China's Floating Population: New Evidence from the 2000 Census

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Over the last two decades, a new demographic phenomenon in China has attracted increasing attention in academic journals, newspapers, and magazines. The "floating population," or *liudong renkou*, refers to the large and increasing number of migrants without local household registration status (*hukou*). The growth of this population group reflects fundamental social and demographic changes in Chinese society since the early 1980s. It would have been very difficult to imagine such a large number of individuals living outside of their places of household registration 30 years ago, for the simple fact that one could not survive in cities without local *hukou* status at that time. China's market reforms since the late 1970s have significantly weakened the government's control over geographic mobility and its ability to enforce the *hukou* system. Despite the demographic importance of this population, estimates of its size are wide ranging (Cai et al. 2001), and little is known about its impact on communities of origin and destination.

This article provides a description of China's floating population using the most authoritative source of Chinese data, the 2000 Chinese Population Census (PCO 2002). Because the last census that contained information on migration was conducted in 1990, what is known about migration between 1990 and 2000 is based on national sample surveys (e.g., the 1995 China One Percent Population Sample Survey) or regionally based surveys such as the sample surveys of floating populations conducted in Beijing and Shanghai. These sources have yielded insights into the causes and consequences of China's floating population (Ma 2001; Roberts 2002; Rozelle et al. 1999; Wang et al. 2002; Zhao 1999); however, surveys are not well suited to describing broad country-wide patterns.

The release of tabulations from the 2000 census affords the opportunity to update knowledge of China's floating population and to identify new

patterns of migration that have emerged during the late 1990s (PCO 2002). Data from the 2000 census show that the intercounty floating population during 1995–2000 was nearly three times larger than the intercounty permanent migrant population.[1] In addition, the size of the floating population has increased by a much greater proportion between 1990 and 2000 than the size of the permanent migrant population. We argue that study of China's floating population is important for at least three reasons. First, these floating migrants, because they have no local household registration status, are not afforded the full benefits of citizenship. For example, certain occupations are reserved for local residents, pension and medical care are usually not available to floating migrants, and the children of such migrants are not allowed to enroll in local public schools. Thus the well-being of this population should be a major concern for social scientists and policymakers. Second, much of this population results from a movement from rural to urban areas in response to the rising urban demand for cheap labor, particularly in the rapidly industrializing coastal regions. The floating population will strongly affect both China's patterns of urbanization and its population distribution among regions. Third, the floating population has begun to play a vital role in economic development and income growth in rural China, through remittances as well as entrepreneurial activities by return migrants (see Ma et al. 2004).

We begin by describing new features of the 2000 Population Census of China relevant to migration and compare the 2000 data with data from the 1990 census. Our analysis covers both intercounty and intracounty floating migrants but with a focus on the former. Intercounty migration is more responsive to interregional economic differentials, driven by China's recent market reforms, and much of the literature on China's floating population is concerned with intercounty movement. We identify trends in the floating population in China from 1982 to 2000 and note differences in data definitions across different data sources. We then describe the size and distribution of the floating population by province in 2000 and changes in the proportions of interprovincial and intraprovincial migration from 1990 to 2000. We also examine the origins of the floating migrant population and the destinations (city, town, and rural) that migrants choose. Using microlevel data from the 2000 census, we compare the extent to which the reasons for migration between 1995 and 2000 differ by *hukou* status, sex, and intercounty versus intracounty migration.

Migration questions in China's 2000 census

The 2000 census used four questionnaires: a short form, a long form, a form for the temporary migrant population (migrants who had left their place of household registration for a period of less than six months), and a question-

naire on the deceased. Only 10 percent of the population was selected to answer the long-form questionnaire, which contained ten questions on migration. Three household-level variables captured the extent of migration: (1) the total number of household members residing outside the household for less than six months; (2) the total number of household members residing outside the household for more than six months; and (3) the total number of household members temporarily residing in the current location who had left their place of household registration for less than six months. In addition, each individual (most often the household head) was questioned about his/her *hukou* status and place of household registration, place of birth, and time of arrival at the current location. Those who had moved in the last five years (since 1 November 1995) were asked about county and province of origin, type of original residence (rural or urban), principal reason for migration, and province lived in five years ago. The information on household registration status allows us to distinguish the floating population (those living away from their *hukou*) from permanent migrants (who possess a local *hukou*).

As a source of data on migration, the 2000 census has three advantages over the 1990 census. First, intracounty migration, which represents a significant portion of overall migration, was ignored in the 1990 census but was counted in the 2000 census, allowing analysis of both rural-to-urban migration within a county (e.g., from a village to the county seat) and urban residential mobility. Second, the timing of migration was given precisely through a new question on "arrival time at the current location." This question was first used in the 1995 China One Percent Population Sample Survey. Third, the principal reasons for migration were reclassified in the 2000 census. The category "retirement," which appeared in the 1990 census as a minor reason for migration, was replaced in the 2000 census by a new category, "demolition of old residence or change of residence (*caiqian banjia*)," to reflect the rising urban residential mobility associated with housing reforms.

As with a census in any country, there is an issue of undercounting. Post-census enumeration indicates an undercount rate of 1.81 percent, which meets the international standard (Lavely 2001; PCO 2001). Given the special characteristics associated with the floating population as discussed earlier, the undercount rate is likely to be higher for them. This is a caveat we should keep in mind when interpreting data on this population. Nevertheless, the 2000 census is the best source of data on China's floating population. No other Chinese agency can afford to devote the resources and time to locate the floating population that the National Bureau of Statistics allotted to the 2000 census.

We present tabulations that draw on information contained in the long-form questionnaire. We rely on tabulations contained in the 2000 census publications (PCO 2002) along with micro-level data from the 2000 Chinese census.[2] China also maintains statistics on the floating population based

on registration of migration as it occurs. Interested readers can find information on individuals who have obtained temporary residence cards in a new statistical compendium compiled by China's Ministry of Public Security (CPPSU 2004). However, the accuracy and completeness of these tabulations are uncertain.

