

Under the command economy there were no labor markets in China. Each worker was a lifetime member of one of the two vast systems of public employment, urban and rural. This system was slow to change, especially in the cities: employment in SOEs continued to grow well into the 1990s, nearly 20 years after the beginning of reform. But then, beginning in the mid-1990s, China laid off almost 50 million workers, 40% of the public-enterprise workforce. Today the entire system of government-controlled employment has dissolved, and active labor markets have developed nationwide. Well-functioning labor markets can create the foundation for a skilled and prosperous economy. However, China still faces many challenges. The old system had provided a job for everyone; when it broke down, unemployment surged, and it remains a serious chronic problem. How can China upgrade the quality of its labor force? Are workers adequately rewarded for extraordinary skills and talent? How can China support the rapidly aging population as retirements increase? These challenges have grown, even as labor market changes have contributed to the overall growth of China's economy.

Many who visit China for the first time are surprised at the predominance of physical labor in China. It is still common to see human labor used for tasks that could easily be accomplished by machines. Human labor power is used to break up rocks, dig ditches, and carry heavy objects. In the southern countryside it is not unusual to see men and women with bamboo staves slung over their shoulders carrying 70- or 80-pound loads up and down steep hillsides. The human counterpart to a low GDP per capita is a life of backbreaking toil. In a low-income economy there are few realistic choices. For the worker, work is difficult and exhausting; for the business, labor is cheap, and there is little incentive to substitute machine power for human labor. If labor markets work well, however, they play a central role in the development process and in the transformation of labor. Working labor markets create jobs that require and reward specific skills and education. Workers have an incentive to get training

and education, and businesses have an incentive to seek out and reward the worker with greater talent or training. China's labor force is in the middle of this transformation: from predominantly low-skill, hard physical labor to a middle-income economy where education and skill begin to transform the nature of work for many workers.

Section 8.1 examines the institutional changes in the labor system over the past decades, beginning with snapshots of employment in 1978 and in 2003. That examination leads into a discussion of the transformation of the urban state sector during 1995–2000, during which mass layoffs led to the emergence of both labor mobility and significant open unemployment. The discussion turns to the formal and informal sectors in the urban economy today, and then to rural labor markets. Section 8.2 examines the functioning of labor markets. How well do labor markets reward productive attributes like education and experience? Recent work examining returns to human capital and migration is discussed. Progress in raising educational standards in the labor force is considered. The migration decision is examined in the context of changing labor markets. Section 8.3 looks at the social security system. An organized system of social security is one of the differentiating factors between formal and informal sectors of the urban labor market. Since the successful operation of a social security system depends on the age composition of the population, China faces a particularly acute challenge in crafting a viable social security system that will survive coming rapid aging. These complex market and institutional factors are reshaping the position of workers in China's contemporary economy.

8.1 THE INSTITUTIONAL TRANSFORMATION OF CHINESE LABOR

8.1.1 The Labor Force

The number of employed persons in China was 752 million at the end of 2004. Even relative to China's huge population, this is an enormous number. As discussed in the previous chapter, because of the age structure of the population, a relatively large proportion of the population—just over 70% in the 2000 census—is of working age. Moreover, labor-force participation (the proportion of the working-age population actually working or actively looking for work) is also very high, primarily due to very high female labor-force participation. Chinese women work, and nearly all young urban women are currently employed. Labor participation was measured at 86% in the 1990 census, and has drifted down since, because of increased college enrollments and early retirement (SYC 2005, 120–121; Populations Statistics Yearbook 2003, 264).

As a result of these factors, China has an exceptionally young and economically active population, which is quite favorable to economic development and perhaps to economic reform as well. China is extremely well placed to take advantage of the “demographic dividend” discussed in the previous chapter. The average age of employed people (urban and rural together) has been increasing but remains low: from an average age of 31 in 1978 it increased to 37 in 2000. Productivity probably improves as the work force ages slightly, certainly through the 30s. Moreover, this relatively young work force has shown enormous adaptability to the changes brought by economic transition.

8.1.2 Employment: Ownership and Labor Mobility

In the final years of the command economy system 99% of China’s workers were in publicly owned undertakings, two-thirds of whom were in agriculture and one-third in everything else (Figure 8.1). In 1978 in the countryside, most workers farmed the land as members of agricultural collectives, and another 6% of the total labor force worked in publicly owned TVEs (called commune and brigade enterprises at that time). Only 2% of the labor force worked outside this system, in tiny “team enterprises,” set up under the village collectives or occasionally as individual traders or haulers. In urban areas the entire labor force was organized either into state-run units or into urban collectives. A tiny handful of private businesses (150,000), mostly elderly traders or repairmen, had somehow managed to stay independent through 30 years of socialist mobilization.

There was virtually no labor mobility in this system. Chapter 5 described how tight controls had been placed on rural-to-urban migration in the 1960s after the collapse of the GLF and how urban residence had become a privileged status. Mobility of all kinds, including job mobility, declined sharply. The government assumed direct control over all urban hiring: From the early 1960s onward, the government assigned 95% of high school or college graduates to work and took the authority to hire and fire away from individual enterprises (Bian 1994). Voluntary job mobility *within* urban areas disappeared, while workers gained protection from being fired. By 1978 voluntary quits and fires had become virtually nonexistent: in that year 37,000 workers in all of urban China quit or were fired, about one-twentieth of one percent of all permanent workers. A worker was 10 times more likely to retire and four times more likely to die on the job than to quit or be fired. The state decided your job, and a job was for life. This complete absence of labor markets was an extraordinary feature of the Chinese command economy. In the Soviet Union, workers were rarely fired but they were free to quit. In fact, in 1978, in the Russian Republic,

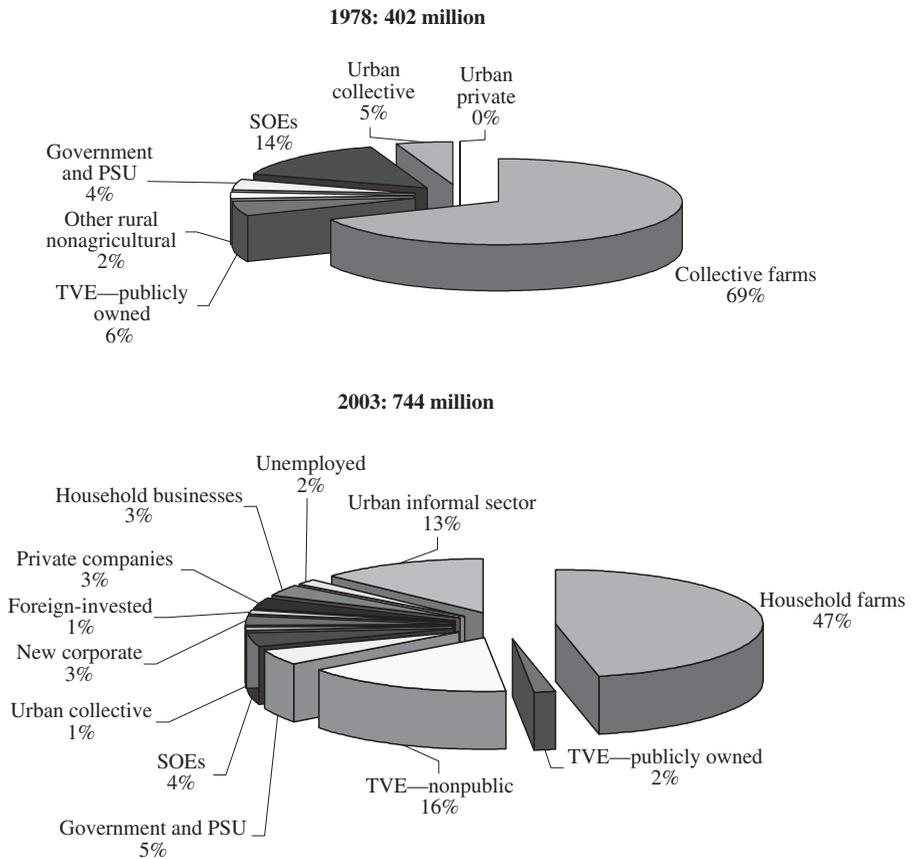


Figure 8.1
Employment by ownership

16% of all industrial manual workers quit their jobs during the year (Granick 1987, 109). Voluntary job turnover was hundreds of times more common in the Soviet Union than in China. The extra rigidity of labor markets in China clearly grew out of the effort to control population movement and employment after the GLF. When the process of market transition began, after 1978, urban labor market rigidity was a severe handicap that slowed progress in the gradualist transition and hampered the efforts of reformers to introduce market forces.

