

Regional Labor Market Integration since China's WTO Entry: Evidence from Household Level Data

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1. Introduction

For an economy in transition, development of market is both a signal to successful transition and a premise to a sustainable way of economic growth. The development and integration of labor market is one of the key components to indicate the development of market system. Despite wide acknowledgement of success in China's market-oriented reform, there are disagreements on the actual effects of marketization, especially on the degree to which markets integrate among regions. For instance, reforms of production factor markets, especially of labor market and capital market, have been considered as a backward arena relative to, for example, reform of commodity market (Lardy, 1994, pp. 8-14). There are also scholars who believe that the market segmentation has become severe as a result of decentralization in the reform process. They argue that although decentralization rectified the concentration of decision-making and resources allocation, it also generated a "border effect" – something presented among independent economies, among administratively-divided regions, thus preventing labor markets of regions from integrating into a national one (Poncet, 2001, 2003; Young, 2000). Others suggest that as the Chinese reform deepens the degree of marketization, including the regional integration of markets of production factors, increases. (Fan and Wang, 2001; Wang and Fan, 2004; Fan et al., 2003).

Labor market integration is a historical concept. Studies on economic history show that

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during the era of pre-industrialization, even in now-developed countries, labor markets were not integrated because of low factor productivity and limited regional mobility. The procedure of labor market integration with industrialization goes from local labor market to regional labor market and then to national labor market (Rosenbloom, 1990, 1997). The process is outcome and requirement of improvement of market mechanism.

In addition to spontaneous forces of marketization, outside shocks could also be sources to encourage labor market integration. For example, common market in Europe promotes labor market integration between member countries of European Union. Another example is the impact of North American Free Trade Agreement (NAFTA) on integration, which integrates the labor market in border areas of United States and Mexico (Robertson, 2000).

China's transition from an administered labor system to a labor market is unique, not only because it is the largest one in the world, but also because it has adopted a Chinese styled gradual approach. One, it has been carried out in a way combining incremental and stock reforms, whereas the incremental reform approach is dominant. Two, economic globalization has stimulated the process of labor market integration. Three, the move towards a labor market is joined by transformation from dual economy to an integrated economy.

When China is reaching its turning point of labor shortage, the step of labor market integration has been sped up. By integrating into the global division of labor, China has been producing labor-intensive products for the world and accepting the world-wide opportunities of employment. As a result, more than 100 million rural laborers migrated to urban jobs, and mass laid-off and unemployed have been reemployed by the economy with high growth rates. With economic development, resources endowment in China is being restructuring which implies a historical turning point coming. According to population prediction, a desirable population structure that has brought about demographic dividend in the past three decades will disappear in the next ten years. Population dependent ratio, which is the ratio of population below 16 and above 64 with respect to those who aged between 16 and 64, will stop decreasing and start increasing. When comparing the growth rates of labor force with other countries, we will find out that China will have no advantage on labor supply in the next two decades. Even the change does not happen in one night but take a few years; it is good to make hay while the sun shines. In fact, the outcome of demographic changes has already

appeared on labor market. Labor shortage spreads from coastal areas to the rest of the country indicated the end of era of unlimited labor supply and Lewisian turning point is coming. That is also a driving force of labor market integration as competition for both skilled and unskilled workers will intensify the labor mobility.

This paper tries to prove the integration of labor market promoted by economic reform, opening-up, and transition of dual economy. Next section we explain how labor market develops and integrates in the three courses of transition, that from planned labor system to market-based labor allocation, from closed economy to increasingly globalized one, and from dual economy characterized by unlimited labor supply to a Lewisian turning point. Section 3 briefly introduces the characteristics of migration workers on urban labor market. Section 4 empirically proves how the wage of migrant workers converges as an evidence of labor market integration. Labor market in China has taken two ways of development. First is the expansion of non-public sectors has absorbed laborers out of planning system – namely, non-public sectors employed migrant laborers and turned-over workers from state-owned and collective enterprises. Second is the competition from non-public pressures SOEs to reform their employment system and the state to deregulate labor market. All those aspects of reform tend to promote labor market integration, with an additional force of labor becoming shortage. By employing statistical method and household level data, we tested the effects hypothesized here. Section 5 concludes with suggestions for further reform of labor market.

