

# China Economic Research and Advisory Programme

## Urbanization in China: Policy Issues and Options<sup>1</sup>

2 May 2007

---

<sup>1</sup> This report is prepared by Vernon Henderson, with contributions from John Quigley and Edwin Lim. Comments by Mike Spence and Tony Venables on an earlier draft are gratefully acknowledged. Comments by GUO Shuqing, LI Jiange, LIU He, LIU Zhongli, LOU Jiwei, QIU Baoxing, WU Jinglian, XIANG Huacheng and ZHOU Xiaochuan on the semi-final draft are gratefully acknowledged, helping to remove errors and provide critical perspective. Remaining errors are the sole responsibility of the author. The report is based upon two background papers: *Managing Urban Development in Chinese Cities* by Alain Bertaud, Jan K. Brueckner, and Yuming Fu and *Evaluating China's Urbanization Experience and Prospects* by J. Vernon Henderson, as well as background papers prepared by counterparts at the Department of Development Strategy & Regional Economy of the Development Research Center and the Institute of Population and Labor Economics at the Chinese Academy of Social Sciences.

# Urbanization in China: Policy Issues and Options

## Table of Contents

<b>1. Introduction</b>	<b>1</b>
<b>2. International Experience with Urbanization</b>	<b>1</b>
<b>3. Distinctive Features of China's Urbanization</b>	<b>3</b>
<i>The comparative level of urbanization</i>	3
<i>Large and growing urban–rural income gap</i>	4
<i>Too many cities; too few people</i>	4
<i>Economic structure of cities</i>	5
<i>Urban governance</i>	6
<i>The urban administrative hierarchy</i>	6
<i>Living conditions of migrants in cities</i>	7
<b>4. Policy Options for Urbanization in the Next Decade</b>	<b>8</b>
<i>Harmonious rural and urban development under rapid urbanization</i>	8
<i>Promoting efficient use of natural resources</i>	11
<i>City management</i>	15

# Urbanization in China: Policy Issues and Options

## 1. Introduction

1.1. The recent economic achievements of China have been enormous. Since 1978, real GDP per capita has grown at about 10% a year. In the same period, non-agricultural employment has risen from 24 to 60% of the work force and the urban population from 18 to 45% of the nation. The driving force behind this transformation is economic reform. Importantly, the introduction of personal and investment incentive systems in both agriculture and industry has led to the dominance of the private sector in most materials and product markets.

1.2. Sustaining this growth in the future and, in particular, achieving harmony between the urban and rural sectors will require the same types of reforms in two areas of policy making, as were carried out over last three decades in industry and agriculture. First is reform to integrate the urban and rural sectors, to create unified national land, labor and capital markets. Second is reform of urban governance. Currently, urban policy-making is largely based on command and control from above, with quantity targets and national edicts that are frequently ignored in a free-wheeling market economy. China needs an urban policy structure which provides appropriate incentives for decision-making by public officials and which replaces an obsolete command structure by introducing incentive structures to inform choices concerning city financing, the use of urban land, treatment of migrants, and provision of local public services.

## 2. International Experience with Urbanization

2.1. Urbanization is an integral element of rapid income growth and industrialization throughout the world, as countries move from low to higher income levels. Labor moves from under-employment in low-productivity rural activities to full employment in higher-productivity urban manufacturing activities. The transformation is spurred by improved technology, imported and domestic, which raises the productivity and skills of the workers moving to the urban sector and maintains the output of the rural sector, as well as by export demand for goods produced in the urban sector. Countries typically experience urban population growth rates of 5–6% a year during the 15–20 year period of most rapid industrialization, where urbanization transforms societies from 20–25% urbanized to 70–85% urbanized in 3–4 decades.

2.2. Why are cities and urbanization so critical to the success of modernization? Most manufacturing and service production is more efficient when undertaken in urbanized areas. In high-density locations, firms more easily learn from other firms about new technologies, hire the workers with the exact skills they need, and purchase and transport intermediate inputs. Studies in other countries (e.g., Japan, Korea) suggest that a doubling of individual industry scale within a city leads to a 2–10% growth in worker productivity. Productivity growth is higher in modern technical industries, such as electronics,

transport equipment, and machinery, and is somewhat lower in textiles and food processing.