Thus, even though change came fast in rural areas, reformers were extremely cautious in introducing labor markets in the cities. During the first era of reform (Chapter 4) the dissolution of the agricultural collectives created hundreds of millions of household farm businesses. It became much easier to start a business, in both rural and urban areas, and entry of new businesses led to a much more diverse ownership structure. But for almost 20 years, from 1978 until about 1996, change in the urban employment system was confined within strict boundaries.

- Private businesses faced official discrimination. Small-scale businesses like restaurants and small workshops were acceptable, but it was almost impossible to run a large, capital-intensive business as a strictly private concern.
- Publicly owned enterprises were not allowed to lay off workers for many years. Reformers were concerned that guaranteed employment was the foundation of an implicit urban social compact, and during the first era of reform they did not challenge this important vested interest.

Instead, labor reformers began to build in some flexibility on the margins of the system. New workers were hired for five-year contracts after 1986, with contracts renewed only when both sides were satisfied. Young contract workers were much more likely to quit or be fired when their contracts expired than were old-style permanent workers. Some tiny cracks appeared in the facade of the labor system.

Thus state ownership still loomed large in the overall employment picture through the mid-1990s. Indeed, total employment in SOEs actually *increased* from 58 million in 1978 to 75 million in 1996. In 1996, *18 years* after reforms began, state employment still accounted for the bulk of urban employment. Moreover the three types of publicly owned enterprises—SOEs, urban collectives, and TVEs—still accounted for 24% of total employment, down only a fraction from 25% in 1978! Through the mid-1990s, then, the features of the first phase of China's gradualist transition strategy were very much in evidence: publicly owned enterprises generated much of the increased employment and output in the economy; reform was "without losers," as state jobs

were protected; and marketization began with product markets and only slowly extended to labor markets.

But then in the mid-1990s this whole institutional setup changed dramatically. SOEs, under increasing competitive pressure, began laying off redundant workers. Figure 4.4 showed the dramatic decline in state enterprise workers after 1996. In fact, beginning around 1993, more than 30 million SOE workers were laid off, 38% of the entire labor force, and almost 50 million urban workers of all kinds. The proportion of urban collective workers laid off was even higher than that of SOE workers. With this huge shift in policy (discussed further in section 8.1.3) public employment shrank dramatically. Shortly thereafter, from the late 1990s, the Chinese government began to give greater legitimacy and legal protection to private enterprise. Together these changes had a huge impact on the ownership composition of employment, which had taken another major step in the direction of a diversified market economy by 2003. All the major publicly owned enterprise forms shrank significantly after the late 1990s. Employment in SOEs dropped to 4% of the labor force; urban collectives dropped even more dramatically, to 1.3%; and collectively run TVEs declined precipitously to 1.7% of total employment. The share of these three public enterprise forms together collapsed from 24% of the labor force in 1996 to only 7% in 2003. (A more inclusive definition of publicly owned firms would include the 2% of the labor force employed in government-controlled new corporations [Chapter 13], still a huge drop to 9% of the labor force in 2003.) The scale of change was enormous: if anything in China's transition counts as a "big bang," this is it. Labor mobility increased dramatically, as did unemployment. People now change jobs regularly, and migrate in search of economic opportunity. The increase in job mobility was driven by the rapid increase in involuntary layoffs from state firms.

As of 2003, almost 5% of the Chinese labor force works for the government or for government-run PSUs. This sector has grown slightly as a share of total employment, largely because of an increase in government-paid teachers. Deducting government and public enterprise workers, more than 80% of China's workers now work for the private sector. The largest share of the private sector workforce is the household farmers who make up 47% of total labor, but even the urban labor force is now predominantly private. Combining companies registered in urban areas, and TVE records, private companies now account for 8.6% of total employment; registered "self-employed" or household businesses for 7.2%; other corporate forms, not directly government controlled, for 2.7%; and foreign companies, 2.1%. Together, this gives a registered, nonfarm private sector that employs 20.7% of China's workers. As Figure 8.1 shows, a very large informal sector is an extremely important part

of labor markets, both in urban and rural areas. This small-scale and frequently unregistered sector is not very accurately captured in our statistics, but there is no doubt that it is large. It accounts for almost 20% of total employment (including most, but not all, rural nonagricultural employment outside collective TVEs). Unemployment—including both traditional registered unemployment and workers laid off from SOEs—accounted for 2% of the total workforce. Change has indeed been dramatic, and the most dramatic change has been the most recent. China has now created a flexible, diversified employment system, but one without the certainty and guarantees of the old system.

8.1.3 Employment, Unemployment, and State-Sector Downsizing

Underemployment has always been a serious problem in China. Under socialism jobs were provided for all, but work was often meaningless and poorly paid. Workers bottled up in the rural sector at times had little to do. A brief episode of open unemployment emerged in China at the beginning of the reform era (1978–1979) when millions of the “sent-down” youth returned to the city and had to find work. But Chinese urban work units created make-work jobs for their sons and daughters during that episode. Afterward, open unemployment was kept below 3% through most of the 1980s and 1990s by the cautious labor policies described earlier. In turn, those cautious policies were partly a response to the pressure of numbers, brought about by the rapid growth of population and labor force during the 1980s (the same bulge that elicited the One-Child Policy). Policy-makers were loath to cut state employment as long as the labor force was growing so rapidly, at an average 2.5% per year through the 1980s. Policy-makers constantly pointed to China’s surplus labor as a burden that forced them to proceed cautiously in economic reform, continue to tolerate (and even create) make-work jobs, and rule out more dramatic reform measures that might increase productivity rapidly at the cost of sharp short-run increases in unemployment. Only after the mid-1990s did reformers gain enough confidence in the flexibility of the urban economy that they were willing to reverse this stance.

During the mid-1990s the dramatic acceleration of labor reforms began with the determination to tackle the problem of overmanning in SOEs. At first, new categories of workers were created within the enterprise: the “surplus worker” and, subsequently, the “off-post” or “laid-off” (*xiagang*) worker. Enterprises were told to identify surplus workers, organize them into new activities, and “optimize” the employment structure within their work unit. Then, in the mid-1990s, these workers began to be discharged from the work unit, and a massive group of “laid-off” workers was created. During the course

of a decade, from 1993 through 2003, an official count of 28.18 million state-enterprise workers were laid off. In fact, this number is a lower bound, because it was not until 1998 that the diverse local data and procedures were unified into a logically consistent category of laid-off workers (*Labor and Social Security Yearbook* 2004, 478). After 1998 the Chinese government created the new Ministry of Labor and Social Security and launched a massive effort to collect data, systematize procedures, and channel workers laid off from their enterprises into Reemployment Centers (RECs). The RECs were designed to provide retraining and job-search assistance. Perhaps more crucially, the REC took over the worker's affiliation from the enterprise, paid into the worker's social security and welfare funds, and typically provided a stipend to the worker. Workers were supposed to remain affiliated with the Reemployment Center for a maximum of three years, or less if they could find a new job more quickly. In a prosperous city like Shanghai or Beijing, this system meant that a redundant worker could receive as much as five years of transitional assistance and support as he or she was gradually eased out of state employment. Less prosperous cities, however, were not usually able to maintain such a high standard of support. The Chinese government thus made an effort to buffer the shock of a massive and traumatic change.