2. Labor Market Integration as Reform, Opening-up and Growth Move On

Like other related institutional arrangements in China, labor policy under the planned system resulted in two kinds of inefficiency. First, the inherent lack of labor supervision and lack of an incentive mechanism in the micro-management system led to low technical efficiency. Second, the distorted allocation of labor, capital and other resources among regions and sectors led to low allocative efficiency. Accordingly, the subsequent incentive mechanism and allocation system reforms have improved both technical and allocative efficiencies, and become dominant drivers of the high economic growth which has occurred during the post-reform period in China. Changes in labor policy have played an important role during the

whole process of reform, directly and indirectly contributing to the efficiency improvement.

China's gradual institutional changes embodied two initiatives – a “bottom-up” one and a “top-down” one. In the first case, once the political climate at large began to change, producers who had previously suffered from the strict constraints of the old system and who could see the potential of the new system, gave up the old and chose the new.. In the second case, while the government perceived the way in which the old institution 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 labor markets in China came about in the same way: as a first initiative, the implementation of the Household Responsibility System unleashed rural laborers from engagement in only the agricultural sector, and in turn they started migrating across villages and towns and even provinces. When a large number of the migrant workers found jobs in urban sectors, competition began between the state-owned sector and the non-state sector, forcing the former to consider a reform of the labor recruitment and hiring system. In part as a response to this, and in part to the problem of low productivity, the government gradually relaxed its labor policy. Since policy-making is, after all, a function of government and since it is a decisive force in the liberalization of a labor market, the intention and the extent of reform of government labor allocation-related policies will determine the pace of labor 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 both 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, but must also be restrained by the costs and benefits from this change. The terms cost and benefit here can refer to both economic and political effects. Increasingly deepened reform brings about an expansion the market as a principle force allocating resources. To avert conflict between traditional government means and market forces, the Chinese government has duly adjusted its policies in response to market development. Labor policy reforms have depended directly on the extent of overall market maturity. While on the one hand development of the labor market makes up a key part of the economic reform as a whole, on the other hand it goes only as far as the reach of the

overall reform. As discussed above, during the process of labor policy reform, the Chinese government and other players interacted with each other by following the rationale of political economy. As part of marketization, the reform of labor policy and the implantation of other related reforms are preconditional to each other. Following this framework, this paper intends to narrate and analyze the process of labor policy reform.

As discussed above, during the process of labor policy reform, the Chinese government and other players interacted with each other by following the rationale of political economy. As part of marketization, the reform of labor policy and the implementation of other related reforms are preconditional to each other. Following this framework, the deregulation of labor mobility has been mainly embodied in rural-to-urban migration, characterized as gradual abolition of *hukou* system.

The gradual reform of *hukou* can be characterized by a bottom-up process since the beginning of the 21st century - that is, relaxation of *hukou* control starts from small towns and gradually extends to medium-sized and big cities. The *hukou* reform in over 20 thousand small towns is characterized by “minimum criteria and complete opening-up”. After years of experiment in some regions, in 2001, Ministry of Public Security initiated action of reforming *hukou* system in small towns. In most small towns the minimum requisition for receiving local *hukou* is that the applicants have permanent source of living and legal housing in the locality. This is considered as a great and complete step in *hukou* reform ever since the system was formed in 1958. The *hukou* relaxation in some medium (even some large and provincial capital) sized cities is characterized by “abolishing quota and conditioned entry”. Threshold for settling in those cities with *hukou* status has been substantially lowered. This approach to reform *hukou* system meets the needs of maturing labor markets and corresponds to gradualism. The *hukou* relaxation in super large cities like Beijing and Shanghai is characterized by “lifting up the threshold and opening the gate”. Those cities have turned on green lights for inviting intellectuals and professionals, whereas imposing stricter criteria for ordinary migrant workers to come. In short, lifting the threshold means narrowing the door. 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 privatization of housing distribution system, and the changes of employment policies and social security system. These reforms have reduced the costs of migrating to, working and living in cities. In the late 1990s, while the urban employment "iron-rice-bowl" was broken, rural workers began to enter the urban labor market at a mass scale. It is becoming more common and much easier for rural laborers to seek work and live in cities, even though the *hukou* system still functions. In short, labor mobility motivated by reforms of *hukou* system and other institutions deterring migration is not only an important part of the economic development, but also a significant process of the economic transition towards market force. This transition has been preconditioned by the reforms in a much wider sphere. As the result of the reform in this aspect, the allocation of labor force across sectors and among regions becomes more and more based on market forces. The characteristics of migration in transitional China reflect on and lie in that of the entire marketization as a whole.

