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Changing Patterns of the Floating Population in China during 2000-2010*

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Abstract

Using data from the 2000 and 2010 Chinese Population Censuses and applying a consistent definition of migration, this paper examines changing patterns of China's floating population during 2000-2010. We find that during the first decade of the 21st century, there have been significant changes in China's floating population, as reflected in continuing rise of interprovincial floating population and the rise of the floating population in China's western and interior regions, geographic diversification of destinations for the floating population, a major increase in interprovincial return migration, and significant improvement in education and occupational profiles among the floating population. We argue that these patterns are driven by a combination of complex domestic and international factors, including the newly released Labor Law, removal of agricultural tax, the western China development program, increased investment in education by the Chinese government, and the global financial crisis. We also discuss several challenges facing the floating population in the coming years, which include equality of educational opportunity for migrant children and adequate housing and social welfare protection for the floating population. Finally, we reflect on the future of migration research in China.

China is once again on the move in the first decade of the 21st century. The dramatic increase in China's migrant population in recent decades is an extremely significant demographic process for China and the whole world. The migrant population has also been capturing recent mass media headlines. From the heart-breaking reports of serial suicides in Foxconn factories to unpaid wages for migrant workers, from the shortage of migrant labor to the massive return migration during the global financial crisis and the Chinese New Year, migration stories are everywhere (Chan, 2010; Han, 2009; Johnson, 2013; Liang, 2013).

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In an earlier paper published in this journal (Liang and Ma, 2004), we used data from the 2000 Chinese Population Census to describe major patterns of China's floating population. In the years since then, several fundamental changes have taken place that changed the international and domestic context for China's migrant population. Major policy changes in China include the following. In 2003 China began to waive agricultural tax which makes farming more profitable than before. In 2008, China passed a new Labor Law that provides more protection for Chinese workers, including migrant workers in the form of formal labor contract, fair wages, and other labor rights. Related to this are rising wages for workers and consequently the rising cost of labor from employers' perspective. During this time period, China was also undergoing a major educational expansion, with higher proportions of national GDP being invested in education. As a result, we anticipate the educational profile of migrant workers will improve over time. However, the picture of the international economy has been quite gloomy and the demand for Chinese goods has declined, especially since 2008 when the global financial crisis began. In the early days of the recent global financial crisis, many factories in southern China were shut down, which is clearly related to the employment situation of migrant workers. This also provides impetus for return migration of migrant workers. Taken together, these factors set the broad domestic and international context within which to examine and update on China's floating population using the most recent population census data.

The 2010 Chinese Population Census also captures China's floating population at a very important moment in history. The urbanization rate in 2010 in China was just about to cross the 50% threshold thanks to the large volume of rural-urban migrants. The reform of China's *hukou* system has become a top agenda for policy makers for both local government and the central government. Many discriminatory policies against migrants have been dismantled. Thus we may expect a significant improvement in the well-being of migrant workers in the first decade of the 21st century.

An added benefit of analyzing China's 2010 census data is that a better understanding of China's migrant population can also help us understand other demographic behaviors and how to conduct the next census. For example, a full enumeration of the Chinese population is often hindered by the lack of understanding of locations of migrant population. A good measure of recent fertility also depends on measuring fertility and spatial distribution of the migrant population.

In this paper, we aim to provide a broad and up to date overview of China's floating population in 2010. We use data (both published data and micro-level data) from the 2000 and 2010 Chinese Censuses to examine changing patterns of China's floating population. Given there are significant modifications in the way the 2010 census was conducted, we first highlight these changes to the extent they are related to migration measures. Following our earlier paper (Liang and Ma, 2004), the current paper will focus on five aspects. First, we describe long-term patterns of floating population during 1982-2010 and we are especially keen to make sure identical definitions are used in different data sources. Thus our discussion of volume of floating population may deviate from what is often published in the mass media. Second, we identify spatial (provincial) and temporal variations in floating population and examine the extent to which these patterns are driven by China's economic

development patterns. Third, we capitalize on the simple question on reasons for migration to reveal changing patterns of migration over the decade. Fourth, given the recent rise in return migration, we explore trends of interprovincial return migration in China. Finally, we discuss changing educational and occupational profiles of the floating population. The article ends with discussions of broad implications from our analysis and findings and future of migration research in China.

1. Overview of the 2010 Chinese Census: Continuities and Changes

Like the 2000 census and the 2005 China 1% Population Sample Survey, the 2010 Chinese census was conducted on November 1. The date was selected to maximize the response rate during census. The 2010 census collected similar information as the 2000 census: basic demographic information on sex, age, marriage, fertility, migration, mortality as well as questions on household registration (*hukou*) status, education, and occupation. Compared to the 2000 census, the 2010 census added questions on self-rated health for individuals 60 and over, reflecting a growing focus on the health of an increasingly large elderly population. For the first time in the Chinese census history, the 2010 Census collected data on international migrants/non-Chinese citizens, reflecting a trend that China is attracting international visitors with longer stays/immigrants as the Chinese economy continues to reach new highs.

Several other changes in the 2010 census also deserve attention. Perhaps the most important change is that everybody must be registered at the current place of residence at the time of census. In practice, this includes two groups of people: (1) individuals who resided in the census location the night of October 31 but not registered there and (2) individuals who did not reside in the census location on the night of October 31 (regardless of how long he/she has been away or for whatever reason), but officially registered in the census location (OCCSC, 2010, p. 37; PCO, 2012, p.2357). If we look at this definition more carefully, we realize this will create problems for migration researchers. The first issue is that there will be double counting for migrants; migrants are counted in both migrant origin and destination. The second issue is that it creates inconsistency in definition of migrants as compared to the 2000 census. According to officials from the National Bureau of Statistics of China, the main reason for this change is that the criterion used in the 2000 census to identify migrants resulted in under-reporting. This is because the 2000 census criteria to identify migrants include duration of residence, i.e. to be counted at the migration destination, migrants need to have stayed at the destination for at least 6 months.¹ In some cases, migrants avoided to be counted by simply saying that they had not stayed more than 6 months (Cui, 2009). In other cases, migrants simply do not remember accurately how long they have lived in the destination. Because of this change in the 2010 census, when we look at the increase in the floating population, it should also be due to improvement in the coverage for migrant population in the 2010 census. The second most important change in the 2010 census is that

¹As for the potential double counting issue, officials from the National Bureau of Statistics of China reported that adjustments were made once questionnaires were returned to the data processing center in Beijing. To make the migration data consistent with the 2000 census, only migrants who have stayed at places of destinations for 6 months and longer are retained for all data processing, including the production of 4-volume tabulations from the 2010 Chinese Population Census. Interviews with Census Bureau Official, June 20, 2013 in Hangzhou. Zhejiang province.

key migration questions (place of household registration, place of current residence, and reasons for not residing in place of household registration) are asked in both short-form and long-form questionnaires (OCCSC, 2010). In the 2000 census, migration information is only obtained from individuals who answer the long-form questionnaire.

With respect to information on migration, the 2010 census retains key questions on migration: place of usual residence 5 years ago, reasons for migration, *hukou* status (to identify floating population), duration of absence from place of household registration, and place/province of birth (which can be used to study life time migration and return migration). Although the question on reasons for migration is retained, categories of reasons of migration have changed. The category of job assignment used in the 2000 census has been eliminated. Instead this is merged with the category of “job transition/transfer” in which job assignment is one of the several subcategories within the general category of “job transition/transfer” (OCCSC, 2010). This is mainly because of the old system of job assignment, a system in place during the period of 1980-2000 for college graduates, was pretty much non-existent by 2010.² The fundamental impetus behind this change is that the government wants the market to play the dominant role in the job search process for college graduates instead of the government.

In addition, a new category of reasons for migration is adopted: *jigua*, which does not have the exact English translation. To translate it literally, it means “*hukou* is temporarily hanging in there.” It refers to situations where individuals are temporarily registered in a location but actually do not reside there for various reasons. Typically we define a person as a member of the floating population when a person resides in a location where he/she is not registered. *Jigua* describes a new kind of household registration status in China in recent years. For example, college students are often registered in the location of the college as collective household (*jiti hu*). They are supposed to move their household registration to the place of employment once they get jobs. Many universities allow college graduates to keep their household registration in the university while college graduates are looking for jobs. But very often these graduates got jobs in another location and still did not move their *hukou* to the new location. Another scenario is related to the new location. Another scenario is related to a new trend in housing development. As China's housing price continues to rise, many urban residents see housing as a major investment. As a result many households own more than one apartment. A person who is registered in the location of one apartment may actually live in another apartment in a different location (Cui, 2009; Cui et al., 2013).

Our analysis relies mainly on the following questions contained in the census: if individuals are registered in the current location of residence, reasons for migration, and the usual place of residence 5 years ago. One of the challenges of studying migration in China is the issue of definition. In discussion of migration in China, the most frequently used term is “floating population (*liudong renkou*).” For example, after completion of China's 2010 Population Census, the National Bureau of Statistics of China announced that China's floating

²The initial policy of not doing job assignment for college students (including 3-year colleges) was first announced in 1996 and has been gradually implemented since then. See document from China's Ministry of Human Resources at (<http://www.edu.cn/20041123/3121285.shtml>), (accessed January 20, 2014).

population reached 221 million. So what is floating population? To understand floating population, we need to have a basic understanding of China's household registration system (the *hukou* system). China implemented the household registration system in the late 1950s as a means to prevent and control rural to urban migration. An individual is officially registered in one location. The location of household registration is also related to benefits and privileges. For example, an individual with urban household registration is entitled to job, health care, pension, unemployment benefits, and access to local public schools for his/her children. Although there have always been migrants who obtained local household registration, the overwhelmingly dominant pattern of migration in the last three decades is the increase in floating population, i.e. migrants who went to locations where they are not officially registered. In this paper, we define floating population as people who are residing in a location that is different from their place of household registration. Unless otherwise noted, we also focus on inter-county floating population as intra-county floating population is often the result of residential mobility which deserves a separate paper to study. In addition, to be counted as floating population, migrants have to have stayed at the place of destination for at least 6 months.