Figure 8.2 lays out the broad patterns of change that led to almost 50 million people losing jobs in state enterprises, urban collective enterprises, other types of enterprise, and government and PSUs. The vertical bars show the number of enterprise workers (not including employees of government and PSUs) newly laid off in the course of each year (these numbers are official data from 1997; estimated data through 1996). Layoffs surged in 1995 and 1996, and for four years (1996–1999) on average more than seven million workers were laid off annually.

The solid areas depict the stock of unemployed and laid-off workers, not yet reemployed, at year-end. The bottom region shows registered unemployed, and the top region the laid-off (*xiagang*) workers, who are never included in unemployed as long as they retain their designation as “laid-off” and maintain their affiliation with the RECs. The sum of these two categories, then, represents the official total of urban residents without gainful employment. In 1993 there were some seven million in this broad category of unemployment, with many of the three million laid-off workers still associated with their work unit. By 1996–1997, this total had soared to 15 million, nearly all of them separated from the work unit. Thus total unemployment more than doubled in the course of three years. Nevertheless, the government forged ahead, laying off six million in 1997, more than seven million in 1998, and almost eight million in

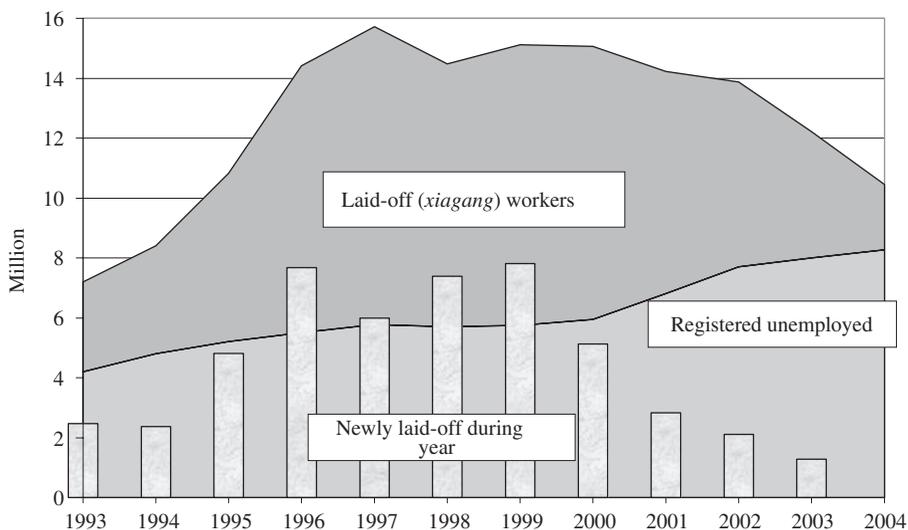


Figure 8.2
Laid-off and unemployed workers

1999. The number of new layoffs only began to taper off after 2000, and by then the system of permanent employment was shattered forever.

What happened to these laid-off workers? The official Chinese claim is that three-quarters found new jobs. That may be true, but since, as we shall see, the number of formal-sector urban jobs declined significantly over this period, most of the new jobs must have been in the informal sector. Many workers took early retirement, which was commonly made available to male workers as young as 50 and female workers as young as 40. Some workers, after three years in the REC, made a further transition to registered unemployment. Thus Figure 8.2 shows that official unemployment increased after 2000 while the stock of unemployed laid-off workers declined. This change occurred because laid-off workers began to “graduate” from the RECs into the ranks of the unemployed. Total unemployment (the sum of the two) peaked in 1997, but then stayed very high through 2002 with more than 14 million unemployed. Thus the unemployment rate peaked at 8%–10%, much higher than the 3% registered unemployment rate the government was headlining at the time.¹

1. This discussion attempts to adjust the official unemployment statistics to make them logically consistent. It does not attempt to make them internationally comparable, or find the “true” unemployment rate. The numbers are somewhat misleading in that they consider only workers with their household registration in urban areas, so that migrants are not considered either in the numerator (unemployed) or the denominator (urban labor force).

After 2002, China's economic boom finally began to bring down the number of unemployed substantially. At year-end 2004 there were still 10 million unemployed in urban China, including 8.3 million registered unemployed and over two million laid-off workers.

The handling of the large number of laid-off SOE workers was a massive attempt at social engineering. Substantial cost and effort were expended to buffer SOE workers from the immediate shock of unemployment, yet laid-off workers still experienced dramatic reductions in their income and standard of living (Appleton et al. 2002; Giles, Park and Cai 2006). Laid-off workers searched for new employment while retaining some income and some benefits (especially housing and health insurance) provided through their work unit. The actual impact on laid-off workers varied enormously from place to place, both because local economic conditions vary substantially and because local governments were responsible for policies toward labor markets. City governments were responsible for juggling almost contradictory objectives: shrinking state enterprises, improving the efficiency of labor markets, keeping unemployment low, and protecting local citizens' interests (Solinger 2004). Local officials decided how much transitional support to give laid-off workers.

Shanghai, for example, pioneered a program of maximum feasible transitional support given to laid-off workers. Shanghai established its first REC in July 1996, initially for laid-off workers from the textile and instrument sectors, which had undergone early consolidation. Shanghai's RECs, like those that came later elsewhere, were funded by the SOE, the SOE's supervising government agency, and the municipal government in approximately equal parts. The SOE benefited, since it paid only one-third of the worker's support instead of being responsible for all of it, as it had been previously. Shanghai's program was extraordinarily expensive, supporting 250,000 workers at an annual cost of one billion RMB. Moreover, by encouraging early retirement as a major channel for laid-off workers, the city acquired additional ongoing pension liabilities of over one billion RMB annually (Urban Labor 1998). In essence, Shanghai, a growing and relatively wealthy jurisdiction, was able to provide massive subsidies to SOEs and laid-off workers, protecting their standard of living while easing their exit from the state sector.

The polar opposite from Shanghai was the far northeastern province of Heilongjiang, struggling with a stagnant economy and huge, uncompetitive heavy industrial plants. Laid-off workers in Heilongjiang received stipends from their RECs equal to only 6% of the average SOE wage in 1997, compared with 43% in Shanghai. Far from being able to provide additional billions for early retirements, Heilongjiang was not even able to meet its existing

pension obligations and was in arrears of its pension obligations by over one billion RMB in 1997, with half a million SOE retirees going unpaid (Mo Rong 1998). Not surprisingly, large-scale and occasionally violent protests erupted in Heilongjiang, and eventually the central government was forced to step in and assume some of Heilongjiang's pension obligations. Most cities in China were in between the Shanghai and Heilongjiang extremes.

Though the massive open unemployment associated with state enterprise downsizing has receded somewhat with the economic boom of 2003–2005, China will have a serious, chronic unemployment problem until at least 2015. The urban sector must absorb millions of new workers annually over the next decade and more. However, as Chapter 6 noted, China has still not fully exploited the employment-generating possibilities in the services, and rapid development of service employment could ease the challenge. If the economy does manage to absorb most of the available labor over the next decade, the seriousness of the unemployment problem will then begin to ease as the combination of slower labor-force growth and completion of structural transformation take effect.

