Elsevier
Journal of Socio-Economics, 2000, Vol. 29, No. 1; p. 39-56

The New Rural-Urban Labor Mobility in China: Causes and Implications

Michael C. Seeborg, Zhenhu Jin, and Yiping Zhu

Abstract

As the Chinese economy reforms, a huge new *floating population* of rural-urban migrants is transforming the urban labor force. This article explores some of the most important reasons for the emergence of the floating population in China. We argue that the neoclassical model alone is not adequate to explain the massive rural-urban internal migration underway in China. Instead, ideas drawn from both sociological theories of segmented markets and institutional economics are used to supplement the standard neoclassical explanation. We found that Chinese policy reforms in both rural and urban areas decreased the balkanization of labor markets and opened up employment opportunities for many rural-urban migrants. In rural areas, a set of agricultural market reforms, starting in 1978, increased farm incomes and simultaneously produced a large surplus labor supply. In urban areas, reforms beginning in the 1980s created an effective demand for rural migrants. Of particular importance was the development of a contract labor system and the emergence of a private sector. © 2000 Elsevier Science Inc. All rights reserved.

Keywords: Chinese economy; Rural–urban labor mobility; Labor force

1. Introduction

Chinese labor is once again on the move. However, unlike the forced migrations in the late 1950s, the current movement is largely voluntary. State controls over internal migration have

decreased markedly in recent years, triggering massive voluntary rural-urban migration. Although it is widely recognized that a flexible and fluid labor force is important in advanced market economies, voluntary labor mobility is a relatively new phenomenon in China. The purpose of this study was to identify the major economic forces and policy changes that have led to this rapid growth in rural-urban migration and to reflect on some of the implications of these changes.

The emergence of this huge new *floating population* in China's urban areas is adding vitality to urban development by providing needed labor for the recent explosion of urban construction and by performing many service functions, including sales work in retail establishments and domestic work. This migration is also helping to adjust the supply and demand for labor between rural and urban areas. Because the migration is not necessarily permanent, it reduces the risk taken by the migrants by enabling them to take advantage of urban opportunities without cutting their ties to village homes (Goldstein and Guo, 1992, p. 39).

But the rural-urban migration is also creating conflict as the new arrivals to urban areas compete with increasing numbers of unemployed urban residents who have lost their jobs as a result of the restructuring and privatization of state-owned enterprises. The potential for conflict between rural migrants and urban residents is in large part caused by many institutional distinctions between urban and rural residents, such as separate urban and rural registration systems and restrictive controls exercised by work units in urban state-owned enterprises. Although the use of these restrictive controls has decreased significantly in recent years, they still put rural migrants at a significant disadvantage to urban residents in the job market.

Most members of the floating population are young adults who leave rural areas, without their families, to seek higher wages in cities. They tend to be somewhat more educated than rural residents who do not migrate (Wu and Zhou, 1996, p. 57). Many come with the intention of staying a relatively short time and then returning home once they have accumulated sufficient savings to establish a higher standard of living for themselves and their families. However, once established in the city, increasing numbers have become attracted to urban life and plan to stay permanently.

Both men and women are migrating in large numbers. However, the gender distribution of migrants varies greatly from place to place. Considering the provinces with heavy urban immigration, those with high levels of infrastructure investment or growth in heavy industry tend to have male-dominated migration streams (e.g., Beijing, Tianjin, Shanghai, and Liaoning), whereas those with labor-intensive manufacturing industries, such as textile and apparel manufacturing, tend to have female-dominated streams (e.g., Guangdong Fujian and Jiangsu). In terms of specific occupations, male migrants often find employment as construction workers and women on labor-intensive production lines or in domestic service jobs (Wu and Zhou, 1996, pp. 58–59).

Besides working in jobs that urban residents generally find inferior or distasteful (Wu and Zhou, 1996, p. 59), members of the floating population are often denied many of the basic privileges enjoyed by permanent urban residents who have urban residency permits. For example, they are often denied access to subsidized housing, subsidized medical care, and schooling for their children. This institutionalized and systematic discrimination is an

Table 1
China's population and labor force by area of residence (in millions)*

Year	Total Population	Percent Urban	Percent Rural	Total Employment	Percent Urban	Percent Rural
1978	962.59	17.9	82.1	401.52	23.7	76.3
1980	987.05	19.4	80.6	423.61	24.8	75.2
1985	1058.51	23.7	76.3	498.73	25.7	74.3
1986	1075.07	24.5	75.5	512.82	25.9	74.1
1987	1093.00	25.3	74.7	527.83	26.1	73.9
1988	1110.26	25.8	74.2	543.34	26.3	73.7
1989	1127.04	26.2	73.8	553.29	26.0	74.0
1990	1143.33	26.4	73.6	639.09	26.0	74.0
1991	1158.23	26.4	73.6	647.99	26.2	73.8
1992	1171.71	27.6	72.4	655.54	26.3	73.7
1993	1185.17	28.1	71.9	663.73	26.5	73.5
1994	1198.50	28.6	71.4	671.99	27.4	72.6
1995	1211.21	29.0	71.0	679.47	28.1	71.9
1996	1223.89	29.4	70.6	688.50	28.8	71.2

* Source: *China Statistical Yearbook, 1997,* Table 3-1 and Table 4-4, Compiled by State Statistical Bureau, People's Republic of China.

important reason why migrants choose to come by themselves to urban areas, leaving other family members behind in their villages of origin. It also is an important reason for the observed high rates of return migration from urban areas back to rural villages.

