Chapter 2

Rural-Urban Inequality in China

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Rural-urban differences in China have persistently accounted for a large share of income inequality.[1] In part, today's rural-urban gap reflects the institutional legacies of socialism. Beginning in the 1950s, Communist Party leaders clearly separated urban and rural residents through a strictly enforced residential permit (*hukou*) system (see chapter 3), establishing urban and industrial development as the main objective of economic planning. Urban workers were provided with an "iron rice bowl" of lifetime employment, as well as health care, housing, and pension benefits. Rural residents were organized into collectives, in which access to basic health care and education was substantially improved. However, in order to subsidize rapid industrialization, the planning system set prices and directed investments in a manner that discriminated against agriculture and rural areas, leading to sharp differences in the living standards of urban and rural residents.

Economic reforms begun in 1978 have yet to reverse this pattern of uneven development or fully repeal the institutions and policies that created it. Quite to the contrary, market reforms have actually increased rural-urban inequality (figures 2.1 and 2.2).

Figure 2.1 plots annual real rural and urban incomes per capita adjusted to 2003 price levels with no adjustment for cost of living differences, and figure 2.2 plots the ratio of real rural to urban incomes accounting for the fact that the cost of living was 29.6 percent greater in urban areas than rural areas in 2003. As is apparent from the figures, real rural incomes grew faster than real urban incomes during only two brief periods. The first was in the early 1980s, when the household responsibility system returned agricultural decision-making authority from collectives back to rural households. The improved incentives, along with substantial increases in agricultural procurement prices and other complementary investments, unleashed rapid growth in agricultural productivity, which, along with price increases, boosted rural incomes significantly. The second period was from 1994 to 1997, when the urban economy slowed following financial retrenchment while rural incomes grew with rising agricultural prices and yields. This period proved to be a brief interregnum in what has been a steadily widening gap between rural and urban incomes since 1985.

By 2005, the most recent year for which data is available, rural-urban income differences had reached their historic peak and were greater than when reforms began, with real rural income per capita being only 39 percent of real urban income per capita.[2] China's rural-urban gaps are much larger than those found in most other developing countries (Knight, Li, and Song 2006; Eastwood and Lipton 2004).

In addition to contributing to overall inequality, rural-urban inequality creates incentives for rural-urban migration and urbanization while at the same time being symptomatic of persistent barriers to population mobility. The size and reasons for the rural-urban gap thus carry important implications for how policy may affect urbanization and inequality and promote development through greater market integration.

The rest of this chapter is organized as follows. The next section discusses measurement issues that arise in quantifying the extent of rural and urban inequality in China. Section 3 provides an analytical framework for understanding the reasons for large rural-urban gaps in China and locates China's experience in a comparative context. Section 4 assesses the extent of rural-urban migration and urbanization in China, which are key determinants of rural-urban differences. This is followed by a discussion of how different government policies influence rural-urban inequality. A final section concludes.

<<A>> Sources of Bias in Measuring Rural-Urban Inequality

The rural-urban income gaps reported above are based on data from separate national sample surveys of urban and rural households conducted each year by the National Bureau of Statistics (NBS). These measurements are subject to a number of sources of potential bias. Although these merit scrutiny, they do not appear likely to overturn the conclusion that rural-urban income gaps in China are large.

<<B>>Sampling Bias

The NBS urban household survey sample excludes urban residents living in townships as well as residents of suburban districts of province-level cities (Beijing, Chongqing, Shanghai, and Tianjin), likely leading to a slight upward bias in urban incomes (discussion with NBS staff).[3] Until 2002 the urban sample also excluded migrants living in urban areas. After they were included, they represented less than 2 percent of the sample, even though the 2000 census found that 14.6 percent of the population living in cities were migrants. Since migrants generally have lower wages than local residents, their exclusion creates upward bias in measured urban incomes.

Using rural data from 19 provinces and urban data from 11 provinces, Sicular and others (2006) find that per capita income of rural migrants living in urban areas is 60 percent that of local residents. Including migrants in calculating urban per capita income reduces the urban-rural income ratio from 2.27:1 to 2.12:1, increasing rural income from 44 percent to 47 percent of urban income. Their estimate of migrant incomes is likely to underestimate actual incomes, because it excludes urban-urban migrants and is based on a one-time survey while data for local residents are based on self-recorded diaries, which are known to produce higher income estimates.

The China Urban Labor Survey (CULS) undertaken in 2005 avoids both problems. It finds that in five large cities, the per capita income of migrants was 78 percent that of local residents; in five small cities, migrants' per capita income was higher than that of permanent residents.

The main reason why migrants' per capita income is so close to that of urban residents is that migrants living in cities work much longer hours, have fewer dependents, and are much less likely than local residents to be unemployed or out of the labor force (Park and Wang 2007). Although migrants often send money to dependents living in rural areas, according to the CULS data, net remittances account for only 6 percent of their

income (compared with 3 percent for permanent urban residents). Netting out remittances thus reduces the relative income of migrants in urban areas by just 3 percent.

Another source of sampling bias is the fact that many individuals living in collective households (including dormitories) are not sampled. In addition, the rural household survey includes as household members individuals who live away from home for more than six months a year but whose economic life remains closely tied to the household (for example, spouses and unmarried children). Many of these individuals actually reside in urban areas. Their inclusion as rural household members is likely to create upward bias in measured rural per capita income given the lack of full income pooling between migrants and their families in rural areas.