8.1.4 The Informal Sector: Emerging Dualism Within Urban Labor Markets

A large proportion of laid-off workers eventually found work in the urban informal sector. The informal sector refers to the generally small-scale, unlicensed businesses that are an important part of urban economies in most of the developing world. China under the planned economy had virtually no informal sector, except for farmers selling goods on short trips to urban markets. However, in recent years the combination of rural-to-urban migration and mass layoffs from publicly owned urban enterprises has led to rapid growth of the urban informal sector. Thus, as state firms shrink and restructure, the old identity between public worker and urban resident has disappeared. Instead, there is now a division within the urban labor force that, to some extent, mirrors and replaces the old division between urban and rural workers. The overall contours of this development can be seen from the aggregate numbers on urban employment. Although those numbers are not very accurate in their coverage of the informal sector, they still provide a clear picture of the emerging reality.

Figure 8.3 shows the evolution of urban employment according to official data. Quite a few striking trends emerge: The absolute number of government employees and workers in PSUs (*shiye danwei*) has changed little in 20 years. State and collective enterprises shrank dramatically, while a group here labeled “new corporate” has increased. These new corporate forms include limited-liability and joint-stock companies, some of which are still

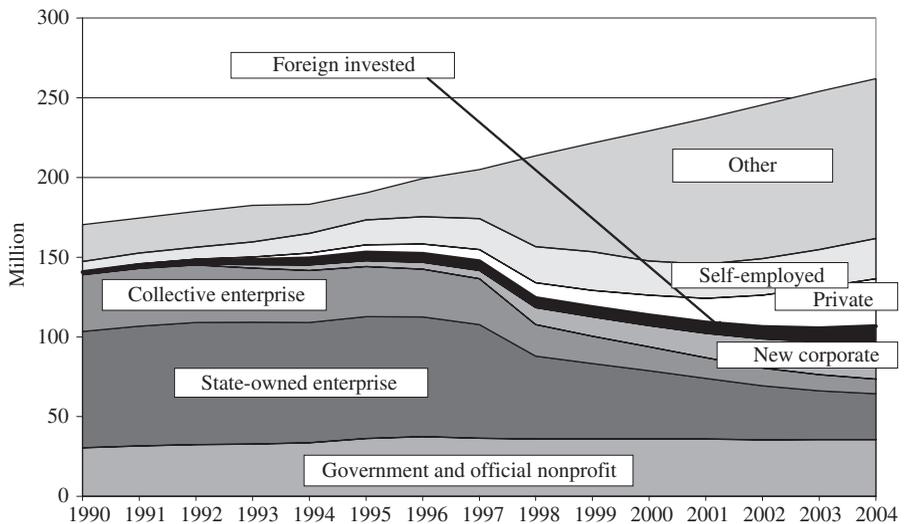


Figure 8.3
Urban labor force

government controlled. As a first approximation, it makes sense to group all these new corporate forms, along with state and collective enterprises, government employees, and urban foreign invested firms into the urban formal sector.

The urban formal sector, in this definition, has declined from 152 million in 1996 to only 105.5 million in 2003 (then began to grow again, reaching 106.7 million in 2004). The bulk of the growth in the urban labor market—which expanded from 200 million to 265 million between 1996 and 2004—has occurred in the private, self-employed, and “other” categories. Some private firms, to be sure, are large, formally organized firms, but not many, because if they were organized as limited-liability firms they would be included in “new corporate” employment. “Other” employment simply represents workers known to exist because surveys and census investigations reveal the size of the overall urban workforce, but who are not enumerated in any of the registered organizational forms. The “other” category picks up most of the migrants and unregistered businesses. The informal sector, broadly defined to include private, self-employed, and “other,” has grown from 48 million to almost 160 million and is now considerably larger than the formal sector.

Migrants and urban dwellers now compete in at least some labor markets that are part of this rapidly growing small-scale informal sector. Migrants dominate certain job sectors—such as construction and textile mills—where labor

is particularly tiring or boring and urban workers lack interest. Urban residents receive preferential treatment in some sectors, including government or local service trades. Thus a segmented labor market has emerged in cities. However, in certain sectors, such as retailing, restaurants, and petty trade, migrants and city dwellers compete head to head. During the 1990s laid-off workers had a strong incentive to maintain their ties to work units or RECs but work in informal gray markets at the same time. In these markets they encountered rural immigrants offering similar labor services. At the same time, intensified competition began to pressure existing SOEs to ignore regulations and hire rural migrants, who are much cheaper and have a reputation as harder workers (Urban Labor 1998). The existence of labor-market competition does not mean that the division between urban and rural residents has disappeared, nor that competition takes place on a level playing field. Not only do urban administrations side with urban residents in many regulatory matters, but also permanent urban residents often continue to receive various kinds of subsidies. Thus, even when they earn the same wages as rural migrants, their total incomes are typically higher.

8.1.5 Rural Labor Markets

Rural labor markets are also changing rapidly. Of course, the majority of rural workers continue to be employed on family farms. However, China's rural labor markets showed a dramatic expansion in nonagricultural employment through the 1990s. According to one large survey (de Brauw et al. 2002), the proportion of individuals having some off-farm employment increased dramatically, rising from 15% of the labor force in 1982 to 32% in 1995, and further to 43% in 2000. These trends are changing China's countryside. Most dramatically, by 2000, 76% of the 16–20 age group had some kind of off-farm work, and less than a quarter of those working off-farm had spent any time in agriculture at all. A generation of rural residents is leaving the land, and the process appears to be accelerating in the decade after 2000.

There is a wide variety of off-farm job choices available to rural residents today. In some regions farmers may create a nonagricultural business while living at home or commute to a job in a rural enterprise in a nearby town. To simplify, we can group rural worker choices into three categories: continue to farm, leave the farm and undertake local nonagricultural labor (perform wage labor or start a business), or migrate away from the locality. Both these latter two options have increased in popularity. Indeed, the share of off-farm workers who were migrants out of the village began to increase rapidly around 1990, and by 2000 about as many off-farm workers were migrants as were local, with slightly over 20% of the total rural labor force falling into each category.

Even among the long-distance migrants enumerated in the census (Chapter 5), almost a quarter had relocated to other rural areas, to work either in agriculture or in rural enterprises. Diverse rural labor markets provide an alternative to urban migration.

8.2 HOW WELL DO LABOR MARKETS FUNCTION IN CHINA TODAY?

Given the rapid, but still incomplete, changes in labor-market institutions in China, it is worthwhile to ask how well these labor markets work. We would like to know if the most productive workers are rewarded for their productivity. Ideally we would hope to find that productivity is rewarded and that factors irrelevant to productivity, such as rural or urban status, have no impact on rewards. In practice it is impossible for us to directly measure the productivity of individual workers. Instead, we can examine the impact on worker income of attributes that we expect to have an impact on productivity. The most important of these is education, a measure of human capital, which we expect to have a positive impact on productivity (Box 8.1). In section 8.2.1 we examine the evidence with respect to returns to education, and then in section 8.2.2 we look at China's changing human capital endowment. In section 8.2.3 we briefly examine three other attributes that might be related to worker productivity: experience, Communist Party membership, and gender. These are not less important than education, but the interpretation of existing results is more complex, and we simply touch on a few incomplete observations. In section 8.2.4, we examine the interaction between individual characteristics and the migration choice.

8.2.1 Returns to Education

The socialist system did a fairly good job of providing basic education to the population as a whole. Public support for education and training in China spread literacy and basic industrial skills very broadly in the population. But the socialist system did a very poor job of rewarding individuals who had attained higher levels of skill or education. When researchers began to study the determinants of urban incomes in China at the end of the planned-economy period (in the late 1970s and early 1980s), they found that incomes were not consistently higher among individuals with more education. Other correlates of higher income were significant: Communist Party membership, being male, and having more seniority on the job were all associated with higher incomes. But education did not significantly increase income. The private return to education was very close to zero.