Although estimates of the size of the floating population vary, it most certainly represents one of the largest internal migrations in recent history. For example, there are as many as 13 million urban guest workers in Guangdong Province, which is near Hong Kong, and another four million in the city of Shanghai (Kahn and Smith, 1995). The floating population was estimated by the government to be between 60 and 80 million in 1990 (Wakabayashi, 1990), and it could be in excess of 100 million today. Wu and Zhou (1996) estimated that, since 1990, China's annual rural-to-urban migrant labor flow has been between 50 and 60 million people, and between 10 and 15 million migrants during a given year will permanently settle in urban areas.

The exact size of the floating population is in dispute. However, there is no doubt that it represents an important force in the urbanization of China. Table 1 shows population and employment statistics for urban and rural areas from 1978 through 1996. Over that 18-year period, the official urban population increased from 17.9% of the total population to 29.4%. It is obvious from these figures that there is massive urbanization, and from all accounts, rural-urban migration is playing an increasingly important role in the process (Hayase, 1991). Impressive as these reported increases are, they probably understate the magnitude of the rural-urban population shift because many recent arrivals to urban areas probably escape enumeration because they often lack a permanent residence (Goldstein and Goldstein, 1991).

The remainder of this article systematically explores the emergence of the floating population in China from both urban and rural perspectives. First, we outline some of the major economic and institutional forces shaping the migration. Second, we examine some important changes in the rural sector that influence rural-urban migration, with special

attention to the effects of agricultural reforms, surplus labor in agriculture, and the development of township and village industries (TVEs). Third, we examine developments in the urban sector, with special attention to changes in state-owned enterprises (SOEs) and the emergence of competitive product and labor markets. Implications of these changes are discussed in the concluding section.

2. A conceptual model of voluntary rural-urban migration in China

Our starting point is Michael Todaro's model of internal migration (Kasliwal, 1995, ch. 9; Todaro, 1969). Todaro's basic model posits that rural-urban migration depends on expected rural-urban income differentials. The model introduces two concepts that are unique. First, *expected* rural-urban income differentials are used rather than absolute income differentials. This means that the potential migrant takes into account the probability of obtaining employment as well as the expected wage rate. In Todaro's models, migration can continue even in spite of high urban unemployment, if urban wages are sufficiently high to overcome the risk of unemployment.

The second concept that distinguishes the Todaro model is that it assumes the migrant to be forward-looking and motivated by expected income streams over time rather than by current income. This means that migration may occur even when urban real income is less than rural real income for a certain period after migration. Migrants may be quite willing to endure short-term low income levels for the promise of higher income in the long run. For this reason, Todaro (1969, pp. 139–140) posits his theory in terms of discounted present values of expected income streams.

Although the basic Todaro model provides a useful starting point for understanding internal migration in China, there is a serious shortcoming. Todaro perceives a potential migrant as facing a single urban labor market with a certain probability of employment. The potential migrant is either employed or unemployed at that wage rate. However, the Chinese urban market is more complex than this. In our version of the Todaro model, we envision a potential migrant facing four basic outcomes: 1) employment in the SOE sector; 2) employment in the non-SOE contract wage sector; 3) employment in the informal or *urban traditional* sector; or 4) unemployment.

As we examine China's urban labor markets from the perspective of a potential migrant, two important facts emerge. First, each of the four basic outcomes yields substantially different wage and benefit possibilities. Second, the probability of a migrant securing employment in a given sector depends on a set of institutional factors, including residence requirements and other constraints imposed by the state. These institutional factors segment the market and severely limit access to certain labor market segments.

Because of market segmentation, many researchers have discarded neoclassical economic models of internal migration in favor of the segmented market models of sociology (e.g., Bian, 1994; Qian, 1996) and institutional economics (e.g., Doeringer and Piore, 1971). However, we feel it is more appropriate to synthesize the two approaches to retain the central features of the Todaro model and expand it by taking several market segments into account. This approach acknowledges the importance of economic forces in stimulating intersector

mobility and allows exploration of institutional factors that restrict intersector mobility. Urban labor markets are highly segmented, with intersegment mobility limited by barriers largely erected by the state. Therefore, we partition the urban labor market into the following four sectors for the purpose of analysis: 1) SOE sector; 2) non-SOE contract wage sector; 3) the informal employment sector; and 4) unemployment. Each of these labor market sectors are outlined briefly.

2.1. Employment in state-owned enterprises

Jobs in the SOE sector are generally out of reach for rural-urban migrants. In the past, SOE jobs were referred to by the Chinese as *iron rice bowls* because they typically offered employment security and relatively high wages and benefits. The benefits often included health care, subsidized housing, and the safety net of the employment bureaucracy. Although some recent labor reforms make SOE employment a legal possibility for migrants (Han and Morishima, 1992), other reforms have reduced opportunities by downsizing SOEs in attempts to increase competitiveness. Most important among these is the 1997 adoption by the 15th Communist Party Congress of a sweeping restructuring of SOEs. This restructuring involves wide-scale privatization of most SOEs, which in all probability will cause downsizing and continued layoffs by many inefficient and over staffed enterprises (South China Morning Post, 1997a).