In the process of demographic transition – from a pattern characterized by high death rate, high birth rate and low growth rate of population, through a pattern characterized by low death rate, high birth rate and high growth rate of population, to a pattern characterized by low death rate, low birth rate and low growth rate of population, the time difference between the declines of birth rate and of death rate leads to form three phases of age structure characterized by high dependence ratio of children, high proportion of working population, and high dependence ratio of the elderly, respectively (Williamson, 1997). During the period between the earlier decline in death rate and the lagging decline of birth rate, natural growth rate of population persistently climbs up and the share of dependence youth in total population increases accordingly. As fertility rate begins to fall, the share of working age population increases in a lagging pace of about twenty years of time. The further drop of fertility rate will lead to a slower growth in population and the population will become aging. Therefore, two sequential inversely U-shaped curves respectively for natural growth rate of population and for growth rate of 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 the continuing increase in the share of working age population and gained demographic dividend from the productive population structure.

This demographic dividend translated from success in demographic transition has been capitalized on through reform of resources allocation mechanism and the comparative advantage of labor-intensive products has been realized by China's integrating into the economic globalization, and thus, the phenomenon of diminishing return to capital has been deterred by the extra source of growth. In the past more than one-fourth century of reform and opening in China, while the total volume of international trade of the world has rapidly expanded, the trade volume of China has increased in a much faster rate. The China's share of commodity imports and exports in the world total enhanced from only slightly over 1 percent in the early 1980s to more than 6 percent in 2004. The high revealed comparative advantage in labor-intensive commodities clearly links the trade expansion to China's advantageous population structure (Yue, 2001; Batra and Khan, 2005). The worldwide allocation and flows of international capital make it possible for China to utilize more efficient capabilities of resources allocation from outside investors and to fill up its twin gaps of domestic savings and foreign exchange at the early stage of reform and opening-up. Taking total dependence ratio as proxy of the advantageous population structure, in the period between 1982 and 2000, each 1 percent decrease in the dependence ratio led to a 0.115 percent of growth in per capita GDP; that is, the decline in total dependence rate 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 rate will persist at a subsistence level until the expanding modern sector exhausts the surplus labor. As a consequence of emerging labor shortage, the competition for labor force inevitably leads to a rise of wage in the modern sector and in turn in agriculture, and relationship between wage rate and productivity in agriculture becomes close to what economics expects (Watanabe, 1994). That is, once the demographic transition moves to a new stage, the Lewisian turning point characterized as transitioning from unlimited labor supply to labor scarcity will lead to the increase of wage rate and hence labor costs. The stimulation of increase in wage when Lewisian turning point comes is competition for unskilled workers among employers, sectors and regions, which leads to a more integrated labor market.

3. Migration Workers on Urban Labor Market

Due to dual economic system implemented in China for a long time, there exists significant segmentation between the rural and the urban labor market. The two markets have different level of regulation, which leads to migration workers and local workers working in two labor markets even within the same city. It is obvious that governments tend to have less regulation for migration workers and protect them less than local workers. For that reason, the employment determination and wage formation of migration workers are mainly determined by market forces. Since the middle of 1980s, migration workers have been the major components of labor flow both between the urban and the rural areas and cross regions. We may take this group of workers as those whose behaviors were firstly marketized in China. The following features of migration workers could reflect the mechanism of labor market integration cross regions.