Our data come from tabulations of the 2010 Chinese Population Census (NBS, 2012), tabulations from the 2000 Chinese Population Census (NBS, 2002), and micro-level data samples from the 2000 and 2010 censuses. From the data collection point of view, one major difference between the 2010 Chinese Census and the 2000 Chinese Census is that the 2010 Census counts people who are in locations at the time of census (November 1, 2010), but the 2000 Census counts people who are in the place of usual residence (*changzhu di*). However, we should note that for study of migration, tabulations from the 2010 Chinese census contains only migrants who have stayed at migrant destination for at least 6 months, making it consistent with migration definition from the 2000 Chinese Census.

2. The Continuing Rise of the Floating Population in China

Data from the 2010 Chinese Census show that China's floating population rose to 221 million by 2010 (PCO, 2012). This is roughly about 17% of China's population in 2010. In other words, about 17% of Chinese population resides in locations that they are not officially registered. It should be noted this 221 million floating population includes three categories of migrants: (1) interprovincial cross-county floating population, (2) intraprovincial cross-county floating population, and (3) intraprovincial within county floating population. However, if we want to compare data from the 2000 census, we should focus on the first two categories. Figure 1 shows the trend of inter-county floating population from 1982 to 2010.³ The top curve shows the trend of floating population using unadjusted floating population size of 221 million in 2010. Restricting only to inter-county floating population, we have 170.6 million floating population in 2010, as compared to 78.76 million of inter-county floating population observed in 2000. Thus inter-county floating population increased by nearly 100 million during the first decade of the 21st century.

³Note that for 1982 and 1990 censuses, to be counted as members of the floating population, migrants have to stay at destinations for a minimum of one year. For subsequent censuses, a 6-month criterion is used. The size of the floating population for 1980 and 1990 would be larger if identical definition is used.

Figure 2 and figure 3 place China's floating population in a comparative perspective, by comparing across time and comparing with two other countries: a developed country of the United States and the other country of Brazil which is in a similar stage of economic development to that of China. Between 2000 and 2010, the share of inter-county floating population has nearly doubled, from 6.34% to 12.80%. If we include both inter-county and intra-county floating population, the proportional share of floating population will be 17.36% (see unadjusted bar chart on the left). Alternatively, if we use the 5-year interprovincial migration measure, we see that the results are less dramatic, namely the 5-year interprovincial migration during 2005-2010 is 4.61%, as compared to the 5-year interprovincial migration rate of 2.74% during 1995-2000. Thus, no matter what measures of migration we use, the increase in migration in China during the first decade of 21st century is very striking.

To place China's migration story in a larger international context, we calculated 5-year interprovincial/inter-state migration for China, the United States, and Brazil around the same time period.⁴ Figure 3 reveals that 5-year interprovincial migration for China is considerably larger than that of Brazil, a country that is in a similar stage of economic development measured by GDP per capita. However, 5-year interprovincial migration in China is more than 4 percentage points below that of the U.S. This suggests that the population in the United States is still more mobile than that of the population in China as far as inter-provincial/inter-state migration is concerned. Given China's population size, China continues to have the largest migrant population in the world, whatever measure we use.

Table 1 shows the size of floating population by province, along with the proportion of intraprovincial and interprovincial migrants within the floating population. To be consistent with the definition of the floating population in the 2000 census, we use 1/1000 micro-data sample from the 2010 census to make adjustment to exclude intra-county floating population.⁵ Thus Table 1 and other tables and maps in this paper are concerned with only inter-county floating population, unless otherwise noted. The regional distribution of the floating population is also captured by Map 1 which uses data from Table 1. Map 1 shows it clearly that places with high proportional concentration of floating population are either in coastal regions or China's northern and northwestern provinces. While the high concentration of the floating population in the coastal regions is an old story, the high proportion of the floating population in Northern provinces, especially in Xinjiang and Inner Mongolia deserves more attention. Both provinces have high proportion of ethnic minority

⁴Several factors went into our consideration of comparisons on migration. One is that most countries do not have a *hukou* (household registration system), so it is not possible to compare China's floating population with migration in another country. Second, it is also important to realize that countries to be compared need to be of relatively similar sizes in geography. Third, given similar sizes in geography for each country, the most meaningful comparison is probably 5-year inter-provincial/inter-state migration because this is available in censuses in most countries.

⁵For each province, we first calculated the proportion of intra-county floating population in the total provincial intra-provincial floating population using the 1‰ micro-data of the 2010 Census. Then, we deducted a proportional number of intra-county intra-provincial temporary migrants from the total intra-provincial floating population in the census tabulations to get the approximated number of inter-county intra-provincial floating population. It should be further noted that since the provincial distribution of intra-provincial temporary migrants is adjusted to exclude intra-county floating population, the total number of intra-provincial floating population as appeared in the bottom of Table 1 and the provincial distribution of the total number of floating population also reflect this adjustment.

populations. When examining the riot in Xinjiang in 2009 and subsequent unrests, we must be mindful of this increased proportion of floating population (most of whom belong to the majority group Han) in Xinjiang. We note that for China as a whole, 50% of the floating population is interprovincial; however, for Xinjiang 60% of the floating population is interprovincial (see Table 1). In addition, according to Appendix 1, for both 2000 and 2010, about 60% of interprovincial migrants to Xinjiang come from three provinces: Sichuan, Henan, and a neighboring province Gansu (also see SRGONNDB, 2012).

Map 2 further depicts the changing patterns of inter-county floating population during 2000-2010. Despite the large size of floating population along the coastal regions, it is the western and central China that saw large growth rates in floating population because the floating population in these places was relatively small in 2000. As for the growth rate of interprovincial migration (shown in Map 3), two regions saw spectacular growth rates, the Yangtze River Delta region and two provinces (Inner Mongolia and Qinghai) with a large population of minorities and rich natural resources and energy. For example, Inner Mongolia has the second largest coal reserve behind Shanxi province. Likewise, Qinghai province has rich mineral resources and its economy has been stimulated by the opening of the very popular Qinghai –Tibet railroad line in 2006.

In an earlier paper that examines the patterns of China's migration over the decade of 1990-2000, we noted a major pattern that characterizes that decade: interprovincial migration increased from 38% in 1990 to 54% in 2000 (Liang and Ma, 2004). However, during the decade of 2000, a fundamental shift has taken place: interprovincial migration proportion has declined to 50% by 2010 from 54% in 2000 (see Table 1). The magnitude of 4% decline may not seem so dramatic, but it signals a major change that is taking place in China and it deserves special attention from migration scholars. We also note that interprovincial migration continues to be slightly more important than intra-provincial migration, but its significance has declined. This rise in floating population within each province reflects two factors: growing economic opportunities within each province and increasing residential mobility in Chinese cities.⁶

Map 4 presents the growth patterns of inter-county and intraprovincial migration by province. Again, western and central China, and part of the northeast, witnessed some of the largest increases. This finding is corroborated by the declining significance of intraprovincial floating population in the two coastal regions: the Pearl River Delta (a drop from 16.5% in 2000 to 9.5% by 2010) and the Yangtze River Delta (a decline from 14.9% in 2000 to 11.6% by 2010) (see Table 2). Two major policy initiatives are particularly worth noting: one is the western China development strategy that involves huge investments in infrastructure in western China, which is the main migrant-sending region for a long time (Naughton, 2003). The second policy initiative is the strong emphasis on building a “harmonic society” (*hexie shehui*) in an effort to reduce inter-regional inequality and income inequality in general.

⁶We note that our measures of interprovincial and intraprovincial floating population are stock measures, namely these migrants moved any time before respective census year.

3. Changes in Reasons for Migration

Like the 2000 Chinese Census, the 2010 Chinese Census also contains information on reasons for migration. Thus we can examine changes in reasons for migration between 2000 and 2010. We should note that the definition of reasons for migration is not entirely consistent across the two censuses. For the 2000 census, the question asked is reasons for migration to the current location. For this question, individual migrants with or without local household registration should answer. But for the 2010 census, the question is phrased mainly for individual migrants without local household registration: reasons for leaving place of household registration. To be consistent across two censuses, we only tabulated reasons for migration for the floating population (excluding migrants who obtained local *hukou*).

Some similarities and differences emerge from our analysis. First, there is a sharp difference in reasons for migration for interprovincial and intraprovincial floating migrants. In both 2000 and 2010, for interprovincial migrants, about three quarters of them migrated because of manual labor or factory jobs. In 2010, a much lower (about 37%) intraprovincial migrants reported “manual labor or factory jobs” as reasons of migration, as compared to 48% in 2000. The pattern is remarkably consistent across the two time periods. However, there are other noted differences between the two time periods. For intraprovincial migrants, nearly 21% of floating migrants reported migration because of education and training, which more than doubles the percentage of migrants who reported the same reasons of migration 10 years earlier. A similar pattern is observed for interprovincial migrants, but the difference is less striking. If we translate the 21% into the actual numbers of migrants, that leads us to the finding that, in 2010, nearly 26 million of individuals left their place of household registration for the purpose of education and training.⁷ This is in large part consistent with China's recent efforts to expand educational opportunities for both college and graduate education. From 2000 to 2010, the total number of yearly college student admissions has increased from 2.21 million to 6.57 million.⁸ China's investment in education follows a similar path, from 2.87% of GDP in 2000 to 3.66% of GDP in 2010.⁹ The expansion of college education opportunities has relieved some pressure for the job market, but perhaps more importantly it has helped train China's labor force to be more competitive in the global economy.