Box 8.1

Human capital and the return to education

Economists have paid increasing attention recently to the role of human capital in the development process. Human capital is the resource that is created by investment in knowledge. Like physical capital, human capital is a factor of production, that is, a basic resource that is used, but not used up, in the production process.

Like physical capital, human capital is produced by prior activities. Education is the most important producer of human capital, but human capital can also be created by on-the-job experience, by investing in good health, or through other investments. Human capital is different from physical capital because it is not tangible: you cannot see it or touch it. But note that human capital does have an owner. An individual “owns” the human capital that is created by his or her education. The higher income that is created by a better-educated worker belongs to the worker.

The return to human capital is sometimes referred to as the “knowledge premium.” The knowledge premium refers to the additional earning power a better-educated worker commands. In the United States there is substantial evidence of an increased knowledge premium—referring to the return to a university education—since the early 1980s. This trend may be a result of the impact of technological change on the production process or a result of the globalization of the world economy.

The most common approach to assessing the value of the knowledge premium is to estimate the Mincerian return to education, an approach named for the economist Jacob Mincer who pioneered it. The Mincerian return to education is the coefficient on the years of education when wages are regressed on a set of explanatory variables. Interpretation of the coefficient depends on a range of restrictive assumptions. Moreover, since educational attainment can often signal for unobservable individual characteristics, interpretation of the coefficient value depends on the manner in which difficult issues of selection bias and labor-market signaling are handled. Most of these issues are beyond the scope of the discussion in this chapter. In China the changes in magnitude of the knowledge premium as measured by the Mincerian return to education are sufficiently large that the technique can give us substantial insight into the evolution of labor markets.

This result revealed how inconsistent China’s system was at that time with a fully functioning market economy. Perhaps the most fundamental requirement of a well-functioning market economy is that an individual is able to feel secure that she will be able to reap the income created by an investment she makes, so long as that investment succeeds in creating new output and income. Investment in education—in human capital—increases the overall productivity of the economy. For a market economy to function, an investment that increases social productivity must also provide a reward to the individual. Only in that case will individuals have the incentives to make socially productive investments. Since education is expensive, it is unlikely that the government could bear the whole cost, even if it wanted to; individual households will inevitably bear a substantial part of the cost of education. Thus a positive and significant private return to education is essential for the continued healthy investment necessary for a more productive economy. The return to education is also a good index of the extent to which labor markets have developed and

are able to provide adequate rewards to those who invest in human capital. It is impossible to envisage a healthy market transition in China without a substantial increase in the return to education.

An extensive literature has examined the changing returns to education in urban China. A remarkably consistent result has emerged from this literature showing that the rate of return to education began to climb in the early 1990s and sustained an important increase through the next decade. Zhang Junsen et al. (2005) trace the return to education in urban China from 1988 through 2001, using annual data (Figure 8.4). They show that in the late 1980s and early 1990s an urban worker would improve his income by 4%–5% per year for each additional year of schooling he completed. This was far below the world average of 9.7%, and even farther below the low-income country average of 10.9% (Psacharopoulos and Patrinos 2002). However, the rate of return climbed during the 1990s, and in 1999–2001 the measured rate of return was around 10%, quite close to the world and low-income country averages. Zhou Xueguang (2000) uses recollected income data to examine the return to education over an even longer time frame: he finds that returns to education approximately doubled in the 1987–1993 period, compared with earlier periods. Appleton, Song, and Xia (2005) exploit an especially rich data set that covers urban incomes in four benchmark years from 1988 to 2002. They find

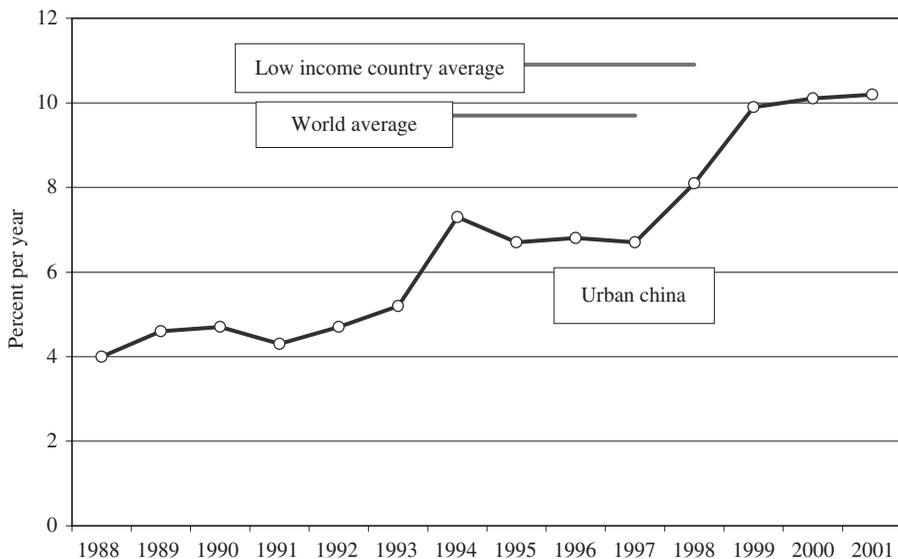


Figure 8.4
Return to an additional year of schooling

that the return to education estimated in cross section increased from 3.6% in 1988 to 7.5% in 2002, roughly consistent with the results of Zhang Junsen et al. With their (panel) data set they are able to control for unobserved individual attributes (fixed effects) and occupational effects. As expected, this adjustment lowers the measured return to education, but the pattern of increasing returns to education over the entire period is even stronger.

Such figures do not prove that Chinese labor markets are functioning efficiently, but the results are consistent with increasingly competitive labor markets. They show Chinese labor markets overcoming an obvious distortion in their functioning that was bequeathed to them by the planned-economy era. How did this dramatic change take place? During the 1990s market forces reshaped the way that workers were rewarded. Not only were more incentives available to those who performed or produced more productively, but structural changes in the demand for labor changed the determinants of income. Among existing workers, less-educated workers were significantly more likely to be laid off: by one recent empirical result, each year of education reduced the likelihood of being laid off by one percentage point (Appleton et al. 2002). Thus layoffs put downward pressure on the income of less-educated workers. Conversely, it is widely accepted that foreign-invested firms are bidding up the wages of educated urban workers. A wide range of skills—including management and English language—are considered valuable to foreign-invested firms, and their bids put upward pressure on the wages of more educated workers. Appleton et al. (2002) found that an additional year of education increased the income of both “never-laid-off” urban workers *and* rural-to-urban migrants by about 7%. Laid-off workers reported a much smaller income response to education (just below 4% for one year of education), a result the authors attribute to the newness of the markets, which means that laid-off workers are unable to smoothly translate their education or experience into income. Overall, the increase in the return to education provides some reassurance that individuals will invest in their own human capital and contribute substantially to the accumulation of skills necessary to drive China forward into an increasingly skill-intensive economy.