<<B>>Exclusion of Some Categories of Income

NBS household surveys exclude some categories of income. According to Sicular and others (2006), including the rental value of housing as income would have raised the urban-rural income ratio by 10 percent in 1995 and 6 percent in 2002. This increase is probably overstated, because consumer price indices do not accurately reflect changes in housing prices.

Urban incomes do not include important nonwage benefits, such as housing subsidies, health care, pensions, and unemployment insurance benefits. One study that attempts to estimate the value of such benefits finds that they increase the urban-rural income ratio by about one-third (Li and Luo 2006).

<<B>>Classification of Rural and Urban Areas

Reclassification of rural areas as urban areas accounts for a large share of urbanization. If more-developed rural areas are more likely to be reclassified as urban, reclassification reduces both rural and urban mean incomes, which could increase or decrease the rural-urban gap.

Benjamin and others (forthcoming) perform an exercise using data from the China Health and Nutrition Survey to argue that such reclassification increases the urban-rural income ratio. To the extent that the definition of urban is consistently applied over time, reclassification should not be a source of bias, but it certainly alters how one thinks about the contribution of rural-urban gaps to overall inequality and the causes of rural-urban inequality. Moreover, as described below, China has changed its definition of "urban" over time, leading to unknown sources of bias. Improvements in the accuracy of the definition (such as those adopted in 2000) could increase the rural-urban gap, because the most economically developed areas are more likely to be reclassified as urban.

<<B>>Differences in the Cost of Living

The rural-urban income ratios plotted in Figure 2.2. are adjusted to account for differences in the cost of living between urban and rural areas. If, however, the much more-rapid increases in the cost of living in urban areas compared with rural areas reflect increases in the quality of goods consumed rather than increases in the prices of goods of the same quality, the comparison of real incomes in rural and urban areas will underestimate the increase in the rural-urban gap.

<<A>>Understanding the Large Rural-Urban Divide

In models of free labor markets and costless labor mobility, equilibrium is achieved when wages adjust to the level at which labor supply equals labor demand. In such models, wages for workers with the same human capital converge across labor markets, regardless of differences in physical infrastructure or capital across regions. This convergence occurs because labor moves across markets until marginal productivities are equalized. If this is the case, rural-urban differences in earnings reflect differences in labor productivity. Sicular and others (2006) find that differences in the observable characteristics of rural and urban residents explain 50 percent of the rural-urban gap. According to them, 25 percent of the difference is attributable to differences in education.

Other causes of rural-urban gaps arise once the perfect-market assumption is relaxed. First, labor mobility may be hampered by the costs of moving, by search (or information) costs, or by the disutility of leaving one's home and moving to a new environment. For the poor, financing constraints may limit migration. Second, policies such as China's *hukou* system (described in chapter 3) may create policy barriers to labor mobility, effectively segmenting labor markets spatially.

Historically, rural-urban wage differentials have been observed in developing countries even when there are no obvious policy barriers to labor mobility. This is especially true during early periods of structural change. In both the United States and Japan, for example, rural-urban wage differences were large at the beginning of industrialization but converged over time, as larger shares of the labor force moved from agriculture to industry (Caselli and Coleman 2001; Hayami 2001). In the United States, rural-urban labor shifts in the South are credited with narrowing North-South wage inequality as well as rural-urban wage differences (Caselli and Coleman 2001). Although there is little direct empirical evidence on the reasons for large rural-urban gaps at low levels of development, it seems plausible that moving and search costs are substantial when the density of nonagricultural activity is low and infrastructure is underdeveloped. Highly productive early industrializers may also ration employment opportunities, leaving uneducated workers out of the industrialization game altogether. Among labor, capital, and goods markets, labor markets are typically the last to integrate (Aghion and Williamson 2002).

In China rural-urban income differences are much smaller in more-developed industrialized provinces. If labor movement out of agriculture into nonagriculture were greater in areas with larger rural-urban gaps, one would expect regional differences in these gaps and in mean income levels to converge over time. However, until the late 1990s, China's coastal provinces witnessed a more-rapid flow of labor out of agriculture, an unsustainable pattern once most of the labor in rich provinces has already left agriculture. Income and employment data suggest that since 1997 structural change in the western provinces has accelerated sharply, providing some hope that regional income differences are beginning to narrow (Du, Park, and Wang 2005). Over time, the number of migrants moving to other provinces and regions has increased. By 2004 half of all rural migrants had migrated to another province (NBS 2005).

Several lessons can be drawn from this discussion. First, large rural-urban gaps can exist absent policy barriers, especially at low levels of development. Second, rural-urban differences related to structural change are likely to be an important dimension of regional inequality. Third, China's pattern of rapid movement of labor out of agriculture

with rising rural-urban income gaps is anomalous in light of the development experience of other countries. Fourth, labor market integration takes time. Increasing rural migration flows from the regions with the largest rural-urban gaps has occurred only recently.

In a world of imperfect rural-urban labor mobility, government policies that treat urban and rural areas differently can lead to gaps in rural and urban living standards. In addition to policies that directly affect labor mobility, such policies include those affecting taxation, the prices of agricultural outputs and inputs, public investment, basic social services, social insurance, and the financial sector [[**AU: Edit okay**?].

<<A>>Urbanization and Migration

According to official statistics, the percentage of China's population living in urban areas more than doubled during the reform period, increasing from 17.9 percent in 1978 to 41.8 percent in 2004. Possible factors that could account for the increase include more-rapid natural rate of population growth in urban areas as a result of higher birth and lower death rates; rural-to-urban migration; recategorization of rural areas as urban areas as a result of economic development; and changes in the definition of *urban*. Annual estimates of the urban population come from linear interpolations based on estimates from population censuses and mini-censuses, one of which is undertaken every five years (Chan and Hu 2003).