Also important is the increasing proportion of migrants who reported “migration as dependents” as reasons of migration. It was 11.48% in 2000 and rose to 12.53% by 2010. This is very consistent with predictions from migration theory. The conventional migration theory suggests migration often begins with adult individuals and then as migrants' jobs stabilize and gain more economic footing, they will gradually bring family members (spouse

⁷It should be noted that there was a major policy change in 2003 that currently enrolled college students are no longer required to change their *hukou* to locations of enrolled universities. Some reports suggested as high as 80% of college students do not transfer their *hukou* to locations of universities. Details see http://hlj.xinhuanet.com/news/2011-11/06/c_131231526.htm (accessed February 10, 2014).

⁸Information on college student enrollment can be found at <http://edu.people.com.cn/n/2013/0503/c116076-21359059.html> (accessed January 16, 2014).

⁹Data on China's education investment are from: for 2000: <http://finance.ifeng.com/news/special/2012lianghui/20120306/5708223.shtml> for 2010: <http://www.chinanews.com/edu/2011/12-31/3575516.shtml> (accessed January 16, 2014).

and children). One challenge with this increasing trend is the issue of education of migrant children, which we will discuss more later.

Another finding is the increase in the job transfer category for both interprovincial and intraprovincial migration. To the extent job mobility/transfer indicates the degree of marketization of China's labor market, it is a healthy sign of development for the Chinese economy.

4. Changing Spatial Distribution of China's Floating Population

Using inter-county floating migration rate, we know that about 12.8% of China's population reside in counties that are not counties of their household registration. There is also a major variation across different provinces. China's three major autonomous municipalities have a very high proportion of floating population. The highest rate of floating migration is observed in Shanghai with 42% of Shanghai's population not residing in their places of household registration (this includes both interprovincial floating population and intraprovincial cross county floating population). Among other provinces, the largest floating population is found in Guangdong province, with 31 million floating population. Guangdong has been China's long-term leader in absorbing floating population. Places with the lowest level of floating population are found in provinces with low levels of economic development or remote locations: Tibet, Henan, Hebei, Anhui, Heilongjiang, and Jilin.

The most dramatic change in spatial distribution of floating population is found in destination choices of interprovincial floating population. Here we discuss the two most important regions in China: the Pearl River Delta (PDR) region (Guangdong province) in southern China and the Yangtze River Delta (YRD) region (Shanghai, Jiangsu, and Zhejiang) along China's east coast. Since the unit of analysis in this section is at provincial level, we use PDR and Guangdong province/region interchangeably for this paper. For as long as we know about China's floating population since the late 1970s, the PRD has the highest concentration of factories that supply goods for the world market and has the largest floating population of any province. Table 2 reveals that in 2000, 35.5% of China's interprovincial floating populations chose to live in Guangdong province as compared to 22.1% of the floating population lived in the YRD region. By 2010, however, the pattern just reversed: with 25% of interprovincial floating population reside in PRD and 33% of them live in the YRD. This shift toward YRD can also be observed from the perspective of migrant-sending provinces such as Sichuan. Appendix 2 details this pattern for five migrant-sending provinces. In 2000, 41% of interprovincial migrants from Sichuan went to PRD. By 2010, only 29% of interprovincial migrants from Sichuan went to PRD. In contrast, 16% of interprovincial migrants from Sichuan went to YRD in 2000 and the percentage increased to 28% by 2010. Clearly YRD has become a much more desirable destination than PRD for interprovincial migrants from Sichuan. The same thing can be said about interprovincial migrants from Henan and other provinces as seen in Appendix 2.

What this also implies is that these two regions are now the most important regions to attract interprovincial migrants. This is reflected in the fact that 57% of interprovincial migrants went to these two regions in 2000 as compared with 58% in 2010. Despite the fact that the

order of importance of the two regions has switched during the 10 years, the combined impact of these two regions remains the same!

In fact, this shift in destination from the PRD region to the YRD region was already observed in 2005 and has been increasingly more pronounced over time (Ma and Wang, 2010; Ma et al., 2013; Wang and Pan, 2013). Ma et al. (2013) argued that the main challenge in Guangdong is the persistent inequality between Southern Guangdong and Northern Guangdong, whereas the diffusion process of economic development is more rapid and intraprovincial inequality is much less in the YRD than the PRD region. Here we use recent large-scale surveys of migrant workers in these two locations to give us some clues about this shift. Professor Liu Linping of Nanjing University conducted major surveys of migrant workers in PRD and YRD in 2010 and Table 3 provides systematic comparisons of these two locations. On average, migrant workers in PRD work 57 hours a week, two hours more than workers in YRD. In addition, 71% of migrant workers in PRD work over time as compared to 61% in YRD. Surprisingly, despite the fact that migrant workers in PRD work more hours and are more likely to work over time, they actually earn less than migrant workers in YRD. Another indicator of quality of life, the average living space, is actually smaller for migrant workers in PRD than in YRD. All things considered, one would expect YRD would be a more attractive location for migrant workers than PRD. Migrants simply vote on their feet.

Data from the 2010 census also reveal different characteristics of migrants in these two regions as revealed in Appendix 3. For education profile, migrants in PRD show a very high proportion with junior and senior high school education (80%), whereas education of migrants in YRD shows some level of polarization. For occupation, both PRD and YRD have a large share of migrants in manufacturing occupations, but a larger share of migrants in YRD than PRD are engaged in sales and service. Perhaps reflecting more desirable working conditions, higher salary, and longer term of job tenure (as reported by Liu (2011)), migrants in YRD tend to have a longer duration of stay than that of migrants in PRD.

Given the importance of these two regions, we also explore changes in migrant origins among interprovincial migrants to these regions. We examine the top 3 migrant-sending provinces for these two regions over the 10-year period. Migration network theory would predict increasing migration from the same province, which may lead to increased proportional share of migrants from the same province (Massey et al, 1994). We do see some evidence of this, namely that for PDR, the top-3 migrant-contributing provinces remain the same over the decade: Hunan, Guangxi, and Sichuan. For YRD, both Anhui and Sichuan are among the top 3 over the time period. However, the well-known migrant-sending regions see their shares in the migrant population in these two regions declined. This is especially the case for Anhui province, its share of interprovincial migrants in YRD declined from 37.1% to 29%. This decline in sending interprovincial migrants from Anhui to YRD is compensated by the increase of interprovincial migrants from China' Henan province. What is also noticeable is that Sichuan province's share in interprovincial migrants in these two regions has declined. For example, the share of Sichuan origin migrants among floating population in PRD has dropped from 18.8% in 2000 to 12.1% in 2010 (not shown in

tables). This is consistent with the trend of interprovincial return migration to Sichuan (more discussion on this in next section).

5. Return Migration and the Transformation of Rural China

During the decade of 2000, another significant development in migration is the increase in interprovincial return migration. Here we use the 2000 data to measure interprovincial return migration from Guangdong to Sichuan (one of the most important migrant-sending provinces in China): individuals with Sichuan *hukou* lived in Guangdong during 1995, but returned to Sichuan province by the time of the census on Nov. 1, 2000. Return migration is somewhat difficult to define because some return migrants can re-migrate later. But the current definition dictates that these return migrants have already stayed in Sichuan province for at least six months (to be counted in the survey or census). We should also note that a substantial proportion of return migrants are not returning to villages but rather returning to the nearby towns or cities in Sichuan province or Hunan province in our case.¹⁰

One major finding on return migration from Table 5 is that there has been a dramatic increase in return migration from 1995-2010 as the cases of Sichuan and Hunan province illustrate. Using identical definitions of return migration, the number of return migrants from Guangdong to Sichuan province increased from 28,000 to 89,000 during the two census periods. The same story is equally dramatic for another major migrant-sending province of Hunan (from 28,000 to 157,000 interprovincial return migrants). Given the dramatic increase in floating population between 2000 and 2010, it is important that we also consider the rate of return migration over time. Our results show that, for Sichuan province, interprovincial return migrations from Guangdong to Sichuan during 1995-2000 and 2005-2010 are 1.88% and 3.27% respectively. For Hunan province (which sends the largest number of interprovincial migrants to Guangdong), interprovincial return migrations from Guangdong to Hunan during 1995-2000 and 2005-2010 are 1.61% and 4% respectively.¹¹

We note again that our measure only captures return migrants who were in Guangdong in 2005 and returned to Sichuan in 2010. But there are clearly migrants who were in Guangdong in 2006, or 2007, or 2008, or 2009, and returned to Sichuan by 2010. Taking all these years into consideration, our estimate is that return migrants from Guangdong to Sichuan during 2005-2010 are about 445,000. This is of course for one province only; the magnitude of interprovincial return migration for other migrant-sending provinces combined would be even more significant.

So what account for such a sharp increase in interprovincial return migration over this time period? We argue there are several major factors that can be linked to the rise in

¹⁰It also should be noted that our measure of return migration is a conservative measure of actual return migration flow. For example, our measure does not capture return migrants who were in Guangdong in 2006 but returned to Sichuan by 2010. Likewise, our measure also misses migrants who were in Guangdong in 2007 and returned to Sichuan by 2010. In addition, we also calculated return migration using place of birth instead of *hukou*. In other words, we estimated these return migrants who were born in Sichuan, lived in Guangdong in 2005 but returned to Sichuan by 2010. The birth place based measure of return migration is larger than *hukou*-based measure of return migration. To be consistent with definition of floating population for other tables, we retain the use of *hukou*-based measure of return migration.