2.2. Employment in the non-SOE contract wage sector

The non-SOE contract wage sector is the fastest growing sector of urban employment opportunities and is a major employer of the floating population. With the development of more competitive markets in China, firms and individuals have found it necessary to hire labor in competitive labor markets, often for work that is seasonal in nature. Work in the contract wage sector is varied, including significant employment of construction workers, domestic workers, waiters, waitresses, and store clerks. Reasons for the rapid growth of contract wage employment include high rates of capital investment in construction projects over the past several years, growth of the service sector, and the emergence of non-state-owned firms in the economy (South China Morning Post, 1998).

2.3. Employment in the informal sector

Although most urban-rural migrants aspire to occupations in the contract wage sector, many end up self-employed and often underemployed in the *informal* sector. All major Chinese cities now have thousands of migrants working on the streets vending food, repairing bicycles and shoes, and collecting recyclable materials such, as aluminum and cardboard.

2.4. Unemployment

Although it is not possible to accurately document the levels of unemployment within the floating population, it is our impression that this number is relatively small. There are many

opportunities to participate in the *informal market.* The major labor market problem facing many new migrants who are participating in the informal market while waiting for an opportunity in the contract wage sector is best characterized as underemployment.

Conceptually, it is useful to view the potential migrant as assessing the probability of ending up in each of the above market segments in addition to assessing the compensation he or she would likely receive in each of the sectors. This information, when compared to opportunities in the rural sector, would determine whether rural-urban migration occurs. What interests the migrant is the expected permanent income gain from the move (i.e., the present value of the expected income to be earned in the urban market compared to the present value of the expected income from the rural market, if the migration had not taken place). The expected permanent income gain from the move depends on three main factors: 1) the length of time of the anticipated stay in the urban area, 2) the probability of employment in each of the three sectors over the anticipated stay, and 3) the anticipated wage rate in each sector over the anticipated stay. The model traced above is outlined in more detail in the Appendix.

In China, institutional constraints and state policies have segmented employment markets and created barriers to mobility between labor market sectors. Because public policy is largely responsible for market segmentation, changes in those policies can have large effects on the direction and magnitude of labor mobility. The remainder of this article explores how recent developments in rural and urban sectors have likely influenced rural-urban migration in China.

3. Rural sector

China's rural sector has experienced remarkable demographic and structural changes since 1978. We have chosen four factors that seem to be especially important in shaping voluntary decisions to migrate: 1) a large gap between urban and rural incomes; 2) agricultural market reform, including the development of the *household responsibility system*; 3) the development of industry in rural areas; and 4) a very large pool of surplus labor in agriculture. Each of the four factors are examined briefly.

3.1. Persistent urban-rural income gap

The Todaro model emphasizes the importance of urban-rural earnings differentials as a motivator of migration. The gap between urban and rural per capita incomes has been very large for many years, with per capita real incomes in rural areas being roughly one half of real income in urban areas. However, there has been some variation in the ratio of urban to rural income over time. Through the mid-1980s, the urban-rural income ratio remained fairly constant and even declined slightly, showing that rural incomes were rising even faster than urban incomes. The three main reasons for this were the development of township and village enterprises, the increase in grain procurement prices, and greater efficiency in agriculture caused by the introduction of market reforms such as the *household responsibility system.* Then, beginning in the mid-1980s, the urban-rural income ratio began to increase. Table 2 shows real average annual incomes for rural and urban areas from 1985 through 1996.

Table 2
Per capita annual real income of urban and rural households* (Base year = 1985)

Year	Rural Real Income	Urban Real Income	Urban/Rural Income Ratio
1985	397.6	685.3	1.72
1986	399.4	773.7	1.94
1987	410.5	787.0	1.92
1988	411.6	796.9	1.94
1989	380.9	771.8	2.03
1990	415.7	838.6	2.02
1991	419.5	888.3	2.12
1992	443.4	967.1	2.18
1993	458.5	1065.8	2.32
1994	492.3	1160.0	2.36
1995	541.4	1216.1	2.25
1996	612.6	1256.8	2.05

* Source: *China Statistical Yearbook, 1997,* Table 8-2 and Table 9-4, Compiled by State Statistical Bureau, People's Republic of China. Note: Nominal rural per capita income was deflated by the rural area consumer price index and nominal urban income was deflated by the urban area consumer price index.

Since the late 1980s, the urban-rural income ratio rose rapidly as development policy began to favor urban areas (Oi, 1993). Contributing to this trend is the fact that rural TVEs lost some of their momentum after 1988. Many TVEs, lacking experience and expertise in a modern market-oriented economy, experienced difficulties beginning in the late 1980s. Because the growth in employment opportunities in TVEs was much lower in the 1990s, surplus labor in agriculture was increasingly focused on opportunities in larger urban areas.

All other things being equal, an increase in urban-rural income ratios should trigger an increase in migration. Rural per capita income increased more rapidly in the early years of economic reform than did urban per capita income. However, the rural/urban per capita ratio peaked in 1984 and started declining in 1985 (Table 2). By 1994, the ratio stood at about 40%, lower than in 1978, when economic reform started. The income disparity between urban and rural residents was large by international standards. The World Bank (1997, p. 16) reported that in most countries, rural incomes were 66% or more of urban incomes. The difference in income is even greater when in-kind income for subsidized housing, education, health care, pension, and other services are included. These services are generally limited to urban residents and are not included in official data. The World Bank (1997, p. 16) put the adjusted rural-urban income ratio in 1990 at 31%, significantly lower than the unadjusted 50%. The huge income disparity between rural and urban areas provides enormous incentive to the rural residents to migrate to the urban areas in search of higher living standards.