8.2.2 Human Capital and Educational Attainment

What then is the evidence on the accumulation of human capital in China? Despite China’s rapid progress, average levels of educational attainment are still low. According to the 2000 census, only 20% of China’s working-age population has a high school education. Table 8.1 shows the data on educational attainment in benchmark years. However, the categories shown in the table are defined in an inclusive manner that tends to overstate overall educational

Table 8.1
Educational attainment of population (percent)

Population, 15 and above	1982	1990	1995	2000	2004
Tertiary (above grade 12)	0.9	1.7	2.3	4.7	6.7
Upper middle (up to grade 12)	10.0	9.4	9.4	14.4	15.6
Lower middle (up to grade 9)	23.8	27.2	31.0	39.1	—
Primary (up to grade 6)	30.8	43.2	43.6	32.9	—
No formal schooling	34.5	18.5	13.6	9.0	—

attainment. Each category includes partial attainment, so attendance for a year or two is sufficient to be placed in a category: graduation is not required. Moreover, a large part of tertiary education consists of three-year junior colleges and technical schools; China also has extensive degree-granting adult education programs that are included. With these qualifications in mind, it can be seen that the gap with developed countries is still very large. For example, in 2002 in the United States, 84% of the population above 25 years old has graduated from high school, and 52% have some college. Graduates of four-year colleges make up 26.7% of this group (U.S. Census Bureau).

However, educational attainment in China has been increasing very rapidly, particularly in higher education. When China emerged from the Cultural Revolution, the pattern of educational attainment was very unusual. The 1982 census, conducted at the beginning of the reform era (see column 1 of Table 8.1), showed that basic education was fairly widespread for a low-income country, with two-thirds of the adult population having received formal schooling. While one-third of the population was illiterate or semiliterate, this was significantly less than India, for example, where more than half the population at this time was illiterate. However, less than 1% of the Chinese population had any college education at all. India at this time had three times as many college graduates per capita as China.

After the reform era began—and in reaction to the perceived excess of egalitarianism of the Cultural Revolution—educational resources were concentrated on building up higher education. Moreover, progress in this area accelerated after the mid-1990s. After years of investing in, and restructuring, the system of higher education, the number of graduates began to increase especially rapidly in 2001. From 2001 through 2005, the total number graduating college *tripled*, increasing from one million to slightly over three million (see Chapter 15). The results have been impressive, as Table 8.1 documents. By 2004, 6.7% of those 15 and above have some education at the university or junior college level, more than seven times the proportion of 20 years ago. This is an astonishingly rapid growth rate, and China has caught up with India,

even though India's college enrollments have also been growing rapidly through this period.

The emphasis on higher education has led to some neglect of primary education, particularly in rural areas. Nevertheless, Table 8.1 shows that progress continued to be made at the bottom of the educational pyramid. The share of illiteracy declined rapidly, as large cohorts of relatively well-educated young students tipped the balance of population. By 2003, only 2.4% of the 15–45 year age group was illiterate. Besides age, gender and residence are important determinants of literacy: 19% of rural females over 15 are illiterate, compared with 8% of rural males. In the cities, only 7% of females and 2% of males are illiterate. The average years of schooling of the population (age six and above) has increased steadily, reaching eight in 2004 (Population Statistics Yearbook 2004: 302; 2005: 54–57, 320). By comparison, the adult population averages seven years of education in Mexico, 10 in Korea and 12 in the United States.

Moreover, from the mid-1990s, the government began to place more emphasis on basic education. A program was adopted to make nine years of education compulsory, and to eliminate illiteracy among young people, initially in those counties with sufficient economic development and budgetary resources to support the effort on their own. The program has been steadily expanded since that time, and as of 2004, the Chinese government claimed that 2,774 county-level jurisdictions, accounting for 94% of China's population, had programs of some kind in place (Ministry of Education 2005). This is an impressive effort, but the ultimate outcome is not yet clear. The problem is money. The bulk of education funding comes from local level governments. In rural areas, local finances have been squeezed by changes in the fiscal system that reduce their revenues (Chapter 19), as well as recent limitations on their ability to collect informal fees from the population. The result is that total outlays for education in China were at 3% of GDP consistently through the 1990s, considerably lower than other comparable economies. Thus while local governments are under political pressure to show and report action in spreading universal education, they have not been given adequate resources to follow through in practice. The gap in teacher preparation and quality of facilities between rural and urban areas is enormous.

Ambitious plans have been announced to address these problems. Scholarships are to be expanded to all needy students by 2007; a system of free primary school education is to be in place in all rural areas by 2010; and free universal primary education is to be implemented by 2015 (Ministry of Education 2005). Following through on this plan will require a substantial sustained commitment of funds from the central government. In recent years,

China has advocated policies of “putting people first,” fostering technological creativity, and adopting a “scientific approach to development.” A recent government planning document pointed out that “Accelerating the development of education is the basic path to converting the enormous pressure of population in our country into the comparative advantage of abundant human resources.” (Eleventh Plan Suggestions [2005], Section 30). If these statements are to be anything more than empty slogans, the government will have to take over funding of universal primary education.

Despite recent improvement, China’s educational structure overall is very much that of a developing country. Underinvestment in girls’ education persists. While illiteracy is far lower among the young, the gender imbalance remains: more than twice as many girls as boys do not go to school. Another strikingly vulnerable group is the children of migrants to the city. These children are charged fees, which can often be prohibitive, to attend local public schools. In response, special privately run “migrant schools” have sprung up to provide a bare minimum of education at a reasonable price. The government has promised to address this problem, but progress so far has been slow. Even with an activist role for government, households will likely bear a large part of the cost of higher education. The improvement in the returns to education documented in the preceding section explains some of the rapid increase in educational attainment over the past 10 years. Although higher education has become more expensive for Chinese households, those with the means have generally been willing to pay, because of the positive returns to investing in education. However, in order to ensure the continued rapid spread of higher education, the government will have to do more to ensure access for all of China’s population.

8.2.3 Other Attributes

While education is *prima facie* productive, the impact of other worker characteristics is more ambiguous. Work experience—virtually identical to age in China—was amply rewarded in socialist China, in what was essentially a seniority wage system. During the reform era the returns to experience have declined moderately, but they have not disappeared (Appleton, Song, and Xia, 2005; Zhang Junsen et al. 2005; Zhou Xueguang 2000). This change seems consistent with greater market competition: on the one hand, skills acquired by young people have become more valuable, and some of the on-the-job experience of older people has become obsolete; on the other hand, expertise and productivity still increase with years on the job. Finally, these studies show that the variation in returns to education by ownership type and sector have tended to narrow over the years. At least among urban residents, barriers among

workers are being reduced. Unfortunately, we do not have good enough data to track the differences in returns between urban residents and rural–urban migrants. Presumably this difference is still large and significant.

In socialist China membership in the Communist Party was rewarded with a significant income differential. Just as it was natural to anticipate that marketization would bring an increase in the return to education, it also seemed natural to most analysts that marketization would bring about a decrease in the return to Communist Party membership. In fact, this has not happened. Both Appleton, Song, and Xia (2005) and Zhou Xueguang (2000) find that returns to party membership actually increased during the reform era. According to Appleton, Song, and Xia, the premium increased from 7% to 20% of income between 1988 and 1999, before falling back slightly in 2002. Does this result indicate that Communist Party members have all along had knowledge and skills that have become more valuable during the era of marketization? Or does it reflect increasing opportunities for Communist Party members to intervene in, and profit from, the operation of the market? In either case, it shows that membership in China’s Communist Party has economic benefits for individuals and that these benefits have continued or increased during reform.

During the socialist period gender gaps in wages were relatively modest. Although women were not strongly represented in the ranks of top management, the system was one of “equal pay for equal work.” Appleton, Song, and Xia find that the gender gap—the difference of male and female wages for comparable levels of experience and education—increased from 12% in 1988 to 22% in 1999 before falling back to 19% in 2002. They consider this a moderate level, comparing it to a gender gap of 25% in the United States in 2000. To the extent that the gender gap results from discrimination, it represents a failure of the competitive marketplace. Women were more likely than men to be laid off from state firms during their restructuring, a fact which may also reflect discrimination but which certainly indicates a change in the selection process by which women remain in the labor force. More analysis is needed to understand these important changes.