¹¹We thank one reviewer for making the suggestion of calculating interprovincial return migration rate from Guangdong to Sichuan and Henan. Detailed methodology for this procedure is available from the authors upon request.

interprovincial return migration in the 2010 census. One is the central government policy with respect to agriculture production. Price for agriculture product saw a significant increase in this period. By some account, from 2003-2004, grain price rose by 40% (Wang, 2005). Another policy announced in 2003 would reduce and eliminate agriculture related taxes and further subsidize grain producing households and households with needs of purchasing farming related machines (Wang, 2005). All measures tend to make farming more profitable than before. A second government initiative, called the Western Development Project (WDP), started in 2000. The goal of this WDP is to stimulate economic development and reduce income disparity between western China and other parts of China. There was a huge amount of investment. During the first two years between 2000 and 2001, there was a budgeted investment of 400 billion Yuan (approximately US\$62.5 billion) (Naughton, 2003). Infrastructure is at the core of this WDP program. For example, investment for the 2001 budget period includes 70 billion Yuan for highways and 27 billion Yuan for railroads. The WDP certainly provides ample employment opportunities for local peasants, but also establishes the important perhaps necessary conditions that encourage more return migrant entrepreneurs.

Second, like immigrants in other parts of the world, the global financial crisis since 2008 also affected the economic well-being of internal migrants in China. Chan (2010) reported in the major migrant destination of Guangdong province, due to a lack of demand, the closure of factories reached a record of 62,000 in 2008. The shutdown of many factories led to the rise of unemployment of migrant workers to 16% in early 2009. Such a clumsy economic context forced many migrants to return home. Some return migrants came back later when the economy began to recover and others never came back. It was reported there were 20 million workers lost jobs in China and many of them were migrants who return home after losing jobs (LaFranier, 2009). The large number of shutdown factories is clearly bad news for workers. Ironically, this all happened at the time when Wang Yang (the governor of Guangdong province at the time) promoted his policy of “empty the cage to change the birds”, a policy to upgrade manufacturing, from labor- intensive to capital-intensive.¹²

Finally, return migration is a significant development in China as many local governments in migrant-sending provinces designed policies to attract return migrant entrepreneurs (Chunyu et al., 2013; Murphy, 2002). Return migrant entrepreneurs also stimulate return migration of other migrants as they can now get jobs near their hometowns (these factories are typically located in towns close to their hometown villages). Another silver lining of this recent development is that migrants can now reunite with their families and take the responsibility of taking care of their children who tend to be neglected when migrants are away. In one of the towns in Jintang county of Sichuan province in western China, where we have been conducting fieldwork for the past 5-6 years, the county takes a very proactive approach to attract return migration entrepreneurs. In the last few years, the county government sent high-level officials to Guangdong province to organize meetings with successful migrants from this county to explain favorable policies for business formation and to encourage return migration. As a result, many migrants have decided to return. The

¹²This policy is elaborated in the following document first announced in 2008 for Guangdong province: <http://baike.baidu.com/view/919531.htm?fr=aladdin> (accessed January 20, 2014).

county government has set aside a big piece of land for newly established factories. They call this is “Special Development Zone for Return Migrant Entrepreneurs”. The county's goal is to become the capital of shoe-making industry in southwestern China. The county's new development program also takes advantage of recent changes in China. One is Chinese government's Western Development Program which has built basic infrastructure that is necessary for business to operate in that part of China. Another development is the steady rise of salary level for migrant workers in coastal China. Factory owners who face rising salary pressure and reduced demand for goods due to global financial crisis also need to find new business opportunities. For them, western China is a good choice because the labor cost is reasonable and infrastructure has significantly improved as part of WDP.

6. Improved Education and Occupational Profiles of the Floating Population

China's floating population has drawn worldwide attention because of its enormous size and connections with China's economic model, and also because of the plight of social and economic conditions of these workers. Migrant workers are known to be engaged in 3 D jobs (dirty, difficulty, and dangerous), earn lower wages, and endure poor housing conditions (Roberts, 1997; Solinger, 1999; Wang et al., 2002; Yang and Guo, 1996). The dark reality of social and economic inequality facing migrants in China is due to a large part to institutional barriers because of no local household registration status in the cities (Meng and Zhang, 2001; Wang et al., 2002). In 1995, the city of Beijing approved and passed 10 documents/policies to monitor, control, and manage the lives of migrants in terms of employment, household registration, apartment/house rental, business operation, family planning, household/person service, and fee collections for business (Zhou, 1996). A 1995 Beijing city document explicitly lists the following jobs as eligible only to individuals who have local *hukou*: managers in finance and insurance companies, accountant, cashier, service staff in star-rated hotels, telephone operator, and warehouse staff (Bai and Song, 2002). Meanwhile, in recent years, many provinces/cities have experimented with different versions of *hukou* reform with an aim to treat migrants equally. In 2003, on a visit to Chongqing, the former Premier Wen Jiabao personally got involved in demanding employers to pay unpaid and delayed wages for migrant workers (CCTV, 2003). In 2004, the State Council issued a document that calls for treating migrant workers and local *hukou* residents equally in employment (State Council, 2004). The 2004 State Council document also called for more programs to facilitate organized migration, including skill training and employment agencies. In 2007, migrant children from Beijing's migrant sponsored school took a center stage to perform at CCTV's Chinese New Year's celebration in February. Overall, the first 10 years of the 21st century saw a favorable political climate, from public media's attention to major government policy changes. Therefore we anticipate migrant workers' social and economic profile during the decade should improve.

Table 6 first presents changes in the educational profile of inter-county migrant workers during this period.¹³ As we expected, the educational attainment for migrant workers in the

¹³We note that education is defined slightly differently in the two censuses. One difference is that the 2000 census has an education category of “literacy class”, i.e. this is mainly informal education for people to learn how to read. We decided to combine two categories of “no formal schooling and literacy class” together.

age group of 15-64 has improved significantly. The proportion of migrants with an education level of junior high or senior high rose by 3% from 17.61% in 2000 to 20.57% in 2010. This group of migrants supplies the bulk of the workforce for China's manufacturing and export industries.

The improvement in access to higher education is even more impressive. In 2000, the education profile of migrants is dominated by junior high school and below with three quarters of migrant workers having an education level at or below junior high school. Only about 1.5% of migrants have a 4-year college degree. By 2010, more than 10% of migrants have 4-year college education. This is a significant departure from 10 years earlier.¹⁴ The increase in 3-year college education among migrants is even more pronounced. It is no longer accurate to characterize China's migrant population as simply uneducated workforce.

Improved level of education for migrants reflects the improvement in education across the board, rural and urban, as government invested more in higher education (including adult education programs) during the decade of 2000s. The yearly number of enrolled college students rose from 2.21 million in 2000 to 6.57 million in 2010 (See endnote 7 for source of information). At the same time, the proportion of investment in education out of total GDP has risen to 3.66% in 2010 from 2.87% in 2000 (See endnote 8 for source of information). Needless to say that China's GDP has grown tremendously during this time period, thus the increased proportion of GDP in education resulted in a much larger amount of investment in education as compared to earlier years. We should also note this improvement in education profile among the floating population is consistent improvement in education among total Chinese population. Similar to the case of floating population, the proportion of the Chinese population with education level of at least three years of college has risen to nearly 12% in 2010 from only 5% in 2000 (see Appendix 4).

To show that this improved education profile applies to migrants of all ranks, we selected only these migrants who reported reasons for migration as "manual labor or do business." The results reveal again that the proportion of having some college education and above has more than doubled during the decade: from 2.24% in 2000 to 6.4% in 2010.

This major improvement in education among migrant population is certainly welcoming news for China's work force as China is engaged in upgrading its industries and move up the value chain (Peng, 2011). It also resonates with recent media and scholars' attention to the issue of the new generation of migrant workers in China (FSMBONPFC, 2011). This "new generation of migrants" refers to migrants who were born after 1980. Scholars argue that this new generation of migrants differs from earlier generations of migrants in several key aspects. They are more educated and their migration journeys are often not out of desperation or escaping poverty but are more driven by ambition and a new way of life. This group also includes some second generation who were born in cities of their parents' migrant destination and some college graduates as well. Most of this new generation of

¹⁴We note that Duan et al. (2013b) reported a lower percentage (15.04%) of people with 3-year college or above among the floating population. However, Duan et al.'s calculation includes migrants who are 6-14 years old and migrants who are older than 65 years old. Thus inclusion of those two groups of individuals will certainly lower the education profile of their sample of the floating population.

migrants will stay in cities no matter what, as few of them have the experience of working on the farm, a fact that urban policy-makers should be aware of.

Improvement in education among migrants is accompanied by improvement in occupational attainment. We begin with an overall assessment of changes in occupational segregation by migration status using a widely used measure of occupational segregation index (White, 1986). This segregation index measures the proportion of migrants included in the calculation that would have to move to different occupations in order to produce a distribution that matches that of the non-migrant population. Overall, occupational segregation has declined significantly from 67.3 in 2000 to 53.01 in 2010.¹⁵ This decline in occupational segregation is also attributable to policy changes such as the 2004 State Council document and the overall more open and more tolerable political and social climate toward migrants in China (DFPSMONFPC, 2010). This decline in occupational segregation is indicative of the gradual openness of the Chinese labor market for the floating population.¹⁶ By the same token, it is also indicative of the declining significance of *hukou* in the Chinese labor market. Recent empirical findings are consistent with this general declining inequality between migrant workers and local residents but still reveal newly emerging pattern of inequality (Lu and Wang, 2013).

Further analysis of occupational distribution in the middle panel of Table 6 confirms this. As we had expected, the main pattern of occupational distribution shows a continuing clustering of migrants in manufacturing jobs, but the proportion in this category has declined from 53% in 2000 to 46% in 2010. The decline in the manufacturing jobs for migrants is compensated by the increase in high-prestige jobs such as government officials, professionals, followed by clerks and sales and service jobs. Perhaps the most striking pattern is a sharp increase of migrants in professional occupations (a jump to 9% in 2010 from 4% in 2000).