3.2. Agricultural market reform decreases the opportunity cost of leaving rural areas

Major market reforms occurred in agriculture as early as 1978. The state introduced the household contract responsibility system, returning land to individuals under long-term leases. At the same time, agricultural procurement prices were increased by 25%. These

market reforms increased peasants' incentives to engage in agriculture. Grain production increased 27% between 1978 and 1983 and reached an all-time historical high in 1983–1984. This allowed rural real per capita income to increase 15% annually between 1978 and 1984, whereas annual growth between 1957 and 1977 was only 0.5%. In 1985, the state instituted a contract procurement system to limit the amount of grain it would buy from peasants beyond the basic quota. (Oi, 1993). Altogether, these reforms moved agriculture rapidly toward a market-oriented system.

On the surface, it seems that rural-urban migration should have decreased with the introduction of the household responsibility system in the early 1980s because the reforms increased rural incomes relative to urban incomes. But there was another factor at work. While raising the average income of families, the reforms actually decreased the marginal contributions of individual family members to family income and thus decreased their opportunity cost of migration. To understand how reforms could increase family income while decreasing the marginal contribution of individual family members to family income, it is necessary to explore how the reforms, which began in 1978, affected individual and family earnings of rural residents. The nature of these reforms and their effects on the opportunity cost to migrate are developed in this section's remaining paragraphs.

Before the introduction of the household contract responsibility system, the social structure in the rural areas included production teams, which were both political and economic organizations. Typically, the team consisted of all the households in a village and the surrounding area, usually more than 100 households. Financially, it was a mandatory partnership. Each team member worked for *work points.* The number of work points earned did not depend on the workers' actual productivity, but instead on a number of other factors, including hours worked, gender, and age. Young and middle-aged males received the most points per day worked. The value of a work point was calculated annually, based on the total income of the production team, which varied from year to year depending on state procurement prices and work team production.

This system created serious incentive problems. A worker had the incentive to show up for work and put in hours because this determined work points, but had little incentive to work hard because individual effort was not rewarded under this system. This is the classic *free rider* problem in economics. Harder work by an individual might increase team output marginally, but because the individual is only one of many workers, hard work would have negligible effects on his or her own wages. The predictable result of this system is low moral and incentives to shirk. But, from a family perspective, every individual member who put in work hours contributed to family income under this system. Therefore, even if family members would have been able to migrate, the opportunity cost of losing any family member through migration would still have been relatively high. So, in addition to the political constraints on movement, the system created economic disincentives for workers to migrate to urban areas by keeping the opportunity costs of migration high.

Introduction of the household responsibility system changed the incentive structure in a way that lowered the opportunity cost of migration while raising rural incomes. Every household was now rewarded on the basis of its own production rather than team production. This institutional change significantly reduced incentive problems, triggering rapid productivity gains and increases in rural household income. With the reward structure now focused

Table 3
Number of employed persons in rural areas (in millions)

Year	Total Number Employed in the Rural Sector	Number of Rural Workers Employed in TVEs	Number of Rural Workers Employed in Private Enterprises	Percentage of Total Rural Workers in TVEs and Private Enterprises
1978	306.38	28.27	NA	9.2
1980	318.36	30.00	NA	9.4
1985	370.65	69.79	NA	18.8
1986	379.90	79.37	NA	20.9
1987	390.00	88.05	NA	22.6
1988	400.67	95.45	NA	23.8
1989	409.39	93.67	NA	22.9
1990	472.93	92.65	1.13	19.8
1991	478.22	96.09	1.16	20.3
1992	483.13	106.25	1.34	22.3
1993	487.84	123.45	1.87	25.7
1994	487.86	120.17	3.16	25.3
1995	488.54	128.62	4.71	27.3
1996	490.35	135.08	5.51	28.7

on household productivity, the existence of surplus labor in agriculture became apparent. Under the old system, the more individuals in the household putting in hours, the more points earned. Now, if an individual does not add significantly to household production, it may well be advantageous for that individual to migrate. Therefore, the institutional change to the individual responsibility system increased the incentive for many individuals to migrate, even though it increased rural incomes. Also, the higher rural household incomes provided resources to help defray the costs of migration.

After the mid-1980s, however, the thrust of the reform movement shifted away from agriculture toward towns and cities. As a result, capital investment in agriculture as a percentage of total investment slipped from 39.6% in 1982 to 9.4% in 1988, and increases in rural incomes failed to keep pace with urban incomes (Oi, 1993).

3.3. Development of township and village enterprises

In 1985, the central state authorized localities to diversify and engage in nonagricultural activity. This gave local officials the freedom to develop revenue-generating enterprises. The result was a large investment shift to TVEs, with the distribution of employment in rural areas shifting away from primary employment in farming, toward secondary and tertiary employment in villages and towns (Yan, 1990). Table 3 shows the rapid growth in TVE employment in comparison to employment in basic agriculture and employment in urban areas. Rural industrial output grew nearly 17% per year from 1978 through the early 1990s (Mood, 1997). By 1996, TVEs employed over 135 million rural workers (Table 2). Rural industrial production currently employs about one quarter of all rural labor, and produces one half of the national industrial output value (Mood, 1997).