The continuing rise of the floating population: Patterns and trends

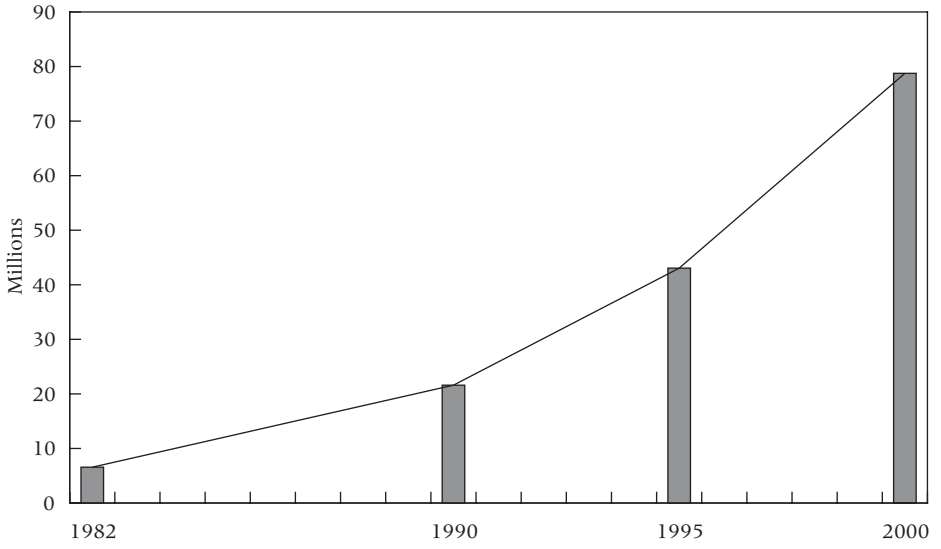
It is understandable why the size of the floating population is difficult to determine. First, by definition, this population is highly mobile and thus creates problems for census-takers wishing to locate and count its members. Second, members of the floating population may try to avoid being counted for fear of being sent back home or being fined if they have unauthorized births (PCO 2001).

The 2000 census defines the floating population as individuals who have resided at the place of destination for at least six months without local household registration status. Within this definition, two types of floating migrants are distinguished: those who cross county boundaries and those who stay within county boundaries.

Figure 1 shows the growth of the intercounty floating population from 1982 to 2000. The figure is based on data from three Chinese censuses, 1982, 1990, and 2000, along with data from the 1995 China One Percent Population Sample Survey.[3] In 1982, in the first census since the introduction of economic reforms in 1978, the intercounty floating population was estimated at around 7 million. By 1990, it had reached nearly 22 million. The size then doubled in the five years from 1990 to 1995. The 2000 census shows another major increase in the intercounty floating population—to 79 million, a total greater than the population of France or Britain. The recorded increase in the size of the intercounty floating population from 1995 to 2000 reflects both actual growth and the likelihood that the 2000 census was more successful in capturing the floating population than the earlier national surveys, given the far greater resources mobilized for that census (Lavely 2001; PCO 2001).[4]

The continuing growth of the floating population may seem surprising in light of current employment conditions in urban China, where state-owned enterprises continue to lay off workers (Lu 2002). However, provinces with the largest floating populations are not those with well-established state-owned enterprises (e.g., Jilin). In the 1990s, rapid industrial expansion along the coastal regions made China a world factory, drawing more and more migrants, first from surrounding rural areas and then from remote interior regions. In addition, the migration process is highly influenced by migration networks. During the past 20 years or so, as migrants have

FIGURE 1 Growth of the intercounty floating population in China, 1982–2000



SOURCES: PCO 1985: Table 2, p. 559; PCO 1993: Table 1-2, p. 6; PCO 2002: Table 1-4, p. 15. The volume of the floating population counted from the place of origin in 1995 is obtained from the Division of Socio-demographics, National Bureau of Statistics.

moved into different parts of the country (in particular the coastal regions), social relationships between employers and migrant workers have formed, and information has been exchanged between places of migrant origin and destination. Once migration networks are established, movement is likely to continue regardless of the overall economic climate at the destination (Massey 1988). In addition, migrants are often entrepreneurs who work in their own occupational niches.

Table 1 shows the size and distribution of the intercounty floating population and the permanent migrant population by province in 2000. When discussing the floating population, newspapers and popular magazines often focus on the most popular destinations: Beijing, Shanghai, and Guangdong. But, as column 3 shows, these are by no means the only places with large floating populations. Floating populations are found in every province of China. Overall, the intercounty floating population accounts for 6 percent of the country's population.

The province with the largest number of floating migrants is Guangdong with 21 million. Zhejiang (5.4 million) and Jiangsu (5.0 million) are a distant second and third. Shanghai ranks fourth with 4.4 million. The size of Shanghai's floating population is much more significant than it appears, given the relatively small size of its total population. Also noteworthy is that Shanghai recorded only 1.7 million floating migrants in the 1995 One

TABLE 1 Total population and intercounty floating population and permanent migrant population by province: China, 2000

	Total population (1,000) (1)	Provincial share of China's population (%) (2)	Floating population (1,000) (3)	Floating population as a share of provincial population (%) (4)	Provincial floating population as a share of total floating population (%) (5)	Intercounty migrant population: those who migrated between 1995 and 2000		
						Floating migrants (1,000) (6)	Permanent migrants (1,000) (7)	Total (1,000) (8)
North								
Beijing	13,569	1.1	2,603	19.2	3.3	2,030	452	2,482
Tianjin	9,849	0.8	791	8.0	1.0	556	254	810
Hebei	66,684	5.4	2,131	3.2	2.7	1,339	938	2,277
Shanxi	32,471	2.6	1,459	4.5	1.9	809	462	1,271
Inner Mongolia	23,323	5.4	1,773	7.6	2.3	1,046	326	1,372
Northeast								
Liaoning	41,824	3.4	2,306	5.5	2.9	1,431	733	2,164
Jilin	26,802	2.2	945	3.5	1.2	542	393	935
Heilongjiang	36,238	2.9	1,794	5.0	2.3	943	587	1,530
East								
Shanghai	16,408	1.3	4,360	26.6	5.5	3,358	846	4,204
Jiangsu	73,044	5.9	5,007	6.9	6.4	3,668	1,449	5,117
Zhejiang	45,931	3.7	5,426	11.8	6.9	4,626	786	5,412
Anhui	59,000	4.7	1,184	2.0	1.5	703	842	1,545
Fujian	34,098	2.7	3,807	11.2	4.8	3,159	565	3,724
Jiangxi	40,398	3.3	1,008	2.5	1.3	658	651	1,309
Shandong	89,972	7.2	2,687	3.0	3.4	1,895	1,278	3,173
Central and south								
Henan	91,237	7.3	2,012	2.2	2.6	1,283	1,105	2,388
Hubei	59,509	4.8	2,239	3.8	2.8	1,489	1,001	2,490
Hunan	63,274	5.1	1,770	2.8	2.3	1,199	953	2,152
Guangdong	85,225	6.9	21,054	24.7	26.7	17,972	1,045	19,017
Guangxi	43,855	3.5	1,843	4.2	2.3	1,290	660	1,950
Hainan	7,559	0.6	654	8.7	0.8	442	131	573
Southwest								
Chongqing	30,513	2.5	884	2.9	1.1	650	544	1,194
Sichuan	82,348	6.6	2,748	3.3	3.5	2,049	1,399	3,448
Guizhou	35,248	2.8	1,254	3.6	1.6	775	465	1,240
Yunnan	42,360	3.4	2,512	5.9	3.2	1,921	652	2,573
Tibet (Xizang)	2,616	0.2	151	5.8	0.2	99	26	125
Northwest								
Shannxi	35,365	2.8	1,041	2.9	1.3	703	674	1,377
Gansu	25,124	2.0	717	2.9	0.9	475	344	819
Qinghai	4,823	0.4	308	6.4	0.4	183	79	262
Ningxia	5,486	0.4	367	6.7	0.5	239	153	392
Xinjiang	18,460	1.5	1,917	10.4	2.4	1,304	421	1,725
China	1,242,612	100.0	78,752	6.3	100.0	58,835	20,218	79,053