Since the fertility rate is much lower in urban areas than in rural areas, the first factor is unlikely to be driving urbanization. Zhang and Song (2003) estimate that three-fourths of the increase in urban population cannot be explained by the natural rate of urban population growth based on birth and death rates; they attribute this unexplained share of the increase to rural-urban migration (including both *hukou* and non–*hukou* migration). According to my calculations using the 2000 population census data, only 12.2 percent of the population living in cities or towns (about 57 million people) had a *hukou* in a county or city different from their place of residence (defined as where they had lived six months or more the previous year). Thus, even if there were no migration in 1978, non-*hukou* migration could at most account for one-quarter of the increase in the urban population between 1978 and 2000. Between 1982 and 2004, 16.8–20.0 million people a year changed their *hukou* registration. Chan, Liu, and Yang (1999) report that 40 percent of *hukou* migrants come from rural areas. A simple calculation using these numbers yields an estimate of the total number of people who changed their *hukou* from rural to urban from 1982 to 2004 at 169 million, or just less than half of the total increase in the urban population over this period. Even allowing for deaths, people who change their *hukou* more than once, and *hukou* changes to rural destinations, these numbers suggest that *hukou* migration accounts for a significant share of total urbanization.

What about the importance of reclassification of rural areas as urban? Such reclassification can be the outcome of either new criteria for what is urban or evolution of rural areas into urban areas given a consistent definition for what is urban. China's official urban population statistics were revised after both the 1990 and 2000 censuses to reflect changes in definition. According to Yu (2002), however, these definitional changes did not increase the total urban population.[4] Thus, the accuracy of recategorization depends on the reasonableness of the criteria for urban classification. In 2000 the NBS shifted to a standard based primarily on population density. This standard

should be less subject to influence from administrative reforms that change an area's classification in the absence of real economic or demographic changes.

Could the censuses be underestimating the true extent of urbanization by undercounting rural migrants living in cities? According to the annual rural household surveys of the NBS (2005), the number of rural migrants was 81.2 million in 2002, 89.6 million in 2003, and 93.5 million in 2004. Elsewhere, the NBS reports that in 2004 about 80 percent of rural migrants migrated for more than six months (the 2000 census also uses a six-month standard for residence) and that 95 percent migrated to cities or towns. In addition to individual migrants, the NBS estimates that rural family migration was 23.5 million in 2002, 24.3 million in 2003, and 24.7 million in 2004 (NBS 2005). If families were as likely to go to cities as individual migrants, these numbers imply that the urban population coming from rural areas was 93.5 million in 2004 (17.2 percent of the urban population). This is significantly higher than the 12.2 percent of the urban population estimated using 2000 census data. Even using official urban population data, at the current pace, more than half of China's population will be urban by 2010.

Despite rapid urbanization, it has been argued that China remains underurbanized given its level of economic development. Chinese cities are suboptimal in size (Au and Henderson 2006), and less of the population is clustered in coastal regions than would be expected with free population mobility.

Rural-to-urban migration is the critical behavior affecting both rural-urban inequality and urbanization. Such migration has increased steadily over time, and policy barriers to migration have been reduced (although the *hukou* system is unlikely to be dismantled for some time) (see chapter 3). Policy and information barriers as well as other costs continue to inhibit migration, leaving ample room for even greater migration in the future. Rising rural-urban income gaps are prima facie evidence that migration flows have not increased rapidly enough to offset rising differences in rural-urban productivity growth.

<<A>>Policies Affecting the Rural-Urban Divide

If rural and urban labor markets are not fully integrated, policies that treat rural and urban areas differently affect the size of rural-urban income gaps and alter the incentives to migrate. This section examines some of the key policies contributing to rural-urban inequality in China.

<<B>>*Rural Industrialization*

The multiplicity of collectively owned small- and medium-size rural enterprises was one of China's great reform success stories. Exploiting demand niches not met by the planning system, rural enterprises, including the self-employed, grew rapidly in the 1980s and steadily for much of the 1990s. Total rural enterprise employment increased from 28.3 million in 1978 to 92.7 million in 1990 and 135.1 million in 1996 (China Statistical Yearbook 2006). After 1996 China experienced, for the first time, a sharp drop in rural enterprise employment, to 125.4 million in 1998. Since then there has been a gradual recovery, with employment reaching 142.7 million in 2005 . The slowdown from 1996 to 1998 reflected a number of factors, including the Asian financial crisis, intensified market competition, corrections for overexpansion during 1993–94, and widespread privatization of town and village enterprises (TVEs), which frequently led to labor shedding.

TVE development in China played an important role in raising rural incomes for those able to find employment in such enterprises. In fact, given the choice, many better-educated farmers preferred local nonindustrial jobs to out-migration (Zhao 1999). The share of nonagricultural income in total rural household net income increased from 22.3 percent in 1990 to 52.4 percent in 2004. Most of the nonagricultural income (34.0 percent of net income) was from wage income. This is an impressive change in the structure of rural income.

Because such employment opportunities were highly skewed in their distribution, favoring those living in coastal areas, rural industrialization increased inequality (Rozelle 1994). This contrasts sharply with the experience of Taiwan (China), where nonfarm employment in small- and medium-size enterprises (SMEs) equalized incomes. This difference occurred because major infrastructure investments and Taiwan's small geographic size integrated the labor market across the island.