First of all, as mentioned, migration workers have already been the major component of urban labor market. Rural to urban migration began in 1980s, since then the size of migration has kept increasing. On the one hand, this has been because fast growing economy creates more and more labor demand in non-agricultural sectors; on the other hand, urban labor market tends to be friendlier to migration workers. Since China's WTO entry, labor intensive industries that China possesses international competitiveness have further grown, which intensify the labor demand for agricultural labor forces. As table 1 presents, migration workers in urban labor market have already been the important source of human resources to support fast economic growth. In 2006, migration workers accounted for 46.7 percent of total employment in urban areas. Therefore, it makes sense to observe regional labor market integration by looking at employment and wage of migration workers.

Table 1 Size of Migration Worker in Urban Labor Market

Year	Migration Workers ¹ (thousand)	Urban Employment ² (thousand)	Share (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 migration workers from National Bureau Statistics, *Yearbook of Rural Household Survey* (various years), China Statistical Press. Data on urban employment are from National Bureau Statistics, *Yearbook of Labor Statistics in China* (various years), China Statistical Press.

Second of all, wage rates of migration workers are good indicator to reflect relations between labor demand and labor supply. Despite of informalized employment, market mechanism plays active role on migration workers' employment determination and wage formation. Relative to urban residents, market of migration workers is more flexible. In particular, wage formation is less intervened by institutional factors. Therefore, it is good to believe that analyzing the wage inequality of migration workers is an effective angel to observe labor market integration across regions.

Finally, migration workers mobilize across regions frequently. At the very beginning of the reform, the society was sensitive to rural to urban migration, and there existed disputes about how to judge migration. However, labor mobility across regions did reflect the fact that migration workers are responsive to market signals while the most concentrative areas of migration workers have always been ones with fast growth rates and strong labor demand. Meanwhile, migrants move back and forth between hometowns and destination places and pass the market information to each other, which let those new entrants to labor market make good use of such information. Labor mobility across regions is the premise to labor market integration. It is migration that makes labor market integration possible.

4. Convergence of Wages among Regions

As one of the key outcomes of labor market, wage rate is the most important indicator to observe the interaction of different labor markets among regions. Similarity and difference coexist between researches on labor market integration and on product market or capital market. If wage converge between regions, the trend implies a process of labor market integration which is similar to integration of product market reflected by *Law of One Price*. However, there is its uniqueness on labor market when talking about the process of labor market integration. Hiring or firing is often an issue of political economy, which leads to that

changes of labor price can not be reflected on the market immediately. As per market of migration workers, the pass of labor market signals with seasonality is indicated by huge labor flow before and after Chinese New Year when is often taken as important timing to adjust labor allocation in the coming year. For that reason, in contrast to quarterly, monthly, even weekly data are used for product markets, annual data on migration workers could be used for analysis on their decision, especially on regional choice.

Depending on the availability of data access, two possible ways are employed when exploring wage changed and labor market integration. First of all, analysis on long time series among various labor markets explores whether the conductibility exists among markets. When price changes on one market are reflected on another market, the two markets are regarded as integrated. Based on such an idea, Robertson (2000) studied the impact of NAFTA on labor market integration between United States and Mexico in border areas. Second of all, we can also take advantage of data that reflect long term trend on labor market 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 good to observe the dynamics of labor market although long time series data is not usually rich for individual information. As per China, the long time series data among various markets is not available currently but also for the future, so it is nearly impossible to analyze regional labor market integration in China based on such an idea. The disadvantage of cross section data with short time series is obvious because it is hard to observe long term trend in short period. However, when the individual characteristics are controlled in 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 analyze deviation of average wage by province and found an integrating labor market among regions (Cai and Du, 2004). Although industrial factors that affect wage are controlled, the study can not reflect the impact of pure regional effects since the aggregated data is impossible for controlling individual characteristics. Hence, we take advantage of data at

micro level and expect to observe impacts of regional factors on labor market integration since China's WTO entry.