SOURCES: PCO 2002: Table 1-2 (p. 10) and Table 7-1 (p. 726). Intercounty floating/permanent migration between 1995 and 2000 is tabulated on the basis of the micro-data sample from the 2000 census.

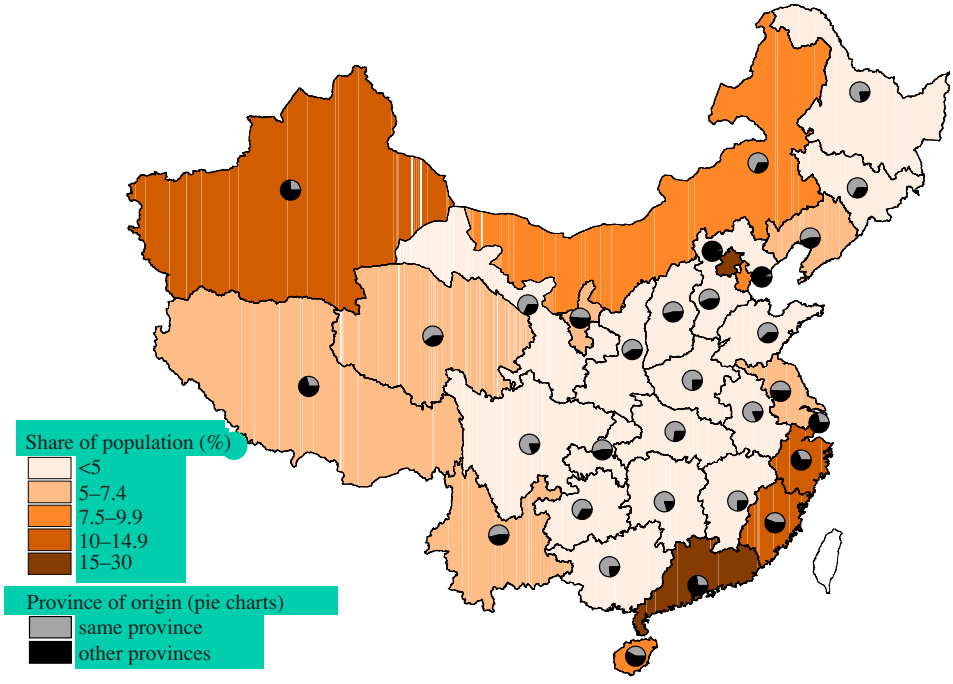
Percent Sample Survey. Five years later, the size of the floating population had more than doubled. This increase is largely attributable to the rapid growth of Pudong (eastern Shanghai) and demonstrates Shanghai's prominence in China's economic hierarchy.

To examine the demographic impact of the floating population at the place of destination, column 4 lists the floating population as a percent of the total population in the province (also see Map 1 for regional variations). Shanghai is ranked highest with some 27 percent of its population classified as floating. Guangdong and Beijing follow, with 25 percent and 19 percent. In three other provinces the floating population accounts for slightly more than 10 percent of the total population: Zhejiang, Fujian, and Xinjiang. Xinjiang is the only noncoastal province with such a high proportion of floating migrants. As Map 1 shows, the share of interprovincial migrants in the floating population is especially high in Xinjiang, as it is in Guangdong. Sichuan is one of the major sources of migrants to Xinjiang. During the cotton harvest season, as many as half a million migrants from Sichuan go to Xinjiang to work ("Journey of Hope" 2003; Mer 1998). Comparison of the pie charts in Map 1 with the appendix map (which shows provincial GNP per capita) indicates that interprovincial migration is positively related to level of development (see GNP per capita in appendix map) but negatively related to size of the population.

Column 5 of Table 1 shows the extent to which the floating population is concentrated in a province. For example, in 2000 nearly 27 percent of China's floating population resided in Guangdong, a more than twofold increase from 1995 when the figure was only 13 percent (China Population Sample Survey Office 1997). Guangdong's dominance in attracting the floating population is suggested by the fact that it is the only province that shows large percentages in both columns 4 and 5. These numbers reflect Guangdong's exceptional demographic and economic dynamics.

To place the floating population in the larger context of migrant populations, we tabulated that part of the 2000 intercounty floating and permanent migrant populations by province which reported having migrated during the period 1995–2000. Results are presented in columns 6 through 8 of Table 1. Comparison of columns 3 and 6 of Table 1 suggests that typically a large portion of the intercounty floating population is of recent origin. For China as a whole, three-quarters of the floating population counted in the 2000 census migrated during 1995–2000. The main rationale for using data on the floating population limited to those who migrated during 1995–2000 is that we can compare floating populations and permanent migrant populations within the same time frame. The size of the floating population originating from migration during 1995–2000 (59 million) is much larger than the corresponding size of the permanent migrant population (20 million). In addition, the proportionate increase of the floating population between

MAP 1 Intercounty floating population as a share of provincial population and its composition by province of origin: China, 2000



NOTE: For province names see Appendix map.
SOURCE: PCO 2002: Table 1-4 (p. 15).

the 1990 and 2000 censuses is much greater than that of the permanent migrant population (figures not shown). The difference between the floating population and the permanent migrant population reflects China's regional development patterns. In economically well-developed regions such as Guangdong, Zhejiang, and Beijing, the difference between the size of the floating population and the size of the permanent migrant population is wide (in the case of Guangdong 18 million floating migrants versus 1 million permanent migrants). In less developed regions (e.g., Jilin, Anhui, Jiangxi, Henan, and Gansu), the size of the floating population is similar to that of the permanent migrant population.