The recent widespread privatization of TVEs, along with increased market openness and intensified competition, provides opportunities for increasing rural incomes in the future. Early evidence suggests that privatized TVEs perform better than collectively owned enterprises and may therefore help make China's SMEs a more dynamic sector that will eventually increase employment opportunities for rural labor. Privatized firms are also less likely than collectively owned enterprises to privilege employment of local rural residents, which should help improve regional labor market integration. In a more open system, however, enterprises are more prone to cluster around urban or periurban areas to realize economies of scale. Therefore, future private enterprise development in China will occur mainly in urban centers. If this is the case, reducing rural-urban inequality will be particularly dependent on the ability of rural residents to migrate to urban areas.

<<B>>*Pricing Policies and Trade Liberalization*

Under central planning, the state determined output prices for grain and other agricultural commodities at low levels to buoy urban workers' consumption and indirectly support industrial production. During the early reform period, official procurement prices were increased several times to improve farmer production incentives and increase rural incomes. In 1985 China established a dual-track pricing and procurement contracting system that required farmers to sell a fixed amount of basic grains, cotton, and vegetable oil to the state at low, state-set prices. Farmers were free to sell the rest of their output on the open market and keep the income earned. This policy acted as an effective tax when the market price was above the procurement price but became a protection price in the late 1990s, when the market price fell below the procurement price and the government agreed to purchase quota amounts to support farmers' welfare. Procured grain was provided at subsidized prices to urban residents until 1993; termination of these subsidies contributed to the narrowing of rural-urban differences.

One reason why grain prices collapsed in the late 1990s was government administrative efforts to mandate that farmers increase planting of grain following concerns about temporary supply shortages that led to rapid grain price inflation in 1994 and 1995. These measures were motivated by concern for the welfare of urban citizens. The low grain prices hit farmers very hard and were largely responsible for slow rural

income growth in the late 1990s. Many farmers responded by seeking additional off-farm employment.

After the large increases in grain prices in 1994 and 1995, real grain prices fell steadily, until increasing sharply in 2004, with lower grain sown area and lower grain output (figure 2.3). Agricultural input prices were much more stable over time, so that the profitability of grain production rose and fell with grain prices. It is not clear whether the recent increase in the grain price is a temporary or longer-term phenomenon. The government now supports higher grain prices to increase farmer incomes, is making less effort to maintain sown area in grain, and, since 2001, has provided sizable subsidies to take ecologically marginal lands out of crop cultivation.

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China's World Trade Organization (WTO) commitment to increase agricultural imports for key commodities has also affected domestic agricultural prices. Before implementation of the agreement, world prices of wheat, corn, soybeans, cotton, and sugar were below domestic prices, in some cases substantially so. Lower prices as a result of trade liberalization significantly harm some specialized producers of these commodities (for example, corn producers in Jilin, soybean producers in Heilongjiang, sugar producers in Guangxi, and cotton producers in Xinjiang). There is concern that trade liberalization will hurt northern farmers more than those in the south, because China is much more internationally competitive in rice production than in wheat and corn production, and the south is better positioned to increase livestock and horticultural goods production, in which China has a comparative advantage. However, since the increase in imports is limited for commodities with tariff-rate quotas (for example, wheat and corn), the adverse effects should be relatively modest in the intermediate term.

Supporting production adjustment (including shifts to nonagricultural activities) by farmers affected negatively by price changes through effective provision of new technologies, credit, and other necessary inputs represents a major policy challenge. If farmers can shift production in line with comparative advantage, trade liberalization can increase rather than reduce rural incomes.

The best quantitative study of the welfare impacts of China's WTO agreement is by Chen and Ravallion (2004), who solve a computable general equilibrium model calibrated using official urban and rural survey data. They find that three-fourths of rural residents lose from trade liberalization, while only one-tenth of urban residents lose. However, the magnitudes are not very large, and inequality measures are hardly affected. Overall, mean per capita farm income decreases by Y18, mainly as a result of the drop in wholesale prices, while mean per capita urban income increases by Y29.

<<B>>Taxes and Subsidies
China's fiscal system was significantly decentralized following reforms in 1980 and 1984 (Lin and Liu 2000). Governments at all levels have encountered difficulty raising adequate revenue to fund government expenditures. The problem has led to increasing budgetary self-reliance at local levels and the reduction of fiscal subsidies from upper levels of government. County and township governments in poor areas have frequently had no alternative but to increase revenues through a variety of ad hoc fees and levies in

order to meet their recurrent expenditure obligations. In some cases, the corrupt practices of village officials have also led to increased rural taxation. In many cases, such assessments are levied on a per capita or per household basis in rural villages.

For all of these reasons, taxation is regressive rather than progressive in rural China. Many farmers have seen fees increase without visible increases in public investments or services. The problem became severe in the mid-to late 1990s, leading in many cases to rural protests (Bernstein and Lu 2000).

The central government has passed laws to limit rural taxation (to 5 percent of income) and widely publicized the importance of effective enforcement of this rule. But without continuous vigilance and administrative effort, compliance is difficult to maintain. The contrast between excessive rural taxation and continued subsidies for many urban workers is quite startling in light of the large gap in welfare between rural and urban residents.

In recent years, as the government has successfully increased revenues and centralized budgetary revenue, greater redistribution has been possible. The new leadership has made significant progress in reducing rural burdens. In 2003 it eliminated educational surcharges (*jiaoyu fujiao fei*). Between 2003 and 2006, it phased out the agricultural tax, along with most other fees, eliminating farmers' tax and fee burdens in most areas.