Although it is comforting to learn migrants' improved occupational attainment, there are certainly issues of concern as well. Using the 2010 census data, Figure 4 shows that migrants worked much longer hours than local residents, 50 hours per week for migrants as compared to 44.6 hours per week for local residents. Table 3 reveals the work hours are even longer (57.41 per week) in a recent survey in the Pearl River Delta region. The long work hours not only raise concern for migrants' physical health but mental health especially for migrant workers who are in factories and who are likely to perform repetitive tasks during work.

Discussion and conclusion

Data from the 2010 Chinese Census show that there were significant changes in China's migration patterns as reflected in the continuing rise of migration, declining importance of interprovincial migration (vs. intraprovincial migration), changing destination patterns

¹⁵We used detailed occupational categories contained in micro-data samples of the 2000 and 2010 censuses to carry out this calculation of occupational dissimilarity index.

¹⁶We should note this is in sharp contrast to findings during 1990-2000. Sun and Fan (2011) show that there was very little improvement in occupational attainment among floating population during this time period.

among interprovincial migrants, increasing interprovincial return migration, and improved education and occupational profiles of migrant population. For a long time, southern China was dominating China's interprovincial migration pattern. The 2010 census has shown a decisive shift towards other locations, especially to the Yangtze River Delta region. This geographic diversification of the floating population also suggests that migrants now have more choices and many regions began to compete for migrant labor. The phenomenon of the shortage of migrant labor in southern China also reflects this new reality of migration.

It is also noteworthy that interprovincial return migration is quite sizeable during the first decade of the 21st century. This is driven by a complex set of factors such as the factory closings in the wake of the global financial crisis and improved economic conditions in western China as a result of China's western China development program. In light of rising costs of labor in the coastal regions of China, many employers are looking for alternative locations for investment and find western China an attractive place to invest. Many migrant workers are now returning home to work in some of these factories that are established in recent years in western China. In the long run, this new development has the benefit of reducing inequality between the coastal region and the western China as a result of China's coastal centered economic strategy.

Some of these changes, such as new patterns of destination choices, improved education and occupational profiles, and a sharp decline in segregation index are clearly very good news for migrants and their families. Likewise, the rise in return migration is another blessing for migrant families as increased return migration will alleviate the issue of left behind children, now estimated at about 61 million among rural households (Duan et al. 2013). These changes in migration patterns are also a result of recent reforms in China such as the removal of agriculture tax burden, western China development strategy, and removal of many discriminatory policies in the urban labor market.

There is also a very encouraging sign of change in government attitude toward migrants. Not long ago, the strategy was to control the flow of migrants. Now the policy orientation has shifted toward providing service for migrants. In fact, China's newly established Ministry of Health and Family Planning has a special Division of Floating Population that is designed to deal with all issues related to the migrant population from data gathering and service provision to policy-making. In addition to government agencies, grass-root level NGOs are also very active in helping migrants with legal issues, unpaid wages, and education of migrant children.

From the perspective of migration research, this is certainly the best of times for studying migrant population in China. This is because China provides perhaps an unparalleled social laboratory to examine migration theories and patterns on such a large scale. In addition, data and research infrastructure on migration are perhaps the best of the times in the Chinese history. China's censuses in 1990, 2000, and 2010 all contain rich information on migrant population. Besides census data, with support from many sources, several major surveys that contain rich information on migration have been conducted in recent years. This list includes the 2008 Survey of Migration in China, Chinese Family Panel Survey (modeled on the success of US PSID), and China Labor Dynamics Survey (PUSRR, 2009; SYSSSSC, 2013;

Treiman et al., 2012). Since 2009, the China Family Planning Commission (now the newly established Ministry of Health and Family Planning) has been conducting annual surveys of floating population to provide the most recent updates (FPSMBNPFC, 2013). These survey data sources contain far richer information on China's migrant population than the census data and have the potential to move migration studies in China to a new level.

Despite this progress mentioned above, there are clearly challenges for China's floating population. Here we will identify several of them. First, China's monumental flow of migration affected millions of children. Among migrant children in cities, the main challenge continues to be the issue of equality of educational opportunity. Although the central government policy is clear that migrant children should be allowed to enroll in local public schools, the reality is that migrant children continue to face unequal treatment in terms of extra fees. High quality education for migrant children holds the best hope for social-economic mobility and to avoid the reproduction of intergenerational disadvantage. Recent research reveals a series of major problems such as delayed entry into appropriate grade level (e.g. 13 years old migrant children still in elementary school), high proportion of migrant children not enrolled in local public schools, and early labor force participation among high school age migrant children (FPDCMHFP, 2013). A major recent debate is whether or not migrant children are allowed to take national college entrance examination in destination places. By December 2012, only a small number of provinces allow migrant children to take college entrance examination in migrant destinations. For the rest (including big cities such as Beijing, Shanghai, and Guangzhou), migrant children need to take college entrance exam in their hometown provinces.

With respect to adult migrants, we have reported some good news as reflected in education and occupational improvement. However, there is still a long way to go before migrants are fully integrated into the urban Chinese society. There is still a major disparity in wages between migrants and local workers. Both Lu and Wang (2013) and Meng and Zhang (2001) show clear evidence of wage discrimination from the 1990s to the mid-2000s. The most recent evidence from the 2012 Survey of Floating Population (sponsored by China's Ministry of Health and Family Planning) reveals a very striking wage disparity: hourly wage for migrants who work in manufacturing industry is 41% less than what is paid for local residents. Similar figure for migrant workers in the service industry (restaurants and hotels) is 37% (DFPMHFP, 2013). Clearly there is a long way to go to achieve wage parity.¹⁷

One thing is certain, that the next stage of change is going to be a lot more difficult than simply opening up the labor markets and creating equal labor market opportunities. The next stage of the change is more about providing equal social and welfare protection for migrant workers. This of course will come at a price. Chinese Premier Li Keqiang has repeatedly advocated a "people centered approach" (*yiren weiben*) toward China's urbanization path (Li, 2012). "People centered approach" must involve providing more social and welfare protection for migrant workers, including pension, low income housing and unemployment benefits. We should note that this change is happening at a critical juncture in China's economic transformation as demand for export began to dwindle in the wake of global

¹⁷Zhu and Lin (2014) also call for attention to the issue of female migrants' rights.

financial crisis and many scholars and policy-makers have argued for generating domestic demand to stimulate next stage of economic growth. Whether or not China's monumental and growing floating population can serve as a potential consumer class for the next stage of China's economic transformations depends on whether they are treated as equal urban citizens.

Appendix

Appendix 1

Distribution of Top Five Origin Provinces Among Inter-provincial Floating Population in Xinjiang, 2000 and 2010

Top Five Origin Provinces	2000 (%)	Top Five Origin Provinces	2010 (%)
Sichuan	30.22	Henan	21.58
Henan	20.30	Sichuan	19.59
Gansu	15.57	Gansu	19.23
Anhui	5.16	Shannxi	5.70
Shannxi	4.96	Chongqing	5.03
Other	39.36	Other	28.87
N	1,411,086	N	1,791,642

Sources: PCO 2002: Table 7-2, p490-500; PCO 2012: Table 7-3, p2171-2173.

Appendix 2

Changing Patterns of Inter-provincial Migration Destination from 5 Major Migration Origins: 2000-2010

Original Province	2000		2010	
	PRD	YRD	PRD	YRD
Sichuan	40.99%	15.84%	29.22%	28.25%
Anhui	8.31%	67.77%	4.63%	77.55%
Henan	32.74%	15.95%	20.43%	35.05%
Hunan	77.29%	6.70%	63.66%	16.34%
Guangxi	90.65%	1.96%	84.96%	5.59%

Sources: 2000 Census, Table 7-2, p732-733; PCO 2012: Table 7-2, p490-500.

Note: PRD refers to the Pearl River Delta. YRD refers to the Yangtze River Delta.

Appendix 3

Comparison of Inter-provincial Floating Population in PRD and YRD: Education, Duration of Residence, and Occupation.

	PRD	YRD
Education		
No Schooling	0.66%	1.85%
Elementary School	12.44%	20.75%
Junior High School	59.48%	54.93%

	PRD	YRD
Senior High School	20.39%	14.13%
3-year College	4.80%	4.46%
4-year College	2.10%	3.47%
Graduate School	0.14%	0.42%
Duration of Residence		
6 months-1 year	26.28%	21.64%
1 year- 2 years	22.86%	19.75%
2 years-3 years	14.54%	14.45%
3 years- 4 years	9.33%	10.31%
4 years- 5 years	5.76%	6.80%
5 years- 6 years	4.17%	5.35%
6 years or above	17.06%	21.70%
Occupation		
Cadres	2.29%	2.21%
Professionals	4.78%	4.78%
Clerks	6.60%	3.90%
Sales and Service	20.52%	24.75%
Agriculture	1.40%	1.99%
Manufacture	64.32%	62.33%
Other	0.08%	0.04%

Sources: PCO 2012: Table 7-6, p. 2180-2183; Table 7-4, p2174-2175.

Note: PRD refers to the Pearl River Delta. YRD refers to the Yangtze River Delta.

