage-sharing system causes labour migration to be temporary, instability of off-farm income for rural households and persistence of a rural–urban income gap. Only when the relationship between supply of and demand for labour changes in an inverse direction against the long-standing figures can these above-mentioned problems be solved. In the histories of most industrialised countries, the moment when systematic labour shortages occurred became a turning point in which the employer–employee relationship improved. Furthermore, at this point, income inequality tends to decline and government policymakers and legislators tend to favour ordinary workers. As international experience suggests, however, if governments are incapable of making sound policy choices, even when they understand the requirements of the next phase of economic development, it is likely that the discriminatory institutions of the dual economy will continue. If such discrimination against ordinary workers continues, it will leave the working class severely disgruntled and could lead to fierce social conflict[2].

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[2] Korea in the late 1980s is an example that a majority of the conditions necessary for institutional changes satisfying ordinary workers matured, but the changes were not made, so the society experienced severe conflict between the government and the working classes (Freeman 1993).

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