At the same time, new spending initiatives sought to improve the welfare of rural residents. Caps on educational fees were imposed in 2002 in some areas, expanding in coverage over time. Starting in 2006, the central government provided new subsidies to eliminate the collection of most educational charges for compulsory education (primary and middle school). Since 2005 free textbooks have been provided to children from poor families. In addition to significant subsidy programs to support grain production and reduce farming on marginal lands, China also recently established a new rural cooperative health insurance system, established a new subsidy program for health expenses of the poor, and began scaling up nationally its rural minimum living standard (*Di Bao*) subsidy program.

Many of these initiatives were outlined in the 11th Five-Year Plan, adopted in March 2006, as part of an effort to "build a new socialist countryside" that increased government spending in rural areas by 15 percent over the previous year. Given these reforms, it is unlikely that differences in taxes and subsidies explain much of the current gaps between rural and urban incomes. However, fiscal imbalance and cash-starved governance in poor regions remain pervasive challenges to maintaining the quality of public services while reducing tax collection.

<<B>>*Agricultural Investment*
During China's reform period, periods of high agricultural investments and growth have been strongly associated with reduced inequality and poverty alleviation (Rozelle 1994; Rozelle and others 1998; World Bank 2001; Chen and Ravallion 2007. But such periods have been brief and intermittent. This contrasts with the experience of Taiwan (China). From early on, Taiwan emphasized the importance of raising rural incomes; it therefore invested heavily in rural infrastructure and agricultural research and extension (Park and Johnston 1995), which led to broad-based rural income growth that not only reduced income inequality but also spurred growth.

In China, industrial growth in China has been associated with increased inequality, mainly because until recently nonagricultural opportunities have been available to only some farmers and regions (especially those in coastal areas). The reform period has seen a steady decline in the share of government expenditures allocated to agriculture (including investments, subsidies, and research and extension), from about 14 percent in 1977 to less than 10 percent by 2004 (NBS, 2006).

The disappearance of village collectives has also contributed to deterioration of rural infrastructure and investment. Collectives, for example, used to assess rural corvée labor requirements to support investments in roads, irrigation, terracing, tree planting, and other activities. The reforms have eroded their ability to mobilize labor in this way.

It is, of course, difficult to assess the adequacy of current public investments in rural development without carefully assessing competing public projects. A decline in agricultural investment may be appropriate given agriculture's falling overall importance in the economy. However, given the large number of people still living in rural areas, declining levels of agricultural investment have significant distributional consequences.

Some specific investments, in particular agricultural research, that have high returns receive inadequate or misplaced public investments. China invests only 0.5 percent of agricultural GDP in agricultural research, for example—a much lower percentage than other countries (developed countries such as Australia, Canada, and the United States invest 2–4 percent) (Rozelle 2003). Much research is decentralized, but revenue-scarce local governments have been unwilling to spend scarce funds on research. Investment has also focused excessively on grain crops, ignoring technologies appropriate for poorer regions.

One example of the potential of well-targeted investments in agricultural research is China's aggressive investments in plant biotechnology, an area where China has become a world leader. The tremendous success of crops such as China's Bt cotton suggests that the returns to such investments can be spectacularly high. China should maintain its commitment to this effort, while putting in place an appropriate safety regulatory system (Rozelle 2003).

<<B>>Education and Health

Differences in basic education and health services are an important dimension of China's rural-urban divide. According to the China Health and Nutrition Survey, conducted in eight provinces, mean years of schooling were 11.0 years for urban workers and 6.6 years for rural workers (Shi, Sicular, and Zhao 2002). According to the 2000 census, urban enrollment rates are 93–95 percent and rural enrollment rates are 84–90 percent (Hannum, Wang, and Adams 2006). Enrollment rates for secondary-school-age children are 72–80 percent in urban areas and just 50–64 percent in rural areas (Hannum, Wang, and Adams 2006).

Quality differences in urban and rural schools are also significant. Many poor rural areas have yet to fully implement China's nine-year mandatory education law, mainly because poor families are unable or unwilling to pay required school fees. Fiscal decentralization has led to growing disparities in the funding of education and health services (Tsang 1994, 2002).

While gender disparities in educational attainment are not nearly as pronounced in China as in other parts of the world, they appear to increase with poverty (Hannum and

Park 2002). Some minority groups also have very low levels of educational attainment. The central government has set up special funds to support schooling in poor and minority counties, but these funds remain relatively small relative to the size of the problem.

Despite the fact that the economic returns to investment in education are likely to be extremely high, the government invested just 2.9 percent of GDP in education (2.5 percent of government budgetary outlays) in 2002, a rate well below that of other developed and developing countries.[5] By way of comparison, in 1994 public spending on education as a percentage of GDP was 2.2 percent in China, 2.8 percent in Pakistan, 3.6 percent in India, 3.7 percent in the Republic of Korea, 3.8 percent in Thailand, 4.7 percent in Mexico, 5.3 percent in Malaysia, and 6.6 percent in Hungary (Song 2003).

Large disparities in educational access among regions or between urban and rural areas are inefficient from the standpoint of making investments to support economic development, as Heckman (2003) notes. Recent studies have shown that the returns to a year of education in urban China are well above 10 percent. Moreover if wages are set below marginal productivities as some research suggests, or if individual educational attainment has externalities, for instance increasing the productivity of other workers, then the estimated private returns to education from micro-studies may substantially underestimate the social returns to education, which could be much higher (Heckman 2003).