Short-distance versus long-distance migration

Migration distance is a measure of geographic mobility within a society. In traditional societies, most people are born and die in the same location. Some short-distance migration occurs when marriages take place between

people in nearby villages. In China, Confucian values reinforce the relative lack of mobility among the traditional population: as it is said, "if your parents are alive, do not travel far away" (*fu mu zai, bu yuan yo*). In contrast, in modern societies, physical boundaries of villages, towns, and provinces are less of a hurdle in moving to a new destination. Migration distance is also a barometer of the extent of interregional inequality. The best economic opportunities are often found in a distant province, and the increasing interregional disparities in China's reform era have catalyzed long-distance migration (Khan and Riskin 1998). From the 2000 census data, we can gauge migration distance by examining the proportion of migration that occurs between provinces. We expect that, as interregional inequality widens, the proportion of interprovincial migration will also increase. Table 2 shows the proportions of intraprovincial and interprovincial migrants among all intercounty floating migrants for 1990 and 2000. The proportion of interprovincial migrants has increased from 28 percent in 1990 to 54 percent in 2000, although the increase varies by province. The most dramatic rises are in China's coastal regions. In 1990, 29 percent and 12 percent of interprovincial migrants in Guangdong and Zhejiang came from other provinces. The corresponding percentages increased to 72 percent and 68 percent in 2000. Overall, there were 11 provinces in the 2000 census in which interprovincial migrants accounted for more than 50 percent of the migrant population, as compared to only three provinces in 1990 (two of them being China's province-level cities, Beijing and Tianjin).

Origin and destination of the floating population

To take advantage of the information on intracounty migration contained in the 2000 census, we now use a broader definition of the floating population that includes interprovincial, intraprovincial (cross-county/city), and intracounty migrants. Under this definition, the floating population in the 2000 census totals about 144 million. Table 3 shows that interprovincial migrants account for the single largest proportion (29 percent) of this broadly defined floating population, followed by the intraprovincial floating population (25 percent) (see last column in the second panel). These two figures suggest that the migration measures that were used in the 1990 census captured more than half of the floating population but missed a substantial portion of floating migrants who moved within a county or city boundary. Among intracounty/city floating migrants, by far the largest group is intracity migrants, who account for 21 percent of the total floating population. This includes all residential moves (moving from one apartment to another in a different residential district within a city). Such changes in residence are driven in part by housing reforms in urban China, which give urban

TABLE 2 Size of the intercounty floating population and shares of intraprovincial and interprovincial migrants by province: China, 1990 and 2000

	1990			2000		
	Total (1,000)	Percent intra-provincial	Percent inter-provincial	Total (1,000)	Percent intra-provincial	Percent inter-provincial
North						
Beijing	517	25.8	74.2	2,603	5.4	94.6
Tianjin	181	38.7	61.3	791	7.1	92.9
Hebei	726	74.3	25.7	2,131	56.4	43.6
Shanxi	760	63.3	36.7	1,459	54.3	45.7
Inner Mongolia	611	73.6	26.4	1,773	69.1	30.9
Northeast						
Liaoning	821	70.5	29.5	2,306	54.7	45.3
Jilin	509	78.7	21.3	945	67.3	32.7
Heilongjiang	1,256	74.7	25.3	1,794	78.4	21.6
East						
Shanghai	542	56.8	43.2	4,360	28.1	71.9
Jiangsu	1,303	73.4	26.6	5,007	49.3	50.7
Zhejiang	722	88.5	11.5	5,426	32.0	68.0
Anhui	767	87.8	12.2	1,184	80.6	19.4
Fujian	795	81.0	19.0	3,807	43.7	56.3
Jiangxi	587	71.4	28.6	1,008	74.9	25.1
Shandong	835	75.1	24.9	2,687	61.6	38.4
Central and south						
Henan	918	79.9	20.1	2,012	76.3	23.7
Hubei	934	76.6	23.4	2,239	72.8	27.2
Hunan	737	91.0	9.0	1,770	80.3	19.7
Guangdong	3,314	70.6	29.4	21,054	28.5	71.6
Guangxi	617	88.2	11.8	1,843	76.8	23.2
Hainan	219	76.7	23.3	654	41.6	58.4
Southwest						
Chongqing	N/A	N/A	N/A	884	54.4	45.6
Sichuan	1,208	90.2	9.8	2,748	80.5	19.5
Guizhou	457	63.2	36.8	1,254	67.4	32.6
Yunnan	541	63.3	36.7	2,512	53.7	46.3
Tibet (Xizang)	62	100.0	0.0	151	29.1	70.9
Northwest						
Shannxi	484	78.5	21.5	1,041	59.1	40.9
Gansu	317	86.3	13.7	717	68.2	31.8
Qinghai	182	71.4	28.6	308	59.7	40.3
Ningxia	98	57.1	42.9	367	47.7	52.3
Xinjiang	576	45.9	54.1	1,917	26.4	73.6
China	21,609	72.3	27.7	78,752	46.1	53.9

N/A = not available
SOURCES: Data for 2000 based on PCO 2002: Table 7-1 (p. 726). Size of the floating population in 1990 is based on PCO 1991: Table 3 (pp. 6–9). Shares for 1990 were calculated for migration between 1985 and 1990 based on 1 percent micro-data sample from the 1990 census.

residents the opportunity to own their own apartment/house or improve their living space and to gain access to other amenities. For example, the per capita living space in urban China increased from 6.7 square meters in 1990 to 8.5 square meters in 1996 (National Bureau of Statistics 1997). Home ownership in urban China increased sharply in the 1990s. Data from the 2000 census show that 72 percent of urban households own private homes, as compared to 24 percent in 1990 (Bian et al. 2004). Given the larger population base of rural China, intracounty migration in rural areas is not large (10 percent of the total floating population). For rural residents, migration most often means moving to a city either within the province of residence or in a different province.

Table 3 examines the floating population (inter- plus intracounty) from the perspective of the migrants' origin and destination. The first panel gives the absolute numbers for type of migration by destination. Nearly 86 million floating migrants chose cities as their destinations,[5] 28 million chose towns, and 31 million chose rural areas. The second panel answers the question of where migrants to cities, towns, or rural areas come from. Among migrants to cities, 32 percent are intracounty movers, meaning they migrated from one residence to another within the same city. This stream of migrants is noteworthy given its large absolute size (28 million). The next largest categories are interprovincial migrants and intercounty migrants (both around 27 percent). In fact, interprovincial migrants play key roles in all three destinations. This is consistent with evidence in Table 2 of the growing importance of interprovincial migration in the migration process. Perhaps somewhat surprising is that among migrants with rural areas as their destination, 35 percent are from other provinces. Two major sources of this migration have been identified. First, when peasants in relatively developed rural areas are engaged in nonagricultural activities, they hire migrants (often from rural areas) from other provinces to handle farm work (Du and Bai 1997; Liang 2001); a second source of rural migrants is migration for the purpose of marriage. Fan (2002) documented that women from poor rural areas often migrate to economically more advanced rural areas in order to marry.