The rise of TVEs contributed to the continuous rise of rural income during the late 1980s, offsetting somewhat slower income growth in agriculture. For example, during the period

from 1984 to 1988, net income per workday increased 45.9% for workers in nonagricultural industries, compared to 15.1% in grain production (Oi, 1993). TVEs also absorbed part of the increasing surplus labor from agricultural decollectivization. But despite the tremendous job-creating ability of TVEs, the level of surplus labor in agriculture remains large.

3.4. Surplus labor in agriculture

The level of surplus labor in the agricultural sector is an important determinant of the income level of potential rural-urban migrants. Increasing productivity in the agricultural sector generates surplus labor, which can be used in the industrialization process (Chang, 1993). These workers become a potential source of rural-urban migration as migrants seek employment opportunities yielding higher income in the urban sector. In China, surplus agricultural labor represents a potentially huge source of future migration. Estimates of the size of the surplus agricultural labor force vary widely, but all agree that it is immense. Wakabayashi (1990), for example, placed the number at 220 million in 1990. Surplus labor in agriculture is likely to continue to be a problem in the future. Wu and Zhou (1996) estimated that approximately 7 million rural residents will reach working age annually for the next several years.

In sum, it is clear that developments in rural areas have produced conditions that encourage migration. Continued natural increases in the rural population and increases in productivity in agriculture have resulted in a very large surplus of labor in agriculture. Although the TVEs have helped absorb significant amounts of the surplus labor and to raise wages in rural areas, they have not provided enough jobs to prevent the emergence of a huge surplus labor population in rural areas. As a result, rural wages have not kept pace with urban wages, and the growing wage differential encourages rural-urban migration.

4. Urban sector

In addition to developments in the rural sector that encouraged migration to urban areas, conditions in urban areas must also be taken into account. There are a number of unique institutions that have limited opportunities for rural migrants in Chinese cities in the past. However, recent reforms have significantly changed the institutional framework in cities. This section explores some of the major institutional arrangements that have restricted rural-urban migration and demonstrates how these institutional barriers have been relaxed over time. First, we discuss the effects on migration of an *iron triangle* of constraints: residency requirements, state-controlled work units, and secret personnel files. We then turn to the effects on migration of certain economic reforms, especially development of the contract wage system in SOEs. Finally, the effects of privatization and rising unemployment on the floating population are explored.

4.1. Institutional barriers to rural-urban migration: The iron triangle of constraints

A decade ago, it was difficult for migrants from rural areas to penetrate formal urban markets because employment opportunities were, for the most part, rationed to urban residents. Rural residents were excluded from these markets through what could be referred to as an iron triangle of constraints. This iron triangle was a triad of controls exercised through residence permits *(hukou)*, state-owned work units *(danwei)*, and secret personnel files *(dangan)*. Because urban residence permits (hukou*)* were difficult for rural residents to obtain, rural migrants did not have many benefits enjoyed by urban residents, such as access to basic public goods and services, and access to many jobs. Government control over work units (danwei) produced stable employment and many benefits in SOE employment for urban residents, but rural migrants were denied access to these jobs. Finally, secret personnel files (dangan) often influenced transfers and promotions. These three institutions still exist, but have been greatly weakened through reforms beginning in the 1980s (Lee, 1997).

Dangan is a comprehensive personal file containing one's family political background, educational and employment history, job performance, and political inclination. Dangan is kept by the employer. Until the current wave of reforms, no enterprise could hire a worker without first securing dangan from that worker's employer. Therefore, by refusing to transfer dangan, the employer had virtual veto power over whether the worker could move to another place of employment. Many employers no longer require that dangan be transferred as a criterion for employment. Consequently, labor mobility is not constrained nearly as much by dangan as in the past.

The importance of residency status on economic opportunity in China cannot be overestimated. Yang (1993) explained the pervasive nature of the restrictions against rural residents living in urban areas:

> With nonagricultural household registration, people can obtain a variety of coupons from the local government which allow them to buy rationed goods at government-set prices. They are entitled to full nonagricultural (urban) employment, public housing, free medical services, and retirement benefits. By contrast, people with agricultural household registration have to obtain daily necessities from their own production or from stores at higher market prices. They have no guaranteed employment. . . .They are not eligible for free government medical services, nor can they enjoy retirement benefits and pensions. When they are too old to participate in agricultural production, the main source of support is their children (p. 797).

Fortunately, private markets for many basic goods and services are now emerging, and rationing is much less common. The increased availability of goods in private markets has significantly weakened the hold that the household registration system had on potential migrants. This is especially true for food because urban residency status is required to qualify for rationed food coupons. Because agricultural reform eliminated most food shortages, the amount of food rationing decreased markedly. By 1985, members of the floating population could live in cities and obtain food at market prices with little difficulty (Bian, 1994, p. 55).

4.2. Contract wage systems in SOEs

A set of Urban Economic reforms implemented in the late 1980s also loosened the grip that the iron triangle of constraints had over workers. Among other things, these reforms 1) created a contract wage system in SOEs; 2) made SOEs more competitive by reducing state subsidies; and 3) began the process of privatization of many SOEs.

With these reforms, it became possible for rural workers to seek employment in SOEs in the type of jobs that were previously rationed to urban residents. The contract wage system, which began with the implementation of four regulations in 1986, replaced the old practice of placing workers permanently with firms in what amounted to a guarantee of lifetime employment (Han and Morishima, 1992), and made it possible for rural workers to contract for jobs in urban SOEs regardless of their residency status. The development of the contract wage system has certainly encouraged voluntary rural-urban migration and contributed to the growth of the floating population.