<<B>>Rural Credit

Rural credit supports rural development by financing new and ongoing economic activities as well as household investments in education and health. Its role is especially important when there is substantial pressure on farmers to adjust their production activities in response to changing price and other incentives, because new activities usually require new investments. Credit is also necessary for farmers to achieve economies of scale through mechanization, which may be an important prerequisite for releasing additional labor for nonagricultural work.

Like much of China's financial system, China's rural financial institutions (Rural Credit Cooperatives [RCCs] and the Agricultural Bank of China) suffer from significant bad debt problems. Beginning in the mid-1990s these problems reduced the volume of new credit made available to rural borrowers, especially in poor areas, where the bad debt problem was more severe (Brandt, Park, and Wang 2004). At the same time, the lack of effective interregional financial intermediation in RCCs may have helped keep financial resources from flowing from poor areas to richer ones. To improve credit access of rural households, in the early 2000s RCCs established a new system in which every household receives a credit limit based on an initial assessment of its creditworthiness. Some initial but scanty evidence suggests that the new system may have improved credit access of farmers, but whether this is a sustainable model remains to be seen. Since 2004, China also began experimental reforms in eight provinces to improve governance by creating larger rural cooperative banks or associations to link broader branch networks and improve incentives. In 2006, the Peoples Bank of China began an experiment to allow private microfinance companies to operate in 5 provinces, and the China Bank Regulatory Commission began experimental reforms to promote village banking in poor villages of 6 provinces. It is too early to assess the performance of these experiments.

Overall, the record for provision of rural credit to support economic development in rural areas is mixed. In some respects, distribution of financial resources has been equitable, but rural banks are plagued by performance problems. In the more-commercial banking system that is likely to exist in the future, it will be essential to deregulate financial institutions, so that they can charge interest rates that cover transaction costs and account for risk in each region and develop financial instruments that meet the needs of local borrowers. Creating a diversified financial system, including microfinance providers, that can meet the needs of different types of borrowers in rural areas should be one goal of China's future financial reforms.

<<B>>*Targeted Poverty Programs*

Since 1986 China has pursued an active regionally targeted investment program in a group of nationally designated poor counties. The main programs have been a subsidized loan program, a budgetary grants program, and a public works program (focused mainly on road construction and infrastructure to provide safe drinking water). Although sharp criticism has been levied at the implementation of the subsidized loan program (the largest of the three programs), there is evidence that regional targeting has increased rural incomes and achieved respectable rates of return (Jalan and Ravallion 1999; Park, Wang, and Wu 2002). However, targeting has been far from ideal, with increasing leakage over time. Many poor people residing in nondesignated counties have received no assistance. To deal with some of the targeting problems, in 2001 China switched the level of targeting to the village rather than the county and established an ambitious new community-based village investment program.

<<A>>**Conclusions and Policy Recommendations**

A key aspect of any policy strategy for addressing rural-urban differences even as urbanization proceeds will be a vision of how patterns of labor mobility will unfold in the coming years. China's economic growth is being driven by rapid urban development in coastal areas that threaten to leave the rest of China behind. Remarkable levels of foreign direct investment and exports in these regions have created global linkages that are creating very dynamic agglomeration economies. Labor flows are responding, but the response is too slow to stop widening wage and productivity differences.

Theory suggests that when regional wage differentials become large enough, investment should begin flowing to the regions with lower wages (Hu 2002). Such movement is being encouraged in China by the government's Western development initiative, but large investment flows have yet to materialize. The situation creates some challenging policy choices, because continued freeing up of the labor market could unleash a large movement of rural labor on coastal areas. Although this may be the fastest way to share the gains of growth broadly, China appears to be relaxing *hukou* restrictions in smaller cities first, in the hope that they will attract more rural migrants and prevent congestion in large cities. The advantages of this approach need to be weighed against growth that is more focused on larger urban centers, which have greater attraction for migrants.

What are the implications of migration trends for public policy? In cities that receive increasingly large numbers of rural migrants, these pressures may create more problems than in the past, because they are adding to already large migrant populations,

pushing congestion costs higher. At the same time, there may be additional scope for extending metropolitan areas in suburban or periurban areas. Large numbers of migrants are likely to affect the wages and employment of low-skilled urban workers, creating new demands on municipal governments. Government inevitably will feel pressure to influence both the volume and the spatial distribution of migration (large versus small cities, coastal versus interior cities) and to respond to pressures caused by migration. In doing so, it is important that it avoid repeating the mistakes of the past by restricting labor mobility directly, which has high economic costs and reduces the welfare of rural citizens. Instead, policies should focus on influencing the market-based incentives facing potential workers, especially through public investments, and by empowering municipal governments to mobilize necessary resources to attract migrants when the potential exists.

The initiative announced in 2004 in the State Council's Document No. 1 was designed to support more-rapid rural development through a specific set of policies and investments. It represents a good start in tackling the difficult challenge of reducing large rural-urban disparities. Clearly, no single policy change can eliminate these disparities; it will be important to push on as many fronts as possible.

This chapter emphasizes the importance of facilitating greater labor mobility as a critical part of any strategy to narrow rural-urban differences in the future. The government should plan to gradually phase out the *hukou* system and harmonize government policies to be *hukou*-blind (that is, to equalize access to education, employment opportunities, social insurance programs, and other programs; see chapter 3). Public policies aimed at influencing or responding to patterns of migration should place less emphasis on regulating labor supply decisions, instead emphasizing empowering municipal governments to realize growth potential and respond to changing demands for public expenditures.