The bottom panel of Table 3 answers the question of where different types of migrants go. For each row, percentages across the first three columns add to 100 percent. Among interprovincial migrants, 55 percent migrated to cities and 20 percent migrated to towns. With the exception of rural intracounty migrants, a substantial proportion of all types of migrants chose cities as their destination. Intracounty migration is characterized by major exchanges of migrants between rural areas and towns. Among intracounty migrants from towns, 32 percent chose rural areas as their destination; among intracounty migrants from rural areas, 39 percent moved to a town. Unlike the exchange of migrants between cities and rural areas, the

TABLE 3 Size and distribution of the intercounty and intracounty floating population by origin and destination: China, 2000

	Destination			
	City (1,000) (1)	Town (1,000) (2)	Rural (1,000) (3)	Total (1,000) (1)+(2)+(3)
Origin				
Intercounty migrants				
Interprovince	23,118	8,493	10,808	42,419
Intraprovince	23,622	5,624	7,092	36,338
Intracounty migrants from				
City	27,501	1,177	2,020	30,698
Town	7,311	6,829	6,681	20,821
Rural area	4,219	5,547	4,348	14,114
Total	85,771	27,670	30,949	144,390
	Destination			
	City (%)	**Town (%)**	**Rural (%)**	**Total (%)**
Percent by origin				
Intercounty migrants				
Interprovince	27.0	30.7	34.9	29.4
Intraprovince	27.5	20.3	22.9	25.2
Intracounty migrants from				
City	32.1	4.3	6.5	21.3
Town	8.5	24.7	21.6	14.4
Rural area	4.9	20.1	14.1	9.8
Total	100.0	100.0	100.0	100.0
	Destination			
	City (%) (1)	Town (%) (2)	Rural (%) (3)	Total (%) (1)+(2)+(3)
Percent by destination				
Intercounty migrants				
Interprovince	54.5	20.0	25.5	100.0
Intraprovince	65.0	15.5	19.5	100.0
Intracounty migrants from				
City	89.6	3.8	6.6	100.0
Town	35.1	32.8	32.1	100.0
Rural area	29.9	39.3	30.8	100.0

SOURCE: PCO 2002: Table 7-3 (pp. 750–751).

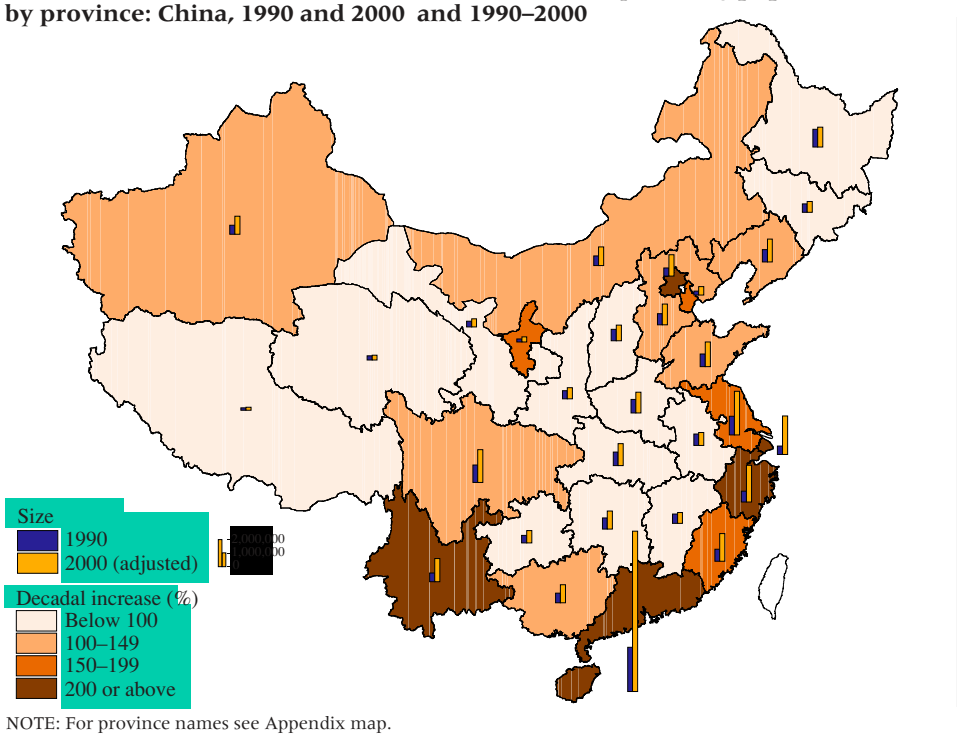
exchange of intracounty migrants among rural areas and towns runs in both directions. This reflects the close economic links between rural areas and towns and the effect of policies aimed at easing the process of settlement in nearby towns for rural migrants (Cai et al. 2001).

Regional increase in the size of the floating population

In the 1980s, when the tidal wave of labor migration began, a popular saying described the regional pattern of migration: "the peacock flies to the east and south" (*kong que dong nan fei*). To what extent was this still true in the late 1990s and 2000? In this section, we look at the regional increase in the size of the floating population. Because definitions of the floating population are different in the 1990 and 2000 censuses, we need to adjust the census counts in order to make meaningful comparisons. There are two main differences between the 1990 and 2000 censuses. The 1990 census data include only intercounty (both intraprovincial and interprovincial) migrants, whereas the 2000 census includes intracounty migrants as well. Second, the 1990 census uses a one-year residence criterion instead of the six-month criterion in the 2000 census. We use the 1990 census as the standard for comparison.[6]

The results of our exercise are summarized in Map 2 in two ways: (1) the size of the floating population in 1990 and 2000 (vertical bars); and (2)

MAP 2 Size and decadal increase of the intercounty floating population by province: China, 1990 and 2000 and 1990–2000



NOTE: For province names see Appendix map.
SOURCES: Size of the intercounty floating migrant population in 1990: PCO 1993: Table 1-2 (p. 6) and in 2000: PCO 2002: Table 1-4 (p. 15). The adjustment ratio for the data for 2000 is obtained from the micro-data of the 2000 census (see details of the adjustment in endnote 6).

the increase in the size of the floating population between 1990 and 2000.[7] The size of the floating population increased the fastest in a few destinations such as Shanghai (430 percent), Guangdong (272 percent), Zhejiang (270 percent), and Beijing (196 percent), hence by 2000 this population has become more concentrated. Although the east coast continues to dominate the regional pattern, Yunnan province, not traditionally known for attracting migrants, experienced a decadal increase of 230 percent. This can be attributed to Yunnan's effort to create the image of an exotic and attractive location (geography, culture, and concentration of minority groups) for both domestic and international tourists. Within a short period of time in the late 1990s, Yunnan became one of the most sought-after tourist destinations in China, stimulating the growth of the service industry and attracting floating migrants both from within the province and from afar.