Although urban economic reforms have opened up opportunities for rural migrants, there continues to be differential treatment between urban residents and rural residents. In SOEs, rural migrants are often contracted as temporaries. They do not enjoy the full range of benefits and earn lower salaries than do urban workers (Gu, 1992, p. 84). A reform implemented in 1991, required that peasants hired on a temporary basis in state-owned enterprises be treated similarly to permanent urban contract workers in terms of such benefits as bonuses, food subsidies, holidays, sick-leave wages, and medical care. But inequities still exist. For example, temporary workers' relatives are not eligible for half-price medical care under the 1991 reform (Solinger, 1995, p. 161). Through a review of the literature and personal interviews, Solinger (1995) found that many enterprises hired members of the floating population with the express desire to cut labor costs.

> Enterprises hiring temporaries have found that they can afford to pay the temporaries regular or even slightly higher wages than the permanent employees receive and still save money by cutting back on, even though not entirely eliminating, benefits. Several of my interviewees commented explicitly on the cost-saving their danwei could enjoy by relying on outsiders to supplement their regular workforce . . . no insurance had to be paid; the young people engaged were unlikely to become seriously ill (and, with their limited-term contracts, would depart before they got much older); no schools had to be set up for their benefit because they were required to be unmarried and thus childless; their housing, with half a dozen or more squeezed into one dorm room, was remarkably cheap; and regular workers had to be compensated whether they worked or not, which was not the case for temporaries (Solinger, 1995, pp. 169–170).

Although conditions in SOEs are still not equal for rural and urban residents, the recent round of reforms has opened up opportunities to rural migrants that did not previously exist. Even so, in the near term, relatively few opportunities in SOEs are likely to be available to rural migrants. Many of these enterprises are contracting in size as their state subsidies are reduced, and they face a new competitive environment. However, in the long term, restructured and privatized SOEs are likely to be an important source of employment for rural-urban

Table 4
Urban employment by type of enterprise (in millions)*

	1980	1985	1990	1992	1994	1996
Employment in SOEs	80.2	89.9	103.5	108.9	112.1	112.4
Urban collective enterprises	24.3	33.2	35.5	36.2	32.9	30.2
Foreign funded enterprises	NA	0.06	0.6	1.4	1.95	2.7
Hong Kong and Taiwan funded enterprises	NA	NA	0.04	0.8	2.1	2.6
Private enterprises	NA	NA	0.6	1.0	3.3	5.5
Individuals	0.8	4.5	5.1	7.4	12.3	17.1
Units with other types of ownership	0.0	0.4	1.0	0.6	3.53	4.21
Total urban employment	105.3	128.1	147.3	156.3	168.2	174.8
Percentage of total employment in SOEs	76.2%	70.2%	70.2%	69.7%	66.6%	64.3%
Percentage of total employment in urban collectives	23.1%	25.9%	24.1%	23.1%	19.6%	17.3%
Percentage of total employment in all other enterprises	0.7%	3.9%	5.7%	7.2%	13.8%	18.4%
Total	100%	100%	100%	100%	100%	100%

* Source: *China Statistical Yearbook, 1997,* Table 4-4, Compiled by State Statistical Bureau, People's Republic of China.

migrants. These new competitive enterprises will have incentives to cut labor costs by hiring from the pool of rural migrants, and unlike SOEs of the past, they will not be restricted by urban residency requirements.

4.3. An expanding private sector

A set of privatization reforms have created highly competitive enterprises that have an incentive to hire rural migrants at low wages to keep production costs down. Many of these enterprises are funded through direct foreign investment, and many are joint ventures between foreign investors and Chinese enterprises. The reforms have also led to a surge in self-employment. Table 4 shows that, although SOEs remain the dominant source of employment in urban areas, other sources of employment are increasing their presence. The SOE share of total urban employment fell from 76.2% in 1980 to 64.3% in 1996. Urban employment in collective enterprises showed a similar trend, decreasing from 23.1% of total urban employment in 1980 to 17.3% in 1996. Rapid increases in urban employment have been seen in private enterprises and in self-employment (Young, 1997). Although private enterprises still employ a relatively small percentage of urban labor, their presence will increase dramatically over the next several years as many SOEs are privatized in response to a set of 1997 policy initiatives.

At the end of 1997, there were 28.8 million private businesses employing 61 million people (South China Morning Post, 1998) and this figure is likely to increase rapidly as the privatization process continues. The proliferation of private businesses should provide many employment opportunities for migrant workers and should have a positive impact on the amount of rural-urban migration.

4.4. An increase in urban unemployment

Offsetting the positive effects of the reforms discussed above are the adverse effects from increasing urban unemployment. These reductions stem directly from another set of reforms designed to make SOEs more competitive, such as the general reduction of state subsidies to these firms and the recent policy directive to begin wide scale privatization of most SOEs (South China Morning Post, 1998). These reforms caused employment in many SOEs and collectives to decline (South China Post, 1997a).

According to the Chinese Labor Minister, 8.14 million workers lost their jobs in 1996, and 5.62 million in the first 6 months of 1997 (South China Post, 1997a). To make matters worse, it is estimated that there are as many as 30 million redundant workers in the state enterprises. This massive surplus of labor in urban areas will clearly have a negative impact on the job prospects of rural-urban migrants who, in general, are less educated and less socially connected than urban residents. There are reports of laid-off workers taking over jobs once done by rural migrants, such as working as housemaids. What is more, government officials in the urban areas are far more concerned about finding jobs for the laid-off urban workers than the migrants. Increasing unemployment in urban areas will decrease the probability of finding employment and thus reduce the probability that rural residents choose to migrate, a result that finds support in Todaro's theory.