The government can reduce rural-urban disparities and promote more-rapid economic growth by making high-return investments in rural development. Priority should be given to increasing education and health investments in rural areas. In the poorest areas, education should be made available free of charge to ensure that financial barriers prevent no children from attending school. Lack of adequate education is a barrier to labor mobility and a leading contributor to poverty. The economic and social returns to education are much greater than the private returns and therefore merit public subsidies. Investments in preventive health and other basic health services are also likely to be high-return investments. Human capital is a particularly good investment for the poor, because it stays with the individual even if he or she migrates to a new location.

Continued investments in agriculture can support rapid growth while reducing rural-urban inequality. Agricultural research has high returns and should receive strong government support. However, large investments in remote rural areas could be a questionable strategy if resources are so poor that labor out-migration is likely to be the best decision for many households. Many of China's poorest rural areas are destined to become depopulated as the process of urbanization and development continues.

The government could also consider adopting several other recommendations:
- Support employment information and credentialing systems that can help rural labor overcome information barriers.

- Promote greater labor mobility and equal treatment by supporting private sector development, by including rural workers in social insurance systems, and by enforcing established labor standards.
- Develop a diversified rural financial system made up of institutions with clearly defined ownership and the flexibility to set interest rates and design financial instruments appropriate for local demanders.
- Develop an adequate financing mechanism in the public finance system to enable redistribution that makes it possible for local governments to avoid excessive taxation of farmers and provide adequate social services and public investments in rural communities.
- Support structural adjustment (shift to new activities) in rural areas by providing appropriate training, incentives, and access to credit.
- Continue investing in targeted poverty alleviation programs, but ensure that specific investments are consistent with a coherent long-range development strategy that is appropriate given local circumstances.

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<<A>>Notes

1. According to recent calculations by the World Bank (unpublished), rural-urban differences accounted for 40 percent of total income inequality in 2003, a percentage similar to that in 1995. Changes in rural-urban inequality accounted for 47.4 percent of the increase in inequality between 1985 and 1995, contributing more to inequality than interprovincial, intrarural, or intraurban inequality (World Bank 1997). Sicular and others (2006) find that rural-urban differences explain 25 percent of overall inequality in 2002 for a subset of provinces.

2. Chen and Ravallion (2007) report that per capita income in rural areas is 58 percent that of urban areas. Using data from the China Health and Nutrition Survey, Benjamin and others (forthcoming) find an urban-rural income ratio of 1.6. Neither of these results is reliable, however: Chen and Ravallion's result appears to arise from incorrect price deflation, and Benjamin and others' result is based on an unrepresentative sample. Brandt and Holz (2006) report a ratio of 50 percent in 2000 using their common basket spatial price deflators but using the unadjusted rural CPI; with adjustment the ratio is 47 percent.

3. Incomes of urban residents in townships are assumed to be equal to surveyed residents in county seats.

4. Before 1990, residents of rural towns (*xiang*) were defined as rural, while residents of townships (*zhen*) were categorized as urban. By 1990 many rural towns had been recategorized as townships, despite having large village populations. In 1990 urban areas were redefined to include urban districts (*qu*) or streets (*jiedao*) and residence committees (*juweihui*) in nonurban districts, such as townships, which reduced the urban population. In the 1990s the number of urban districts increased 17 percent, often as a result of the recategorization of suburban areas that still contained rural populations. At the same time, many rural areas of townships had become quite developed. In 2000 the NBS switched to a criterion of 1,500 people per square kilometer. Using either the 1990 or the 2000 definition, the urban population in 2000 totaled 452 million. In contrast, the distribution of the urban population changed significantly as a result of the change in the definition. Chan and Hu (2003) estimate that reclassification accounted for 22 percent of urban population growth in the 1990s, but their estimate is based on the very simple assumption that the increase is equal to the population of rural towns (*xiang*) that became townships (*zhen*).

5. If education spending from all sources, including private spending, is included, education spending rises to 4.4 percent of GDP. It is unclear how this rate compares with that of other countries.