8.2.4 The Migration Decision

Having examined the return to different worker characteristics or attributes, we are now in a position to return to the phenomenon of rural-to-urban migration, described in Chapter 5, and examine the individual decision-making process more closely. Migrants move in search of opportunity. Thus we expect migration to be driven by an income differential, as migrants seek higher incomes. The best studies of Chinese migration have interpreted it through the framework of household decision-making. The basic premise is that the

decision to migrate is made by households rather than individuals. Migration is initially costly, and households must subsidize the initial costs of out-migration, typically of a young adult household member. They do so because they expect that migration will bring long-run benefits to the household. Thus, although the individual income gap between the urban wage and the return to farming is the right starting point for understanding rural-to-urban migration, it is only the beginning. For example, Taylor, Rozelle, and de Brauw (2003) find that an additional family worker increased the chance an individual would migrate in the 1990s by 28%, because a larger family is able to support the migrant's initial costs and can more easily sustain agricultural production.

Unique institutional features in China also shape the migration decision. At the place of origin, ties to the land continue to be strong because land ownership is to some degree contingent on farmers using the land. Migrants may fear losing their land-use rights, since the collective has the authority and incentive to redistribute scarce land to those with more stay-at-home workers. At the place of destination, the household registration system in China raises the costs (and risks) of living in the city, making it much more expensive to settle down. Moreover, as discussed earlier, the urban labor market is strongly segmented, and some occupations are still not open to migrants. For these reasons, we might expect Chinese migration to take the form of "sojourning," of medium-term residence in the city, followed by a return to the native place. In fact, migration everywhere is characterized by a significant share of sojourning. But if this phenomenon turns out to be even more important in China, it may have a significant impact on rural development patterns.

In fact, we observe that migrants often return to their place of origin, in part to fulfill long-term life goals, such as marriage and raising children (Hare 1999; Roberts et al. 2004). How should we understand these returned migrants? Do they represent those who have failed in the city and now retreat to their native place? Or do they represent relatively well educated residents who return with new experiences and entrepreneurial ideas, and who can provide benefit to their places of origin? Zhao Yaohui (2002) studied return migrants in six provinces. She found that older and married persons were more likely to return, and that the probability of return declined as the migrant's stay in an urban location lengthened. Perhaps surprisingly, more education significantly raised the probability a migrant would return. These features seem to suggest that returnees may be those who have positive skills and experiences they can bring to bear in their place of origin.

The interaction between education and out-migration is particularly worth attention. In most studies of migration, education is found to encourage

migration. Indeed, a large part of the economic value of education in rural areas comes precisely from the fact that it increases the chance that a worker will relocate and find a higher income outside his place of origin. However, several of the initial studies of migration in China found a very weak relationship between education and migration. Zhao (1999) studied a large sample in Sichuan province and found that although schooling raised the probability an individual would take a nonagricultural job in his or her place of origin, it had an insignificant effect on raising the probability of out-migration. Hare (1999) found similar results in an intensive study of Xiayi County in Henan Province. De Brauw and Giles (2005) studied the interaction between rural high school and migration, and found that high school does little to increase the income of migrants, and that, perhaps as a result, out-migration is an alternative to attending high school. These studies suggest that the positive benefit of migration might be limited by the institutional rigidities of China's system. If education does not increase the benefits of migration, it may be that the full range of opportunities potentially created by migration is still limited in the Chinese context.

However, de Brauw et al. (2002) found that the migrant labor force has been getting younger and that formal education has been increasingly rewarded. In fact, in their study they found that each year of education increased the likelihood of migration by 17% in the 1990s, up dramatically from the 6% increase they found in the 1980s (through recollected data). This finding may be related to the rapid increase in the proportion of young people in the migration stream. Younger workers are increasingly specializing in off-farm work, either through migration or local nonfarm employment, and this trend may be changing the migration calculus. Many of these younger workers have little or no direct experience with farming. They are more likely to stay in the city over the long term, and they have generally foreclosed the option of farming in their place of origin. The share of female migrants, while still below that of males, has also been increasing rapidly. This finding suggests a shift in the pattern of migration in China away from the temporary sojourning of the previous generation and toward a new mass movement as young people leave the land. For this shift to be sustained, though, China's urban labor markets must prove capable of absorbing the increased inflows and expanding the opportunities available to migrants.

8.2.5 Labor Markets Concluded

Labor markets in China appear to be increasingly competitive and more effective at rewarding the productive characteristics of workers. In both urban and rural areas there is evidence that the returns to education are increasing.

Nevertheless, China's labor markets are still distorted by institutional barriers and incomplete markets. The initial absolute separation between urban and rural work has been eliminated, but it has been replaced by a segmented urban labor market, with rural migrants overwhelmingly working in the informal sector. A deepening of labor-market integration can be expected to significantly improve the productivity of the Chinese economy.

8.3 SOCIAL SECURITY

Social security is one of the defining characteristics of the formal sector of the urban labor market. It is also a critical issue for China's future, an issue in which many of the distinctive characteristics of the Chinese economy play a role, sometimes unexpected. Under the old system urban workers routinely enjoyed social security as part of their employment under the "work-unit" system: work units paid pensions to their own retirees out of their own profits. The number of retirees was not large, and since the enterprises were not profit maximizers or competitive firms, the funds were not at issue. But as China has moved toward a market economy, it has been essential to move the entire social security system out of the work unit's control and shift it to a national social program administered by government agencies. Important beginnings have been made in this direction: indeed, the downsizing of the state sector documented at the beginning of this chapter was delayed until some rudimentary social insurance mechanisms were in place to take over responsibility for laid-off workers. But at the same time, progress in this area has been uneven, and the problem of creating a viable social insurance network is particularly great in China for the following reasons:

- Urban workers are accustomed to a pension system and feel a sense of entitlement; social security must reach a minimum level to match expectations and succeed politically.
- Enterprises operate in a competitive market and cannot disproportionately bear the burden of paying out pensions. Older firms with many retirees would be enormously burdened. Pension funds must absorb the payment obligation.
- China will face population aging with unprecedented speed and at an unusually low level of per capita income (Chapter 7). After 2020 the elderly population will grow very rapidly.
- The financial base of the traditional social security system—the SOE and government employers—has been shrinking very rapidly, and the growing

sectors of the urban economy are often outside the scope of existing social security mechanisms. The formal sector, with social security provisions, is a declining share of total urban employment.

- Finally, the downsizing of state firms created a large number of relatively young retired people, state workers in their 50s who were allowed to retire because there was no more work available for them.

This combination of early retirement, generous pensions, and increasing elderly dependency rates will create serious economic challenges for China in the coming years. All the rapid demographic and institutional changes in China over the past 20 years come together to intensify the problem of social security.

As the nature of the employment relationship changes in China, new institutions are being crafted to take up some of the burden previously assumed by the work unit. The recent pension reform began with modest efforts to pool the risks of the existing SOE pension system. Reflecting the patterns of gradualism and bottom-up organization that have characterized much of the reform process, pension funds and medical insurance programs have been established at the local government level. However, thus far China has no unified national system. Currently only urban residents (generally employees of government agencies or SOEs) are offered public pension benefits. The majority of the population in the rural areas is not covered by the public pension system, with a few exceptions in rich areas where local governments offer pension benefits to the elderly. Pensions for government employees are paid from the government budget. As such, the pension system is an amalgam of hundreds of separate pension systems with different contribution rates, coverage levels, and benefit calculations, all of which causes further complications in the creation of a unified system for Chinese retirees.