In recent years, a new type of urban surplus labor referred to euphemistically as *xia gang,* or off-post workers, emerged. These off-post workers do not report to work. They do, however, draw a fraction of their salary from their SOE employer, and as a result they do not show up in the official unemployment statistics. This *hidden* unemployment will rapidly disappear as the SOE privatization process continues. Competitive firms will not have the luxury of maintaining underemployed workers, and the off-post workers will need to compete more aggressively with members of the floating population.

This recent trend toward increasing urban labor surplus has major implications for the floating population and future rural-urban migration. Rural migrants now find themselves in direct competition with urban residents who are unemployed or underemployed. Beyond the probable social conflict between these two groups, we expect the increased competition from urban residents for the limited number of jobs to dampen the incentive to migrate. An increase in the urban labor surplus decreases the probability of employment in SOEs and in the private contract wage sector. This results in a decrease in the expected income from SOE and non-SOE contract wage employment which, in turn, reduces the economic incentive to migrate.

4.5. Decreasing importance of interpersonal connections

Another difficulty that promotes less than fair competition between urban and rural residents for jobs in SOEs and former SOEs is the importance placed on the strength of a person's interpersonal connections, referred to as *guanxi.* Cultivating these interpersonal connections takes time, effort and social position. Rural migrants are at a distinct disadvantage in developing guanxi. In an interesting empirical study of worker mobility in China,

Bian (1994, pp. 95–122) found guanxi to be a powerful predictor of first-job statuses and job-mobility.

However, we believe that increasing competition and a reduction in the need to ration goods in urban areas will reduce the importance of interpersonal connections over time. The recent growth in private sector jobs (Table 4) through foreign direct investment and domestic privatization will certainly create more employment opportunities for rural migrants. Interpersonal connections (guanxi) will likely be less important in these competitive enterprises.

5. Conclusions and implications

The tremendous changes under way in the urban sector are having diverse effects on the floating population. For example, direct constraints on voluntary migration, such as residency requirements (hukou), the controls of the work unit (danwei), and the use of employment records (dangan), have been relaxed considerably.

Although distinctions associated with residency status are still important in discouraging rural-urban migration, the introduction of the contract wage system and other reforms have opened new opportunities for rural migrants. Unfortunately, the positive effects from this tremendous increase in the freedom to contract have been eroded by widespread layoffs in present SOEs and recently privatized SOEs. The decrease of employment opportunities in SOEs and former SOEs puts the floating population in direct competition with unemployed and underemployed urban residents.

Although the level of employment in private firms is increasing rapidly, these firms cannot be expected to provide sufficient employment opportunities for much of the floating population. We can expect competition between urban residents and members of the floating population for private sector jobs to intensify as urban residents continue to be laid off from their once secure SOE jobs. This means that millions of rural-urban migrants will continue to compete in the informal job market for relatively low earnings and virtually no benefits. In addition, housing shortages and a lack of access to public goods, such as education for their children, suggests that most of the floating population will continue to be working-age adults who must leave other family members behind in their villages.

Developments in rural areas have also impacted rural-urban migration flows. Rural incomes, although increasing, have not increased as rapidly as urban incomes. Furthermore, the rural reforms, which produced impressive increases in productivity during the early 1980s, also produced huge surpluses of labor in rural areas. Part of this surplus labor was diverted to village and township industries during the 1980s, but in recent years these industries have slowed their growth. The combined effects of these developments in the rural and urban sectors have produced tremendous pressure for rural-to-urban migration. The result has been the emergence of the huge floating population.

If the current development bias favoring cities over rural areas continues (Oi, 1993), pressure for urban migration is likely to persist despite rising surplus labor in urban areas. The push from the increasingly large surplus labor in agriculture will be stronger than the negative effects of increasing surplus labor in cities. We believe that the recent increase in

surplus labor in urban areas, along with a leveling in urban capital expenditures, may slow the rise of the floating population, but will not stop it.

Without strong policy action, the floating population could become a major social problem in cities rather than a stimulus for growth. Increasing urban unemployment, overcrowding, criminal activity, and pressures on social services could result. It is important to redirect development resources toward the rural areas by allocating resources toward township and village enterprises and by encouraging foreign investment in rural areas. In addition, some of the idle capital from underused SOEs could be moved to rural areas to expedite the growth of TVEs. This would both avoid inefficient use of SOE capital and allow revitalized TVEs to absorb surplus agricultural workers (Shi, 1996, p. 112).

Only after development policy has achieved more balance between urban and rural areas should efforts be made to remove the remaining barriers facing the floating population in urban areas. Then, municipalities should insure that all residents have equal access to medical insurance, education, housing, and other basic services. This would allow migrants to make more permanent moves without having to leave their families behind.

Appendix

A conceptual model of rural-urban migration in China is outlined in this appendix. It draws heavily from the work of Michael Todaro (1969), but recognizes the highly segmented nature of urban labor markets in China. The primary difference between this model and the basic Todaro model is that ours acknowledges the existence of four urban employment sectors rather than one.