Data

Data in this paper were collected by Research Center of Rural Economy, Ministry of Agriculture. In the past decade, the Center has fixedly surveyed 20,000 households that distributed in 300 villages. In each household, a household form is required to fill in, which includes basic information of every household member, such as educational attainment, age, gender, health status, etc. Since 2003, a complementary labor survey has been done in order to get more information on labor migration. In the individual forms, we can get the information of destination places where migrants work. Combining the household data and individual data together, we may get information on individual characteristics, wages, and working places so that we can take advantage of the survey to look at the impacts of geographic factors on wage inequality.

Inequality measure and decomposition: regional effects

In general, the disparities of individual earning could be attributed to factors in three categories. The first one is individual characteristics including human capital and demographic characteristics such as age, gender etc. The second one is industrial and occupational features. Even in developed countries where labor market functions very well the earning disparities between industries exist persistently, that is, workers in different industries with similar individual characteristics are possible to make different incomes. The last one is regional factors. The regional disparities are not easy to disappear when labor mobility between regions does not happen. As we know before, market mechanism plays very active role on market of migration workers and the industrial and occupational distribution of migration workers concentrates in a few industries and occupations, therefore, we think it is plausible to explore the role of regional effects when individual features get controlled.

As table 2 shows, wages of migration workers converge in recent years. No matter what

inequality measure is applied, we may find that wages are more equal in 2006 than in 2003. Theil entropy went down from 0.27 to 0.196 and Gini coefficient from 0.374 to 0.332, so as the other general entropy indices and Atkinson indices. Percent ratios show that the gap between top 10 percent and bottom 10 percent slightly smaller in 2006 than in 2003, which could be a result of more protection for migration workers happening in recent years. Despite of the decreasing trend of income inequality indices, there is need to further look into the role of geographic factors on 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

The data we use in this paper include information on distribution of destination provinces. So we may simply decompose those decomposable inequality measures as inequality within province and inequality between provinces. Table 3 presents the decomposed inequality measure of general entropy by province. It is evident that in general

inequality within province dominates inequality between provinces no matter which index of general entropy is considered. For example, about 90 percent of Theil entropy came from within provincial factors and 10 percent was from between province factors in 2003, and the shares are 93.4% and 6.6% respectively in 2006. The table also indicates that share of regional factor fluctuates instead of monotonically decreasing. Therefore, we may not infer that the labor market is more integrated simply based on such decomposed results because some regional factors are possible to correlate with individual characteristics, for example, more able persons are more capable migrating to a place with high wage rates.

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

To further explicate the components of income inequality, we will decompose those decomposable indices based on regression of earnings on income determinants. According to Shorrocks (1982), the inequality indices could be expressed as sum of weighted incomes,

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

Where $I(\mathbf{y})$ is the total inequality index such as Theil Entropy, Gini Coefficients,

Coefficients of Variation etc, and y_i is the income of individual i and $a_i(\mathbf{y})$ is the weight applying to every individual which varies with choice of indices. In the regression equation, every regressor contributes to inequality. s^k is the contribution of factor k , which is explanatory variable or residual, to the total income inequality.

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

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

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

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

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

and the component of each source of inequality is expressed as:

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

Regression based decomposition

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

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

Where the left hand side variable is monthly earning of 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 earning equation using log of wage as dependent variable, for the purpose to decompose inequality index, such as Theil entropy, we sacrifice the advantage of semi-log equation since the main goal in this research is to look at the role of geographic factors on wage inequality instead of returns to human capital. Table 4 presents some of regression results on individual characteristics and provincial dummies are not included in order to save space while the effects of specific provinces are not our interests here. As shown in the table, the regression results are generally consistent with traditional predictions, i.e., educated, healthy, male and aged labor had a relative better economic performance on the labor market.