Reasons for migration

So far, our analysis has focused on the size of the floating population. To identify distinctive features of this population, we compare characteristics of the floating population with those of permanent migrants (migrants who have a local *hukou*), using micro-level data from China's 2000 census. This exercise focuses on reasons for migration. Previous studies have examined responses to the question on reasons for migration (Chan 1999; Liang 2001). In the 2000 census, respondents were offered nine possible reasons for migration (see Table 4 for details) and were asked to choose only one.

The upper half of Table 4 shows the distribution of reasons for intercounty migration during 1995–2000 by sex and *hukou* status (floating population versus permanent migrants) by the respondent and other members of the household. The lower half shows the distribution by age and sex. The most striking difference between the floating population and permanent migrants is that 65 percent of the former cited "looking for manual labor or business" as the principal reason for migration compared with only 4 percent of permanent migrants (reason number 1 in Table 4). Overall the floating population is much more motivated by economic reasons than the permanent migrant population. Floating migrants are also much less educated than permanent migrants (see Figure 2), which suggests that the former are more involved in lower-level physical labor.

The differences between the floating population and permanent migrants are even more pronounced in certain age groups. For example, among males aged 15–29 and 30–44, the proportions of the floating population reporting "manual labor or business" were 79 percent and 84 percent. The corresponding proportions for permanent migrants were 4 percent and 17 percent. Among the male floating population aged 60 and older, 23 percent cited "looking for manual labor or business" as the principal reason for mi-

TABLE 4 Reasons for migration between 1995 and 2000 as stated in the 2000 census, intercounty migrants, by sex, *hukou* status, and age: China

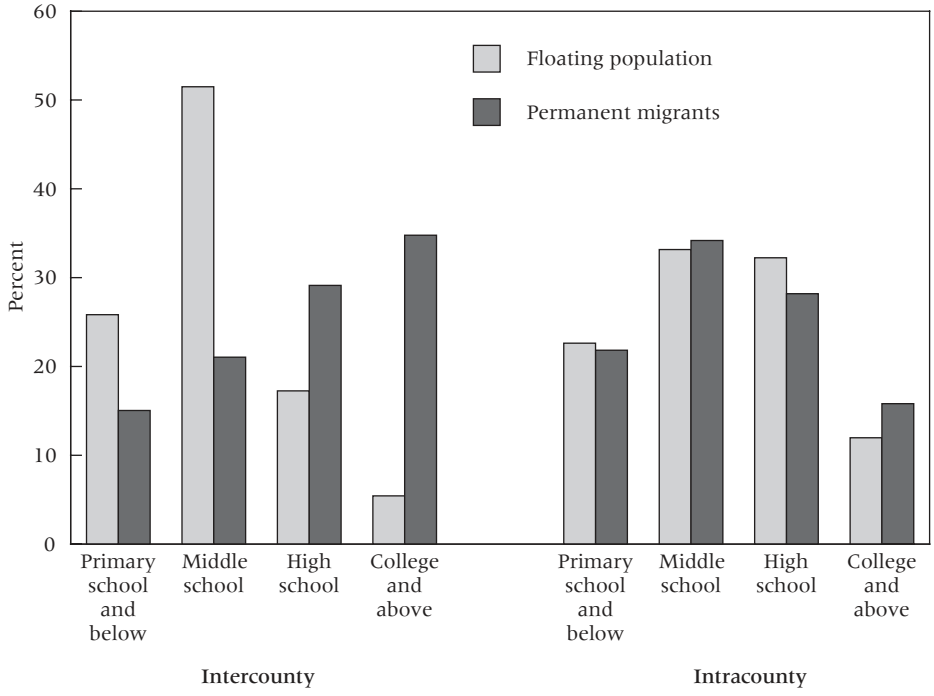
	Reason for migration (%)									Number (1,000)
	1	2	3	4	5	6	7	8	9	
Total	**49.4**	**3.1**	**2.6**	**13.7**	**4.5**	**7.3**	**10.0**	**5.0**	**4.4**	**79,053**
Floating population										
Total	**65.0**	**2.4**	**0.8**	**4.7**	**2.5**	**3.9**	**10.7**	**5.6**	**4.4**	**58,835**
Male	**70.6**	**3.2**	**0.9**	**4.7**	**2.4**	**1.2**	**8.0**	**4.7**	**4.3**	**31,758**
Age <15	1.3	0.0	0.0	4.8	3.4	0.0	67.8	15.7	7.1	3,000
15–29	79.1	2.8	1.5	8.0	1.0	1.2	1.6	2.0	2.9	16,616
30–44	83.8	4.4	0.3	0.3	2.7	1.4	0.8	2.4	3.9	9,197
45–59	62.6	5.9	0.2	0.0	6.8	1.6	3.7	9.8	9.5	2,167
60+	23.1	2.4	0.1	0.0	12.4	1.3	11.3	34.3	15.1	777
Female	**58.5**	**1.4**	**0.6**	**4.6**	**2.6**	**7.1**	**14.0**	**6.6**	**4.6**	**27,077**
Age <15	2.1	0.0	0.0	4.9	3.7	0.0	63.6	17.6	8.0	2,443
15–29	69.1	1.4	0.9	6.5	1.1	8.8	5.9	3.0	3.4	17,070
30–44	64.1	2.1	0.1	0.2	3.9	6.3	14.3	4.5	4.5	5,520
45–59	31.1	1.6	0.1	0.0	10.3	5.0	21.1	20.9	9.9	1,352
60+	5.5	0.4	0.0	0.0	11.9	3.2	21.4	46.6	11.0	692
Permanent migrants										
Total	**3.9**	**5.1**	**7.8**	**39.9**	**10.4**	**17.2**	**7.9**	**3.4**	**4.2**	**20,218**
Male	**5.5**	**7.3**	**10.1**	**45.4**	**11.7**	**3.7**	**6.9**	**3.7**	**5.7**	**9,502**
Age <15	0.1	0.0	0.0	11.1	20.2	0.0	51.6	10.6	6.3	822
15–29	3.6	4.3	13.5	64.6	3.2	3.2	2.3	1.9	3.5	6,505
30–44	16.9	22.4	5.2	1.4	27.2	8.4	2.8	5.0	10.9	1,353
45–59	9.3	17.3	2.0	0.1	43.0	3.8	3.9	6.8	13.8	562
60+	2.7	8.1	1.3	0.0	49.7	2.1	7.8	13.0	15.2	259
Female	**2.6**	**3.2**	**5.7**	**35.0**	**9.3**	**29.3**	**8.9**	**3.2**	**3.0**	**10,716**
Age <15	0.1	0.0	0.0	19.3	17.0	0.0	45.9	10.7	7.0	875
15–29	2.1	1.6	7.5	46.6	2.6	33.7	2.6	1.7	1.6	7,662
30–44	7.0	12.5	1.6	0.6	22.6	31.8	14.9	3.9	5.0	1,428
45–59	3.1	7.2	1.0	0.1	40.4	14.5	19.0	6.5	8.2	509
60+	0.8	3.0	0.3	0.0	48.0	10.8	16.7	12.8	7.5	242