Appendix 4

Comparisons of Education among the Total Population, 2000 and 2010

Education	2000 (%)	2010 (%)
No Schooling or Literacy Class	6.50	2.62
Elementary School	30.12	20.76
Junior High School	42.96	47.03
Senior High School or Vocational High School	15.51	18.05
3-Year College	3.25	6.70
4-Year College	1.56	4.43
Graduate School	0.10	0.41
N	869,810,610	992,561,090

Sources: PCO 2002: Table 4-1, p593-602; PCO 2012: Table 4-1, p.822-824

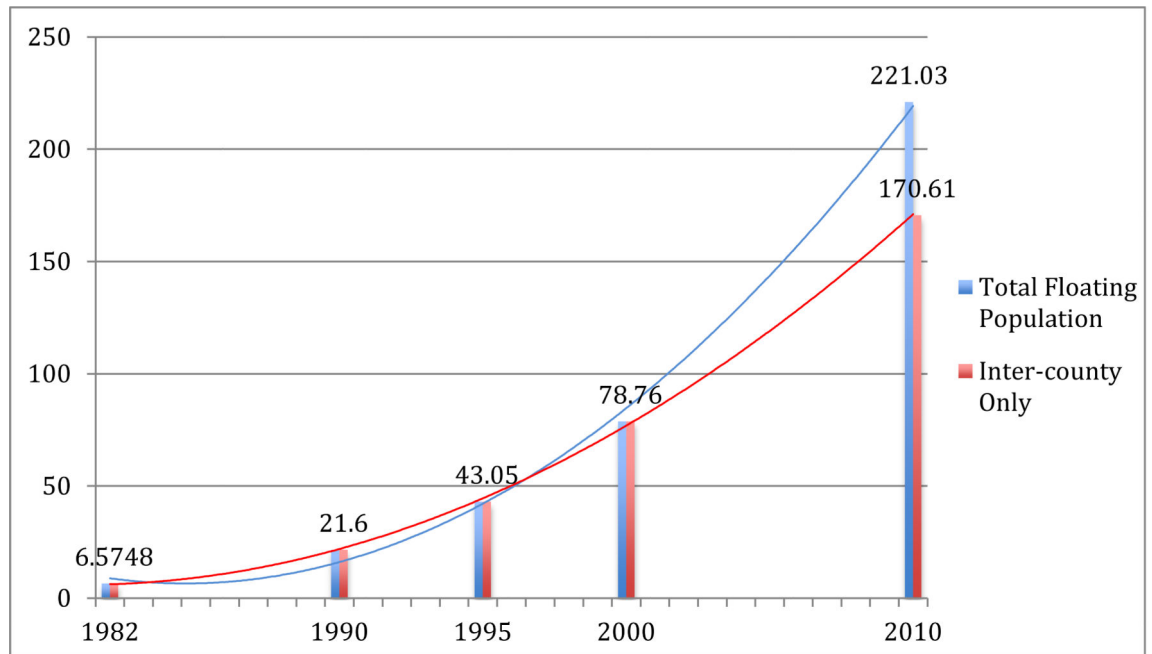
Note: The total population is restricted to those of age 15-64.

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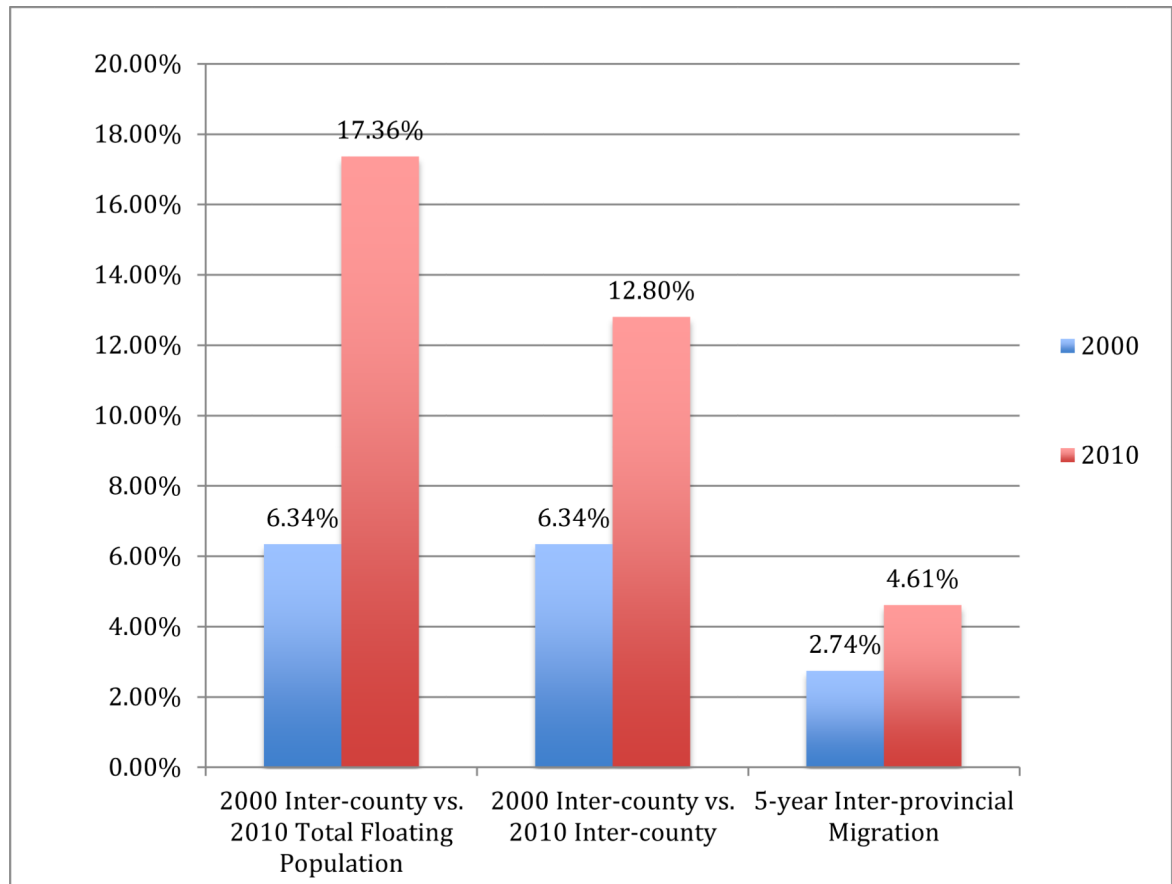
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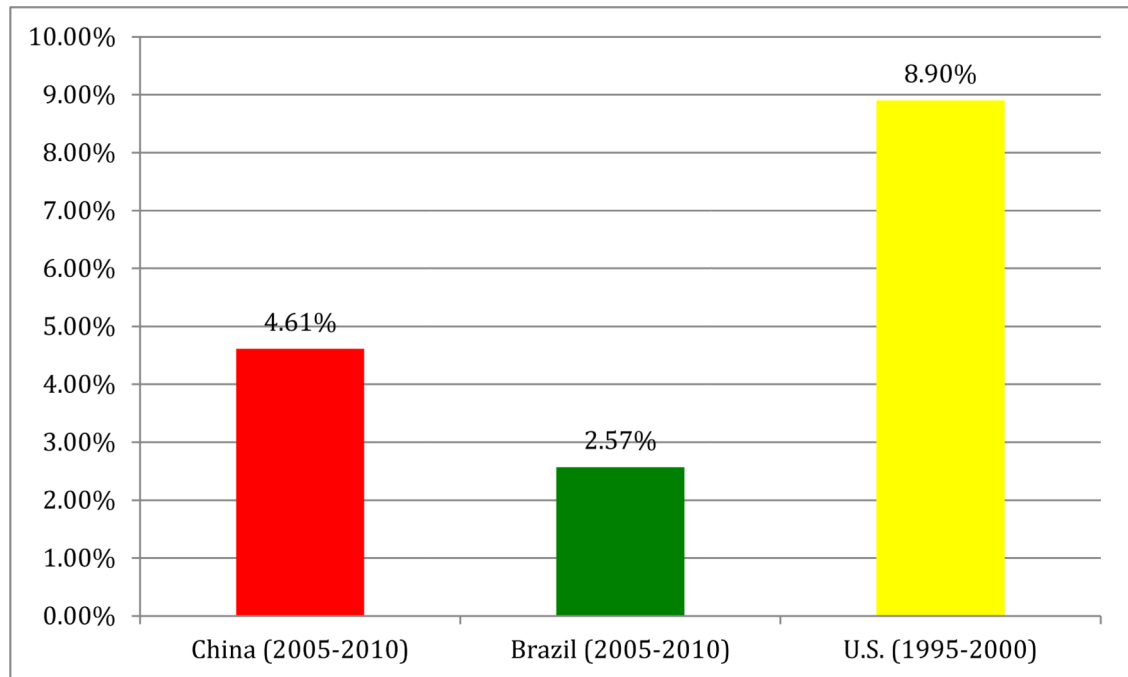
Sources: PCO 1985: Table 2, p. 559; PCO 1993: Table 1-2, p.6; PCO 2002: Table 1-4, p.15; PCO 2012: Table 7-1, p458-459; 1/1000 micro-data of the 2010 census. The volume of the floating population counted from the place of origin in 1995 is obtained from the Division of Sociodemographics, National Bureau of Statistics.

FIGURE 1.
Trend of Floating Population in China, 1982-2010



Sources: PCO 2002: Table 1-2 (p.10) and Table 7-1 (p.726); PCO 2012: Table 7-1, p458-459; Table 7-8, p2188-2191; 1/1000 micro-data of the 2010 census.