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

	2003	2004	2005	2006
Years of schooling	37.63 (3.08)	29.66 (3.17)	20.11(3.27)	34.94(2.71)
Gender (1= male)	197.44 (15.96)	197.86 (15.56)	54.33 (15.81)	231.78(13.84)
Age	10.41 (0.71)	10.02 (0.69)	6.93(0.69)	9.35(0.60)
Self-reported Health Status	-59.97 (12.72)	-74.94 (12.70)	-17.37(13.30)	-108.19(11.21)
Provincial dummies	yes	yes	yes	yes
R ² (adj-R ²)	0.13 (0.12)	0.15 (0.15)	0.061 (0.056)	0.12(0.12)
No of obs	8372	7986	6040	10094

Note: standard errors in the parenthesis. Health status is self-reported in 5 ranks, which are the lower the better.

Table 4 provides basis for wage inequality decomposition. According to formula (4) and (5), combining the information of those right hand side variables, it is possible to decompose Theil Entropy into regional effects, which are the sum of provincial effects, and other effects, which are sum of individual effects, constant, 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. As shown in the table, in 2003 there was 28% of wage inequality could be explained by regional factors while the share was 20.3% percent in 2006. 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 still tells us that regional labor markets have been integrated at least for migration workers.

The results of inequality decomposition are also consistent with some other observations. For example, the shortage for unskilled workers was firstly reported in costal areas and then passed to other parts of country. The same pattern was found on changes of wage rates, which was significantly increased in the coastal areas first and then transmit to inner areas (Cai and Du, 2007). Those stylized facts indicate that employment and wage information are passed on across provinces through migration flows, which is the basis to integrate labor market.

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

5. Conclusion

China's employment expansion has kept paces with its unprecedented performance of economic growth in the reform period. After the accession of WTO, China's reform and opening-up not only continue, but also intensify in a way consistent with globalization. By breaking up iron-rice-bowl in urban employment policy and eliminating a series of *hukou*-related institutional barriers deterring labor mobility, more jobs have been created and

more laborers migrate from rural to urban sectors. Furthermore, as the result of substantial increase in employment in rural and urban China and decline in working age population, labor shortage is becoming a general trend of labor market. All those changes have created necessary institutional and structural conditions for labor market integration and the analysis on wage convergence of migrant workers proved that the Chinese labor market tends to be integrated over time.

The labor market reform, however, is 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 labor markets will not only enhance migration flows, but also make it a rational movement, by helping create the development climate and job opportunities for labor mobility, which in turn matures the conditions for *hukou* reform. The Chinese government, who has planned specific development goal for its next 10-20 years, should grasp every opportunity to push institutional reforms and to encourage labor migration once its importance is further realized.

In China's course of dual economy development, urban modern economic sectors rapidly expand and attract mass labor migration from rural to urban areas, supplying inexhaustible labor force to urban sectors at a very low cost. Thanks to the unlimited supply of labor, the migrant workers at urban sectors could neither have collective bargaining power on their wage determination, nor influence labor market policies made by local governments. At the development stage, therefore, rural-to-urban migrants confront a host of institutional obstacles, among which is *hukou* system dividing the rural and urban labor market. Legitimized by *hukou* system and its resulting discriminatory institutions, local governments often impute urban employment pressure to the competition from migrant workers and hence form a policy orientation discriminating against migrants, cycling in accordance with the fluctuation of employment situation in urban labor market (Cai, Du and Wang 2003). Every time when labor mobility from rural to urban areas experiences systematic obstruction by government policies, migrant workers have no other choice but to return back to contracted land or other family business in their home village, which therefore serve as a pool that cyclically reservoirs rural surplus labor force.

This Chinese-style wage sharing system causes temporariness for labor migration,

instability of off-farm income for rural households and persistence of rural urban income gap. Only when the relationship between supply of and demand for labor changes in an inversed direction against long-standing instance, can conditions solving those problems mentioned above mature. In the histories of most developed countries, the moment when systematic labor shortage happened often became a turning point, at which employer-employee relationship tends to improve, income inequality tends to reduce and the government policy-making and legislations tend to be in favor of ordinary workers. However, international experiences suggest that if governments are incapable of making a sound policy option by temporizing with the requirements of the coming stage, the discriminatory institutions against ordinary workers formed under dual economy would continue, leading to severe disgruntlement by working class and even resulting in fierce social conflict².

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

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