However, the national government gradually has attempted to unify provincial programs into a national social security program and to expand coverage to all urban workers. After several years of experiments in various regions and enterprises, the State Council in March 1995 issued “The Directive on Further Reform of the Enterprise Pension System.” The objective of this directive was to establish a multipillar pension system involving funds contributed by the state, employers, and individuals. This system consists of three elements: a basic public pension funded on a pay-as-you-go basis, a fully funded pension funded by mandatory contributions, and voluntary personal savings. The first two of these three elements are funded by contributions from the enterprises and the employees; the size of the contribution ranges from 10% to 20% of the employees’ total wages, depending on the region. Of this 10%–20%,

employees contribute about 2%–5%, and the rest of the premiums are borne by the enterprises (West 1999).

The first of the three pillars, the public pension, provides only minimum levels of old-age security (with a target replacement of about 50% of wages). The hope is that the partially funded nature of this system will enable the government to avoid the old-age crisis that is being experienced by many industrialized countries, a crisis that will otherwise loom for China 20 years from now. Outside the basic public pension, the Singapore model of treating old-age social security as mainly a financial-sector issue (with mandatory contributions and market-based operations) is attractive to Chinese policy-makers. The first attempts to create fully funded pensions had limited success. However, it seems that the Chinese government is making a serious attempt not to overburden fiscal authorities with a huge public pension system, which makes sense given the immaturity of China's financial markets (see Chapter 19).

In September 2000, China's State Council established a national social security fund, directly under the administration of the State Council. It manages the funds allocated by the central government and those raised through selling state-owned assets. Other important tasks include selecting professional asset-management companies and entrusting the fund's operation to them. The fund has also been allowed to invest some of its money in the stock market through selected asset-management companies. Previously pension funds could only be invested in bank deposits and government bonds, a requirement which meant losses would occur during periods of low interest rates. Thus the creation of pension funds should have lasting repercussions on the broadening of the financial markets.

Table 8.2 shows that the social security system has already become fairly large. In 2003 there were already 45 million retirees, one for every 2.7 workers covered by the basic program. The total number of covered workers was 116 million in 2003, compared with 105.5 million workers in the urban formal sector, as calculated earlier. Thus the government has made some progress in

Table 8.2
Social security system

Year	Total retirees (million)	Ratio employed to total retirees	Total urban pensions (billion RMB)	Total pensions share GDP (percent)
1980	8.2	12.8	5.0	1.1
1990	23.0	6.1	39.6	2.1
2000	38.8	3.5	273.3	2.8
2003	45.2	2.7	414.9	3.1
2004	46.7		451.1	2.8

extending coverage through the formal sector and has also including some private and rural firms. Notwithstanding the fact that some new firms (including foreign-invested firms) with young workforces and low retirement burdens would prefer not to participate in the program, coverage of the formal sector is now close to complete. Nevertheless, an increasing share of urban workers are in the informal sector, and most have no social security coverage at all. Despite the incomplete coverage, the sums involved are large and are growing rapidly. In fact, the average pensioner in 2000 received approximately 75% of the average state wage that year, similar to the replacement rates over the past 20 years. Moreover, these funds, although increasingly resembling a national social security program, have thus far been consolidated at the provincial level only in most cases.

In fact, despite the progress made, the social security system remains very much a work in progress. Because the demands on the system have been so much larger than anticipated, and local control of funds an obstacle, progress has been slow. Pension outlays have not yet been incorporated into budgetary figures, except for the direct fiscal payments government has had to make to keep the system solvent. In 2003 government had to kick in about 15% of total funds to subsidize deficit regions, accounting for about 6% of central government outlays. Pension funds have been troubled by scandals, as local government officials have diverted balances in the funds to their own priorities. Funding shortfalls have been caused by the inability (and unwillingness) of enterprises to pay into their accounts, combined with the generous retirement benefits that have been extended to younger retirees. The initial reform design of having individual retirement accounts designated from the worker's individual contributions failed, because there was not enough money to actually fund them. A new push to establish such accounts was evident after 2004. Pension funds in the Northeast are known to be especially troubled, and there have been public demonstrations and protests over failures to pay pensions on time. One of the main provisions of the Northeast Revitalization Program rolled out after 2003 was to have the central government guarantee the pension programs in the Northeast. In the face of such issues, the pension programs have not provided sufficient funds to cover current pension outlays, much less provide a secure financial basis for future outlays. This failure presents a challenge to policy-makers in terms of future social stability.

The pension system is just one pillar of the overall social insurance system. Health insurance has also been dramatically transformed in recent years. Widespread implementation of health reform did not begin until 2000, but by 2004 the system already covered 90 million workers (SYC 2005, 798). Health insurance reform clearly involves a lesser degree of coverage for urban

workers than the former system provided. Not only do workers now have to contribute a portion of their paycheck for health insurance, but in addition there are gaps in coverage for certain kinds of catastrophic illness (Duckett 2004). According to the 2002 household survey (Chapter 9), 32% of urban workers (formal and informal) have no health insurance at all. While health insurance reform has succeeded in stripping out one social function from the business enterprise, it has reduced income security and is extremely unpopular among urban residents.

8.4 CONCLUSION

Dramatic changes have reshaped nearly every aspect of China's labor economy. These changes have eliminated the privileged social status that state-enterprise workers had occupied under the command economy. At the same time, changes have opened up new sources of mobility, both for rural workers seeking urban employment and for urban workers with higher levels of skill and training. Overall, urban incomes have increased dramatically. But at the same time these institutional changes have led to increasing income diversity within urban areas. For those workers who have been laid off, the reduction in income has been exacerbated by the need to adapt to continuing job insecurity and the recognition that social insurance provisions are far less complete and reliable than they were before. The increasing bifurcation of urban areas into a formal and informal sector creates new social challenges for China.

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Suggestions for Further Reading

Brooks and Tao (2003) is a recent overview. De Brauw et al. (2002) on rural labor markets is essential reading. Knight and Song (2005) is a good overview with several indepth chapters. Li Shi and Sato (2006) collects a number of important papers.

Sources for Data and Figures

Figure 8.1: *Labor Yearbook* (1994); *SYC* (2004, 122–23, 132, 177).

Figure 8.2: *Labor Yearbook* (1996, 409; 1997, 213, 405; 1998, 431–31; 1999, 441; 2000, 409–10; 2001, 401–02; 2002, 109–10; 2003, 135; 2004, 146); *Labor and Social Security Yearbook* (2004, 478); Yang Yiyong (1997); Mo Rong (1998); 2004 stock of laid-off workers from Annual Economic Report (2005), with state workers estimated as 70% of total. Data on 2004 newly laid-off workers not yet published.

Figure 8.3: *SYC* (2005, 120–21).

Figure 8.4: Zhang Junsen et al. (2005, 739).

Table 8.1. 1982 from 1982 Census Summary (1985), pp. 360–61. 1990, 1995, and 2000 from Population Statistics Yearbook (1996: 5, 154–55; 2002: 287). 2004 from *SYC* (2005), pp. 105–07.

Table 8.2. *Labor Yearbook* (various years); SYC (2005): 795–800.

Labor data: The primary sources of official data on labor are the *Labor Yearbooks* published by the Ministry of Labor and Social Security (sometimes in collaboration with the National Bureau of Statistics), the *Labour and Social Security Yearbooks* from the same ministry, and the statistical reports posted on the ministry's Web site, http://www.molss.gov.cn/index_tongji.htm.

In 1978 there was some additional job movement, because the state reassigned workers to new enterprises—including those in distant cities—in accordance with the state's needs and development strategies. The numbers discussed do not cover workers changing jobs within the state sector, either through voluntary choice or job reassignment. An additional category of “discharge and suspension” was generally for political or criminal offences. In addition, there were 11 million short-term workers in the state sector who did not have lifetime employment (*Labor Yearbook* 1993, 318).

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