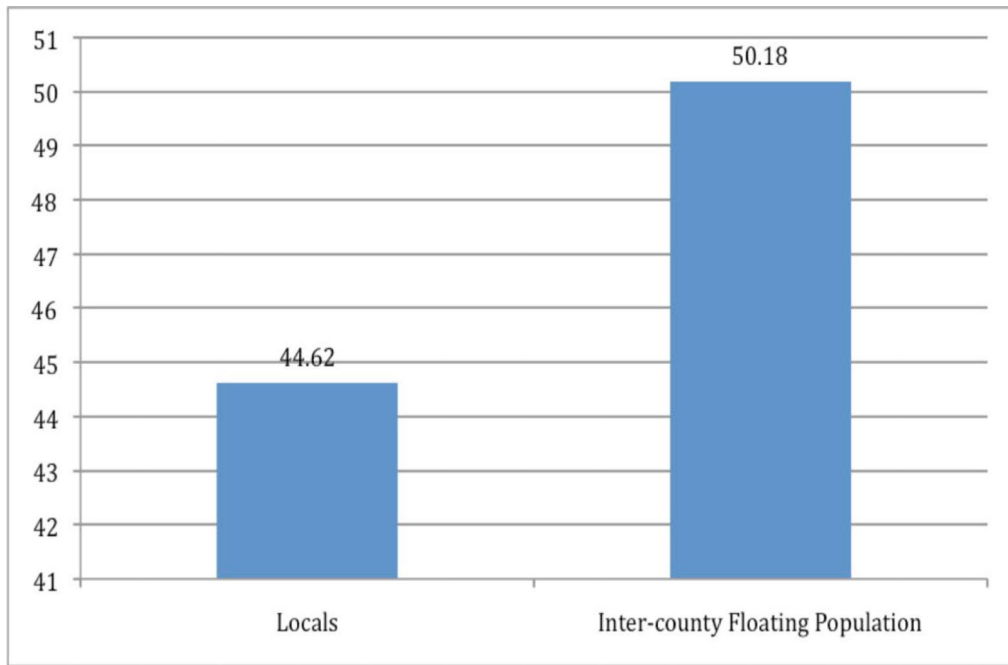
FIGURE 2.
Floating Population as Share of Total Population, 2000 and 2010



Source: PCO 2012: Table 7-8, p2188-2191; U.S. number is based on the 2000 U.S. Census, drawn from American FactFinder on www.census.gov; Brazil number is based on the 2010 Brazil Census, drawn from <https://international.ipums.org/international/>.

FIGURES 3.

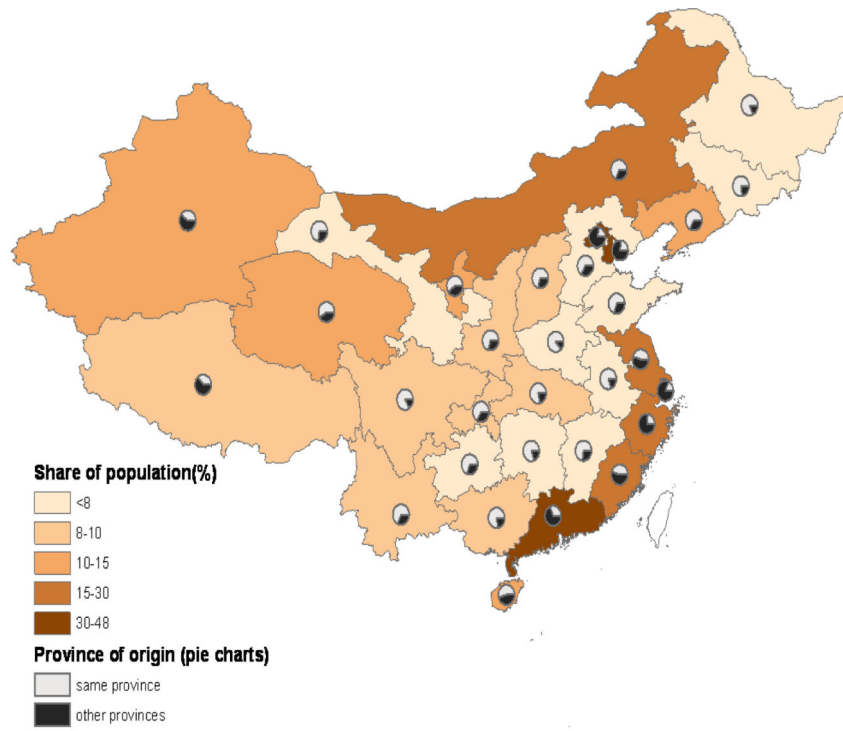
Five-year Inter-provincial/state Migration as a Share of Total Population, 1995-2010, China, Brazil and the U.S.



Note: Locals and floating population are restricted to those of age 15-64.

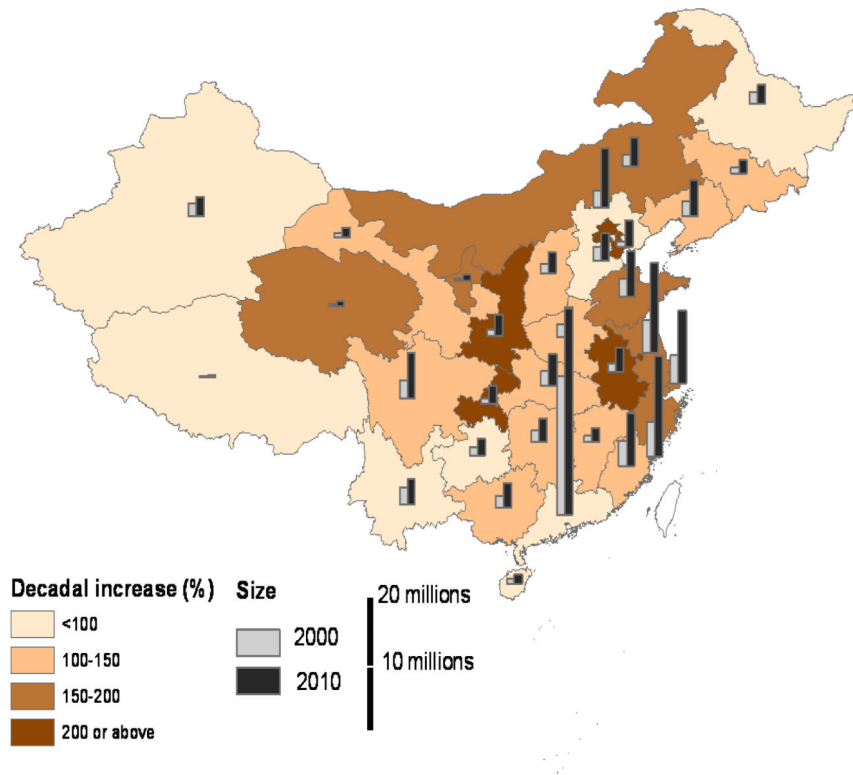
Sources: 1/1000 micro-data of the 2010 census

FIGURE 4.
Average Working Hours Per Week by *Hukou* Status



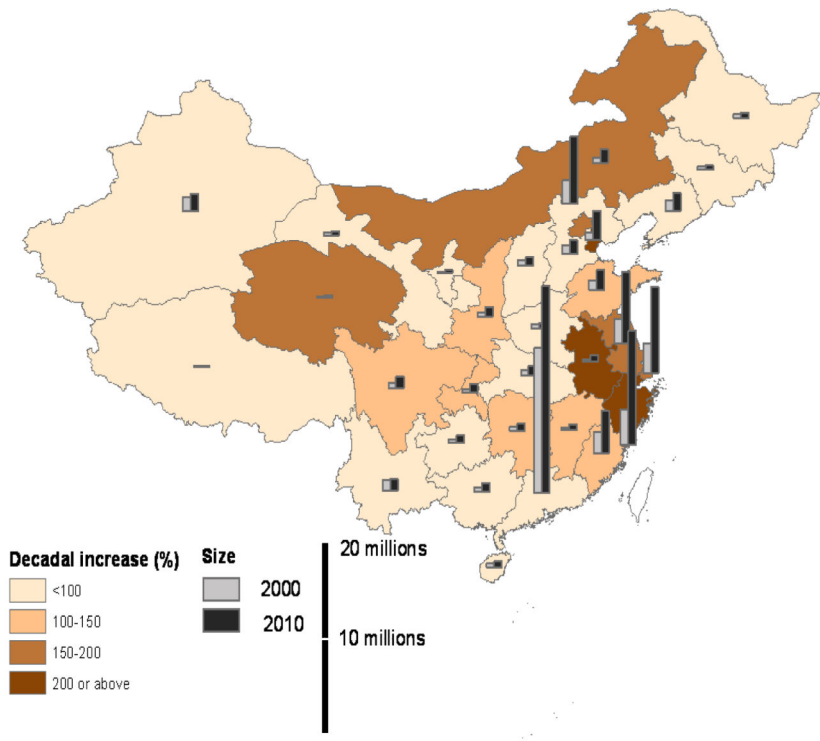
Sources: Data for 2010 are based on table 7-1, p458-459; 1/1000 micro-data of the 2010 census.

MAP 1.
Inter-county Floating Population as Share of Provincial Population and Its Composition by Province of Origin, China, 2010



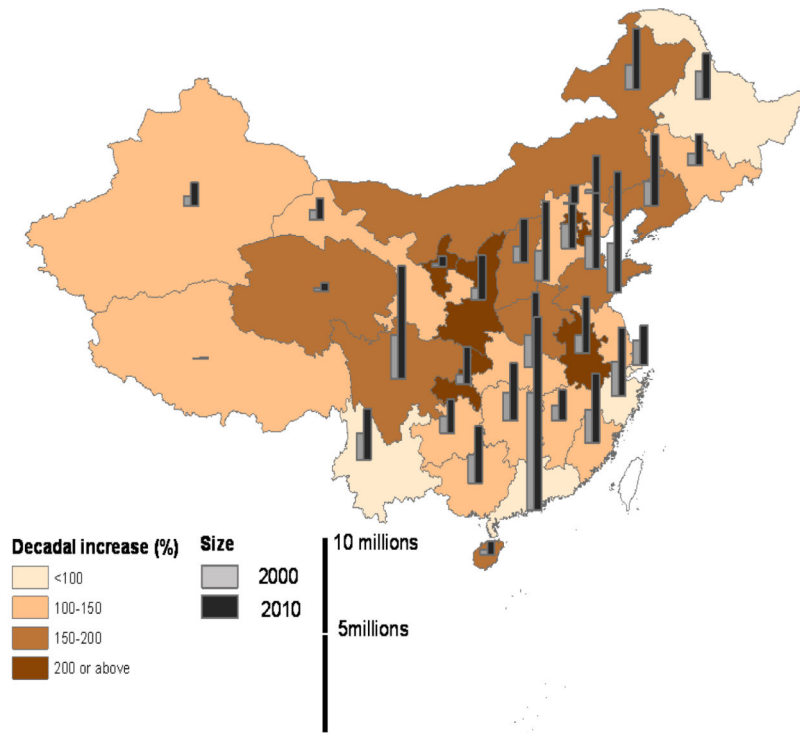
Sources: Data for 2010 are based on table 7-1, p458-459; 1/1000 micro-data of the 2010 census.