Figure 2.1 Real Urban and Rural per Capita Income, 1978–2005
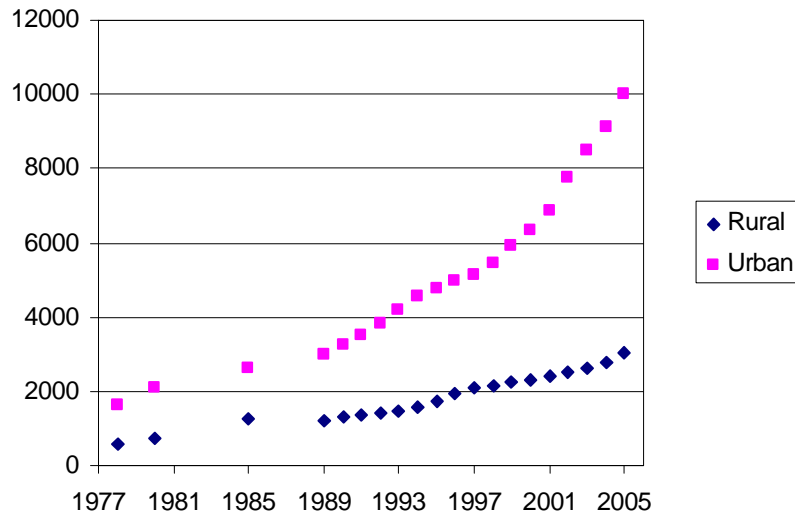
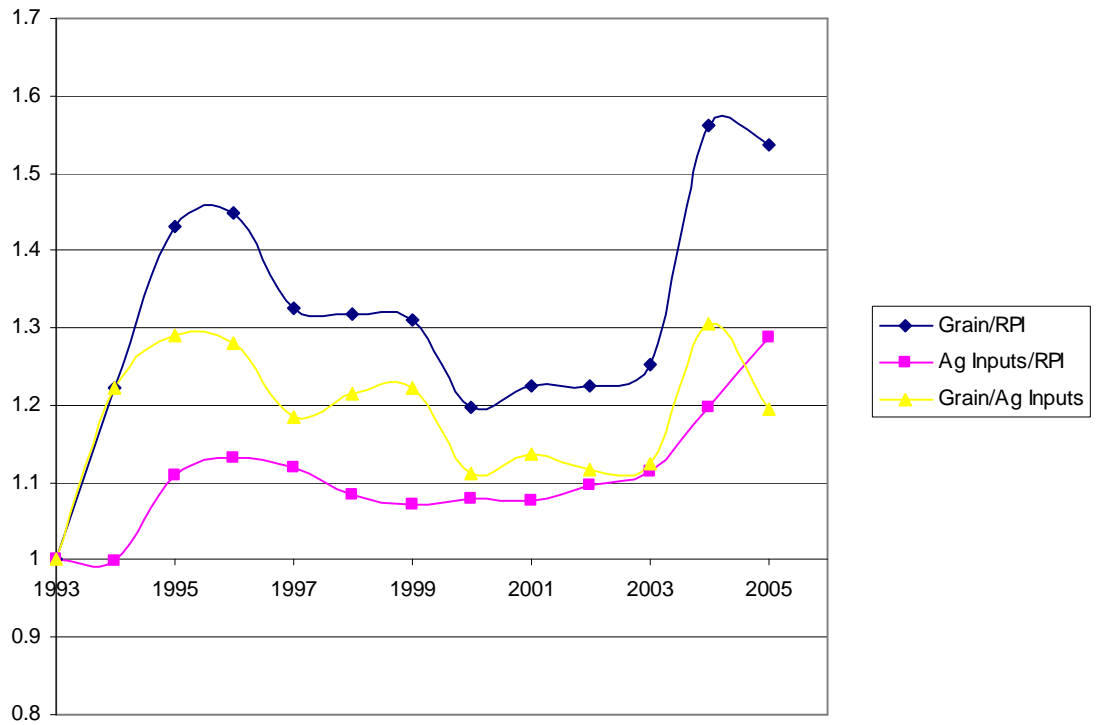*Source*: author's calculation using data from NBS (2006).
Note: Real income is in 2003 yuan, deflated by national urban and rural consumer price indices. Because of the lack of a rural CPI through 1985, the rural CPI is assumed to be equal to the urban CPI from 1977 to 1985.

Figure 2.1 Ratio of Real Rural to Real Urban per Capita Income, 1989–2005
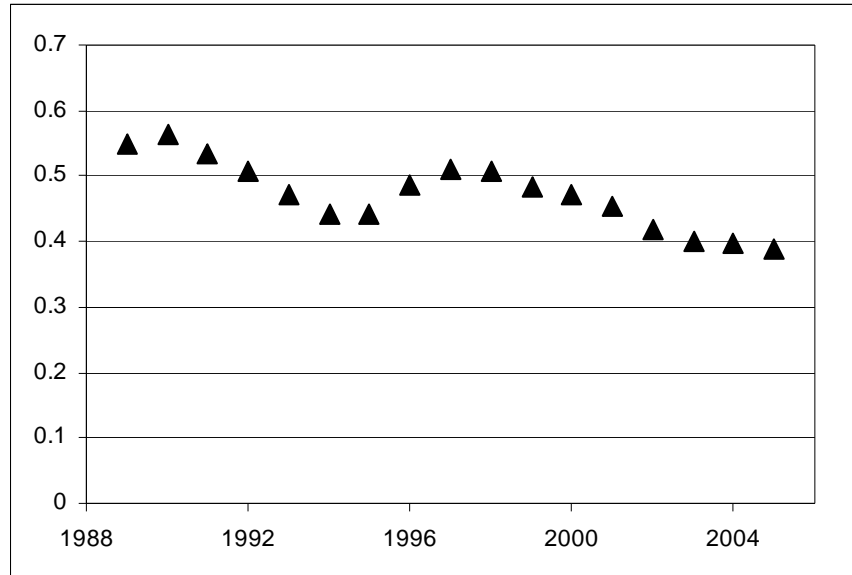
Source: author's calculation using data from NBS (2006) and Brand and Holz (2005).*Note*: Figure plots the ratio of rural and urban incomes per capita, using urban CPI and adjusted rural CPI for 1990–2002 based on a common bundle of goods in 1990, as calculated by Brandt and Holz (2005). Use of a common bundle allows comparisons that take into account the greater cost of living in urban areas (29.6 percent greater than in rural areas in 2003). National rural and urban CPI are used to adjust incomes for 2003–05.

Figure 2.3 Grain and Agricultural Input Price Indices, 1993–2005
(1993 price = 1.0)

Source: author's calculation using data from NBS (2006)..
Note: Grain and agricultural inputs price indices are divided by the retail price index (RPI), using 1993 as a base.