1= Manual labor or business; 2= Job transfer; 3= Job assignment; 4= Education or training; 5= Demolition of old residence or change of residence; 6= Marriage; 7= Joining dependents; 8= Joining relatives or friends; 9= Other.
SOURCE: Tabulated from the micro-data of the 2000 census.

gration. Traditionally, those aged 60 years and older have retired from normal economic activities, but this is not the case for some elderly migrants in the late 1990s.

There are some differences by sex as well. Females migrate in numbers comparable to those of males. In fact, there were more permanent migrant

FIGURE 2 Distribution of the intracounty and intercounty migrant population aged 6 years or older by level of education and *hukou* status: China, 2000



SOURCES: Tabulated from the micro-data of the 2000 census.

females (11 million) than permanent migrant males (10 million) in the 2000 census. Among women, 59 percent of the floating migrant respondents cited "looking for manual labor or business" as the reason for migrating (compared to 71 percent for men), indicating that a significant portion of rural young females seek economic independence through labor migration. To the extent that women participate in economically oriented migration, however, they mainly do so at relatively young ages. Among the female floating migrant respondents in the age group 45–59, the proportion citing "manual labor or business" as the principal reason for migration was only 31 percent, whereas for men in this age group the proportion was 63 percent.

Table 5 shows reasons for migration among intracounty migrants. As mentioned earlier, the 2000 census is the first to collect information on the intracounty migrant population. This permits us to compare the characteristics of intracounty migrants with intercounty migrants (as shown in Table 4) for the country as a whole. The differences between the reasons given for migration by the floating population and permanent migrants are much less marked than in the case of intercounty migration. For example, 20 percent of the male respondents in the intracounty floating population cited "looking for manual

TABLE 5 Reasons for migration between 1995 and 2000 by sex and *hukou* status as stated in the 2000 census by intracounty migrants, China

	Reason for migration (%)									Number (1,000)
	1	2	3	4	5	6	7	8	9	
Total	**10.3**	**3.5**	**3.5**	**8.8**	**25.5**	**19.1**	**15.4**	**4.4**	**7.2**	**52,991**
Floating population										
Total	17.4	5.4	2.3	10.9	22.6	9.6	17.1	6.1	8.6	26,522
Male	20.4	7.7	2.7	12.6	24.2	3.8	13.7	5.7	9.3	13,078
Female	14.4	3.2	2.0	9.2	21.0	15.3	20.4	6.6	8.0	13,444
Permanent migrants										
Total	3.2	6.3	4.7	6.7	28.4	28.5	13.6	2.7	5.8	26,469
Male	4.8	10.6	6.9	8.1	38.9	5.2	14.5	3.1	7.9	10,249
Female	2.2	3.6	3.3	5.8	21.8	43.3	13.1	2.4	4.5	16,220

1= Manual labor or business; 2= Job transfer; 3= Job assignment; 4= Education or training; 5= Demolition of old residence or change of residence; 6= Marriage; 7= Joining dependents; 8= Joining relatives or friends; 9= Other.
SOURCE: Tabulated from the micro-data of the 2000 census.

labor or business" as the principal reason for migration, compared to 5 percent of male permanent migrants. The corresponding figures for intercounty male migrants are 71 percent and 6 percent. The category in Table 5 with the highest percentage for both the floating population and permanent migrants is "demolition of old residence or change of residence" (reason number 5).

Figure 2 corroborates the findings above regarding the greater similarity between intracounty floating and permanent migrants. For example, the educational distribution by *hukou* status is nearly identical for the two groups of intracounty migrants. This is because it is much easier to obtain *hukou* for intracounty migration (often from a rural area to a town in the same county). The story is very different for intercounty migrants, as also shown in Figure 2. Permanent migrants (with *hukou*) are characterized by having large proportions of persons with college degrees or high school education. In contrast, over three-quarters of the floating population have education levels of middle school or below.

Summary and conclusions

This article uses tabulations from the 2000 Population Census of China along with a micro-level data sample from the census to provide a picture of China's floating population. It also assesses changes over time, in particular between the 1990 and the 2000 censuses. By 2000, the size of China's floating population has grown to nearly 79 million, if that category is defined as migrants who moved between provinces or counties and resided at their destinations for six months or more.[8] A new feature of the 2000