MAP 2.
Changing Volume and the Growth Rate of the Inter-County Floating Population by Province, China, 2000 and 2010



Sources: Data for 2000 are based on PCO 2002: Table 7-1 (p. 726); Data for 2010 are based on table 7-1, p458-459.

MAP 3.
Changing Volume and the Growth Rate of the Inter-provincial Floating Population by Province, 2000 and 2010



Sources: Data for 2000 are based on Table 7-1 (p.726), PCO (2002); Data for 2010 are based on table 7-1, p458-459; and 1/1000 micro-data.

Note: intra-provincial floating population=inter-county intra-provincial floating population

MAP 4.

Changing Volume and the Growth Rate of the Intra-provincial Floating Population by Province, 2000 and 2010

TABLE 1

Size of the Floating Population and Share of the Intra-provincial and Inter-provincial Floating Population by Province, China, 2000 and 2010

Province	2000			2010		
	Total (1,000)	Percent intra-provincial	Percent inter-provincial	Total (1,000)	Percent intra-provincial	Percent inter-provincial
North						
Beijing	2,603	5.38	94.62	8,947	21.26	78.74
Tianjin	791	7.08	92.92	3,891	23.12	76.88
Hebei	2,131	56.36	43.64	4,125	65.95	34.05
Shanxi	1,459	54.28	45.72	3,149	70.41	29.59
Inner Mongolia	1,773	69.09	30.91	4,520	68.05	31.95
Northeast						
Liaoning	2,306	54.68	45.32	5,391	66.86	33.14
Jilin	945	67.30	32.70	2,029	77.50	22.49
Heilongjiang	1,794	78.43	21.57	2,813	81.99	18.01
East						
Shanghai	4,360	28.10	71.90	11,002	18.40	81.59
Jiangsu	5,007	49.33	50.67	13,513	45.39	54.61
Zhejiang	5,426	32.01	67.99	15,272	22.58	77.42
Anhui	1,184	80.57	19.43	3,611	80.13	19.87
Fujian	3,807	43.66	56.34	7,836	44.95	55.05
Jiangxi	1,008	74.90	25.10	2,172	72.38	27.62
Shandong	2,687	61.56	38.44	6,935	69.49	30.51
Central and south						
Henan	2,012	76.34	23.66	4,601	87.13	12.87
Hubei	2,239	72.76	27.24	4,826	78.99	21.00
Hunan	1,770	80.28	19.72	3,655	80.16	19.84
Guangdong	21,054	28.45	71.55	31,324	31.37	68.63
Guangxi	1,843	76.78	23.22	3,727	77.41	22.59
Hainan	654	41.59	58.41	1,288	54.32	45.68
Southwest						
Chongqing	884	54.41	45.59	2,819	66.48	33.52
Sichuan	2,748	80.49	19.51	6,870	83.57	16.43
Guizhou	1,254	67.38	32.62	2,503	69.51	30.49
Yunnan	2,512	53.66	46.34	3,831	67.73	32.27
Tibet	151	29.14	70.86	262	36.86	63.14
Northwest						
Shannxi	1,041	59.08	40.92	3,272	70.22	29.78
Gansu	717	68.20	31.80	1,551	72.09	27.91
Qinghai	308	59.74	40.26	779	59.14	40.86
Ningxia	367	47.68	52.32	934	60.55	39.45
Xinjiang	1,917	26.40	73.60	2,986	40.01	59.99

Province	2000			2010		
	Total (1,000)	Percent intra-provincial	Percent inter-provincial	Total (1,000)	Percent intra-provincial	Percent inter-provincial
China	78,752	46.14	53.86	170,614	49.67	50.33

Sources: Data for 2000 are based on Table 7-1 (p.726), PCO (2002); Data for 2010 are based on Table 7-1, p.458-459 and 1/1000 micro-data.

TABLE 2

Changing Spatial Distribution of Floating Population: 2000-2010

	Year	The Pearl River Delta	The Yangtze River Delta
Inter-provincial Floating Population	2000	35.5%	22.1%
	2010	25.0%	32.8%
Intra-Provincial Floating Population	2000	16.5%	14.9%
	2010	9.5%	11.6%
Total Floating Population	2000	26.7%	18.8%
	2010	15.5%	19.9%

Sources: Data for 2000 are based on Table 7-1 (p.726), PCO (2002); Data for 2010 are based on Table 7-1, p458-459; and 1/1000 micro-data.

TABLE 3

Comparison of Worker Benefits in the Pearl River Delta and the Yangtze River Delta in 2010

	The Pearl River Delta	The Yangtze River Delta
Length of Tenure at the Current Company (years)	2.94	3.99
Rental (%)	47.41	60.12
Average Area of Dwelling (square meters)	11.77	14.30
Average Monthly Income (yuan)	1917.68	2052.69
Average Working Hours Per Week	57.41	55.24
Overtime (%)	71.48	61.23
Compensation for Overtime Per Hour (yuan)	7.05	7.34

Source: Liu, Linping et al. 2011. "Regional Differences in Labor Rights: A Survey of Rural Migrant Workers in the Pearl River Delta and the Yangtze River Delta. *Social Sciences in China* 2:107-123

TABLE 4

Reasons for Migration, 2000 and 2010

	Reason for Migration, 2000 (%)									Number
	1	2	3	4	5	6	7	8	9	
Total	63.95	2.23	0.78	4.48	2.73	4.03	11.48	5.80	4.51	49,980
Intra-Provincial Floating Population	48.02	3.11	1.56	8.22	5.38	5.80	14.85	7.29	5.76	20,940
Inter-provincial Floating Population	75.44	1.59	0.22	1.77	0.82	2.75	9.06	4.73	3.61	29,040

	Reason for Migration, 2010 (%)									Number
	1	2	3	4	5	6	7	8	9	
Total	55.1	3.02	0.28	13.36	4.84	3.20	12.53	4.27	3.36	108,616
Intra-Provincial Floating Population	37.45	3.84	0.49	21.25	8.90	4.14	14.07	4.80	5.06	54,367
Inter-provincial Floating Population	72.89	2.20	0.06	5.44	0.76	2.25	11.00	3.74	1.66	54,249

1= Manual labor or business;

2= Job transfer;

3= Job assignment(2000)/Jigua(2010)

4= Education or training;

5= Demolition of old residences or moving;

6= Marriage migration;

7= Dependents of migrants;

8= Joining relatives or friends;

9= Others.

Note:

1. The category "job assignment" in 2000 census is replaced by "Jigua" in the 2010 census.

2. Distribution of reasons for migration between 1995 and 2000 among inter-county temporary is derived from the 1/1,000 micro-level data of 2000 census.

3. Distribution of reasons for migration between 2005 and 2010 among inter-county temporary migrants) in the bottom panel is derived from the 1/1,000 micro-level data of 2010 census.

TABLE 5

Patterns of Interprovincial Return Migration Flows from Guangdong to Sichuan and Hunan, 2000-2010

Sichuan				Hunan			
Province 5 Years Ago	2000	Province 5 Years Ago	2010	Province 5 Years Ago	2000	Province 5 Years Ago	2010
Chongqing	71,000 (17.93%)	Guangdong	89,000 (24.18%)	Guangdong	28,000 (16.67%)	Guangdong	157,000 (47.43%)
Guizhou	38,000 (9.60%)	Zhejiang	39,000 (11.00%)	Guangxi	22,000 (13.1%)	Guangxi	18,000 (5.44%)
Yunnan	37,000 (9.34%)	Yunnan	23,000 (6.25%)	Hubei	17,000 (10.12%)	Sichuan	17,000 (5.14%)
Guangdong	28,000 (7.07%)	Xinjiang	19,000 (5.16%)	Hainan	15,000 (8.93%)	Zhejiang	15,000 (4.53%)
Hubei	27,000 (6.82%)	Fujian	18,000 (4.89%)	Guizhou	15,000 (8.93%)	Hubei	12,000 (3.63%)
All Other Provinces	195,000 (49.24%)	All Other Provinces	180,000 (48.92%)	All Other Provinces	71,000 (42.26%)	All Other Provinces	92,000 (29.37%)

Sources: 1/1000 micro-data of the 2000 Census ; 1/1000 micro-data of the 2010 Census.

TABLE 6

Comparisons of Education and Occupation among Inter-County Floating Population, 2000 and 2010

Education	2000 (%)	2010 (%)
No Schooling or Literacy Class	3.79	1.27
Elementary School	21.06	12.03
Junior High School	52.37	44.93
Senior High School or Vocational High School	17.61	20.57
3-Year College	3.64	11.23
4-Year College	1.42	9.14
Graduate School	0.1	0.82
N	58,293	137,529

Occupation	2000 (%)	2010 (%)
Cadres	1.99	3.18
Professionals	3.97	9.00
Clerks	3.98	6.24
Sales and Service	26.99	31.32
Agriculture	9.61	4.47
Manufacturing	53.32	45.66
Others	0.13	0.14
N	46,722	101,797

	2000	2010
Occupational Segregation Index	67.26	53.01
N	46,722	101,797

Note: Floating population is restricted to those of age 15-64.

Sources: 1/1000 micro-data of the 2000 Census ; 1/1000 micro-data of the 2010 Census.