A rural resident will make the decision to migrate to an urban area when the following condition is met:

$$V_r < V_u \tag{1}$$

$$V_u = [Y_{u1} + Y_{u2} + Y_{u3} + Y_{u4}] - C \tag{2}$$

Where,

- V_r is the discounted present value of the expected rural real income stream over the period of migration.
- V_u is the discounted present value of the expected urban real income stream over the same period net of migration costs.
- Y_{u1} is the amount of V_u coming from the SOE sector. It is the product of the individual's perceived probability of employment in the SOE sector and the expected wage in that sector.
- Y_{u2} is the amount of V_u coming from the non-SOE contract wage sector. It is the product of the individual's perceived probability of employment in the non-SOE contract wage sector and the expected wage in that sector.
- Y_{u3} is the amount of V_u coming from the informal sector. It is the product of the individual's perceived probability of employment in the informal sector and the expected wage in that sector.

Y_{u4} is the amount of V_u coming from urban unemployment benefits. It is the product of the individual's perceived probability of unemployment and expected unemployment benefits.

C is the initial fixed cost of migration and relocation in the urban area.

The potential migrant is assumed to evaluate the expected benefits of migration (V_u) against the expected benefits of remaining in the rural sector (V_r). He or she will migrate only if $V_r < V_u$. Although the sum of the probabilities across the four labor market sectors will always be one, the individual probabilities, we believe, are very sensitive to certain policy initiatives and institutional changes. One purpose of this article was to identify those policy initiatives that are likely to have the greatest impact on the probabilities of employment in the various sectors and/or on the expected compensation in those sectors.

The internal migration model outlined above suggests that rural-urban migration should increase if 1) urban wages and benefits increase relative to rural wages and benefits and/or 2) the probability of securing employment in the higher paying segments increase. Currently the highest compensation, including benefits, is in the SOE employment sector followed by contract wage employment.

References

Bian, Y. (1994). *Work and Inequality in Urban China.* Albany, NY: State University of New York.

Chang, K. S. (1993). The peasant family in transition from Maoist to Lewisian rural industrialization: China. *J Development Studies, 29,* 220–234.

Doeringer, P., & Piore, M. J. (1971). *Internal Labor Markets and Manpower Analysis.* Lexington, MA: Heath.

Goldstein, S., & Goldstein, A. (1991). Permanent and temporary migration differentials in China. *Papers of the East-West Population Institute* Honolulu, HI: East-West Center, Number 117.

Goldstein, S., & Guo, S. (1992). Temporary migration in Shanghai and Beijing. *Studies in Comparative International Development, 27,* 39–56.

Gu, S. (1992). Two types of population migration in China: a comparative study. *Chinese J Population Sci, 4,* 75–84.

Han, J., & Morishima, M. (1992). Labor system reform in China and its unexpected consequences. *Econ Industrial Democracy, 13,* 233–261.

Hayase, Y. (1991). Internal migration in China. In Y. Hayase & S. Kawamata (Eds.), *Population Policy and Vital Statistics in China* (pp. 70–75). Tokyo, Japan: Institute of Developing Economies.

Kahn, J., & Smith, C. (1995). Unemployment boosts tensions in China. *Wall Street Journal,* February, 6, Section A, p. 8.

Kasliwal, P. (1995). *Development Economics.* Cincinnati, OH: South-Western Publishing.

Lee, C. K. (1997). Chinese labor in the reform era: changing fragmentation and new politics. In C. Hudson (Ed.), *The China Handbook: Prospects into the 21st Century* (pp. 237–247). New York: Fitzroy Dearborn Publishers.

Mood, M. S. (1997). The impact and prospects of rural enterprise. In C. Hudson (Ed.), *The China Handbook: Prospects into the 21st Century* (pp. 122–136). New York: Fitzroy Dearborn Publishers.

Oi, J. C. (1993). Reform and urban bias in China. *J Development Studies, 29,* 129–149.

Qian, W. (1996). *Rural-Urban Migration and its Impact on Economic Development in China.* Brookfield, IL: Avebury

Shi, P. K. (1996). *Megatrends China: Prosperity and Crisis.* Beijing, China: Hua Lin.

Solinger, D. J. (1995). The Chinese work unit and transient labor in the transition from socialism. *Modern China, 21,* 155–183.

South China Morning Post. (1997a). Reform leaves 5 million jobless. November 3.

South China Morning Post. Internet Edition. (1997b). Bleak outlook for 30 million jobless. November 26.
South China Morning Post. Internet Edition. (1998). Fewer workers employed by state-owned firms. February 13.
State Statistical Bureau. (1997). *China Statistical Yearbook, 1997.* Beijing: State Statistical Bureau, People's Republic of China.
Todaro, M. P. (1969). A model of labor migration and urban unemployment in less developed countries. *Am Econ Rev, 59,* 138–148.
Wakabayashi, K. (1990). Migration from rural to urban areas in China. *Developing Econ, 28,* 503–523.
World Bank. (1997). *China, 2020—Sharing Rising Incomes, Disparities in China.* Washington, DC: The World Bank.
Wu, H. X., & Zhou, L. (1996). Rural-to urban migration in China. *Asian-Pacific Economic Literature.* November 10, 54–67.
Yan, S. (1990). The movement of labor in Chinese rural areas: with a focus on developed regions. *Developing Econ, 28,* 524–543.
Yang, X. (1993). Household registration, economic reform and migration. *International Migration Rev, 27,* 796–818.
Young, S. (1997). The private sector. In C. Hudson (Ed.), *The China Handbook: Prospects into the 21st Century* (pp. 150–161). New York: Fitzroy Dearborn Publishers.