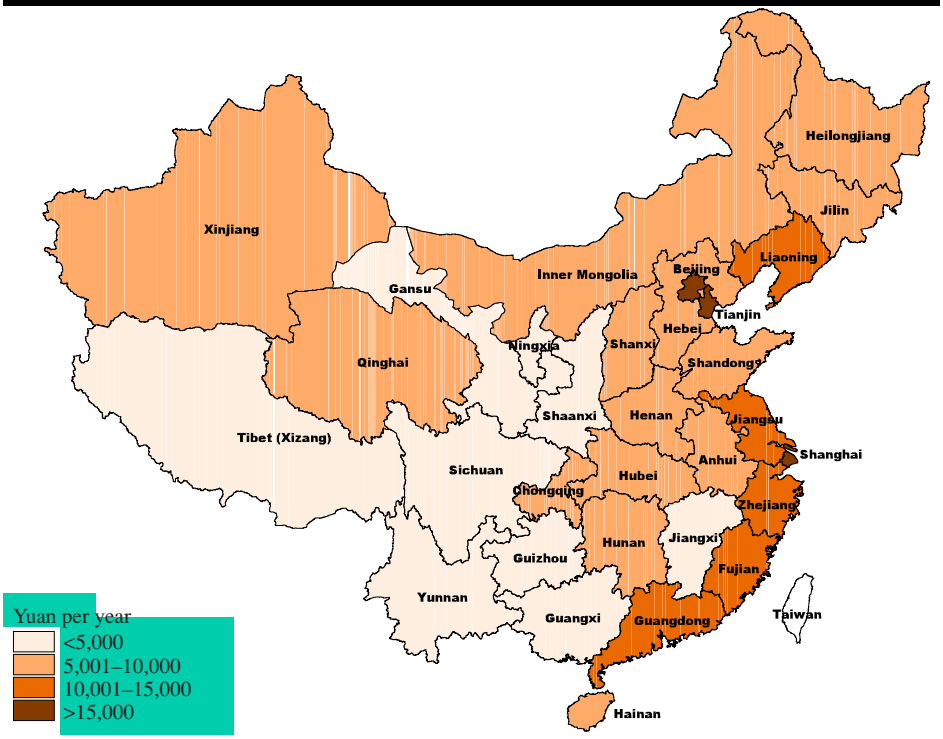
census is that it also enumerates intracounty floating migrants. Intracounty floating migration is large, contributing another 66 million to the size of the floating population.

Despite the Chinese government's policy of encouraging the development of western regions of the country, China's coastal regions, and especially the province of Guangdong, experienced the largest increase in the size of the floating population. With less than 7 percent of China's population, Guangdong has 27 percent of China's floating population. The size of the floating population in Guangdong nearly tripled between the 1990 and the 2000 censuses.

Findings from the 2000 census suggest that cities are significant not only as destinations but also as places of origin in China's floating migration stream. This point is often lost in public discussion about floating migrants. City-origin migrants accounted for 15 percent of the interprovincial floating migrant population (PCO 2002), and they tend to be relatively highly educated. Thus, floating migrants from cities and the countryside complement each other, one group providing human capital and the other supplying needed labor. Moreover, city-origin floating migrants are the largest group of participants in intracounty migration. The large increase in within- or between-city moves is a result of China's housing reforms over the last decade.

The continuing growth of China's floating population raises the question of what will happen to China's *hukou* system. Migration, particularly rural-to-urban migration, has become a permanent feature of Chinese society. China's agricultural system no longer requires very large numbers of laborers; thus the transfer of rural labor to nonagricultural employment must be part of China's strategy for modernization and urbanization. Reform of China's *hukou* system has been in progress for many years. The major step in this regard has been implemented in small towns/cities, where obtaining a local *hukou* became much easier. In large cities, however, progress has been slow. The *hukou* reform in large cities tends to focus on giving a local *hukou* to migrants with relatively high education or those with the ability to purchase commercial housing. Since the majority of floating migrants falls into neither category, a local *hukou* continues to be beyond their reach. While the government considers the next steps in the *hukou* reform, the current system continues to inhibit the integration of China's newest urban citizens. Migrants without household registration status face daunting problems—in particular, difficulties in school enrollment for their children and limited access to health care, adequate housing, and employment opportunities. In addition, the floating population presents major public health challenges, especially in the provision of reproductive health care for migrant women and the need to address the increased risk to both sexes of infection with sexually transmitted diseases and HIV. These problems point to the urgent need for radical reform of the *hukou* system in China.

APPENDIX Gross domestic product per capita by province: China, 2000



NOTE: 10,000 Yuan = approximately US$1,220 (based on exchange rate of US$1 = 8.2 Yuan).
SOURCE: National Bureau of Statistics 2001: Table 3-9 (p. 57).

Notes

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1 The floating population registered in the 2000 census as resulting from migration during 1995–2000 was around 59 million as compared to 20 million permanent migrants (see Table 1). The figure for the floating population does not include floating migrants who arrived during the six months before the census, whereas for permanent migrants the figure of 20 million includes permanent migrants who arrived during the six months preceding the census.

2 All calculations and tabulations using the micro-level data were performed at Hong Kong University of Science and Technology,

one of several institutions that have been granted permission by the National Bureau of Statistics of China to use the micro-level data sample of the 2000 census. At the time of this writing (early 2004), it is not clear whether the micro-level data sample will be released for public use. The decision ultimately rests with the National Bureau of Statistics.

3 Identical definitions of the floating population were used in the data collections for 1982 and 1990. This means that, to be counted as part of the floating population, an individual must have resided at the place of destination for no less than a year or must have been absent from the county of household registration for more than a year. Identical definitions for the intercounty floating population were applied to the data from 2000 (a six-month instead of one-year criterion was used). Data for 1982, 1990, and 2000 are from PCO 1985, PCO 1991, and PCO 2002. Although the 2000 census includes intracounty floating migrants, for comparison we use only the intercounty floating migrants to prepare Figure 1. Caution should be exercised when assessing changes over time. Unlike data for other years that counted the floating population at destinations, the intercounty floating population estimate for 1995 (43 million) is the product of the total number of household members who left the place of registration (73.6 million) and the proportion of the intercounty floating population among the total floating population (58.5 percent), based on a special tabulation provided by China's National Bureau of Statistics. We used the figures on migrant origin because we believe information on migration derived at migrant destinations severely underestimated the size of the floating population in 1995. We reached this conjecture on the basis of another measure of migration: whether individuals moved during the five years preceding the census or survey. The five-year migration data from 1995 and 1990 show almost no change, an outcome that is very unlikely. We believe that if the 1995 China One Percent Population Sample Survey underestimated five-year migration data, it is very likely that it underestimated the floating population as well. See also Chan and Hu (2003).

4 However, undercounting of the floating population is still likely especially in large cities (see a discussion of this issue for Beijing by Li 2004).

5 The number of cities in China has grown significantly over the years. This growth is in part due to the reclassification of certain towns as cities. For example, in 1990 there were 453 cities. By 2000, the number of cities had increased to 659 (Jia 2001).

6 To make the 1990 and 2000 data on the floating population comparable, we developed a procedure to eliminate from the 2000 intercounty floating population those floating migrants who came within 6 to 12 months before the 2000 census. To do this, we took advantage of information on the timing of migration contained in the 2000 census. For each province, we applied this procedure to the micro-level data sample of the 2000 census to generate needed comparable data on the floating population for 2000.

7 Ours are conservative estimates of the growth rate. A technical document concerning the estimation details is available from the authors upon request.

8 Some initial tabulations concerning temporary migrants (persons who were absent from their place of household registration for less than six months) have been published for Beijing and China as a whole (PCO 2002; PCOBJ 2002).

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