2.3. More generally, cities are the engines of growth. They are places where innovations are incubated and sophisticated skills are developed. Research shows that ‘knowledge accumulation’ in urban environments – that is, an increase in the general level of human capital – leads also to improved worker productivity. Cities provide the scale economies for schooling and training systems to develop in interaction with commerce and industry.

2.4. In the early stages of industrialization, the largest cities in a country are the focal points for development and importation of technology, and are the initial centers of industrialization. However, as development proceeds, technologies used in manufacturing production standardize, which permits decentralization of industrial production to small and medium-sized cities with lower labor and land costs, a process akin to the “product cycle<sup>2</sup>.” For example, in Korea in the decade 1983–93, the share of national manufacturing employment in Seoul, Pusan, and Taegu fell from 44 to 28%, while the share in small hinterland cities and rural areas rose from 26 to 42%. The largest cities evolve to become financial and business service centers, producing the high-end, innovative products in these sectors. They may remain centers for high-tech development as well. Large cities in developed countries (e.g., New York, Tokyo and London) have little manufacturing activity, but huge shares of national financial and business services.

2.5. Rural-urban convergence of incomes, reflecting rural–urban harmony, is critical in the later stages of the development process. In the beginning, as suggested by Simon Kuznets,<sup>3</sup> as young workers move to cities, income inequality between the urban and rural sectors increases. The ratio of urban incomes to rural incomes may rise to as high as 2.0 to 2.5. Some of this simply reflects differentials in productivity, and some reflects the skills acquired by migrants and their families in cities. However, the gap declines with growth, and rural–urban incomes ultimately converge. For example, in Korea, the urban–rural wage gap was eliminated by 1994; and in Sri Lanka and Taiwan, China the ratio was under 1.4 by 1995.

2.6. A key to rural-urban convergence of incomes and attainment of food security is that, in the rural sector, agriculture modernizes and mechanizes. This modernization supports urbanization; the rural sector must not only release labor to move to cities, but also must continue to develop so as to feed the nation. Traditional peasant agriculture is transformed into farming businesses managed by highly skilled, educated people. Many developed countries are major food exporters, and yet only small fractions of their labor forces are employed in farming.

---

<sup>2</sup> The product cycle hypothesis originally was applied to international trade. Once technology is standardized, production of new products or product varieties in developed countries moves off-shore to countries with lower labor and other production costs.

<sup>3</sup> Simon Kuznets hypothesized that, with economic development, nationally income inequality would first rise as per capita income rose and then peak and decline as per capita income continued to rise further.

2.7. Rapid urbanization can pose enormous challenges to attain a high quality of life, livable neighborhoods, and a sense of moving forward within cities. Urbanization happens so quickly. Policy structures designed for a rural society adjust too slowly, and urban managers often lack requisite skills and training. With poor management and planning, cities are often initially overwhelmed by problems of congestion, pollution, unclean water and sprawl, as well as the development of urban slums, breeding poor health, crime and social unrest. This was the experience of many Latin American cities in the 1970s and 1980s, as described in the writings on Brazilian *favelas*. By the time Latin America was fully urbanized in 1990, the policies and institutional reforms needed to integrate former migrants into local society were long overdue.

### 3. Distinctive Features of China’s Urbanization

3.1. There are a variety of distinctive features of China’s urbanization compared to other countries, which are the result of past policies as well as legacies of the previous central planning system. Under these policies, China has accomplished enormous economic growth in quite liveable cities. Nevertheless, the current policy structure and the resulting features of its urbanization are limiting China’s ability to achieve national harmony and would limit China’s ability to sustain growth in the future. The policy reforms in section 4 address these concerns.

#### *The comparative rate and level of urbanization*

3.2 While urbanization has been a key feature of China’s economic transformation, China’s annual rate of urban population growth, at 3-4% during 1990-2004, was well below the 5-6% rates typically experienced by other developing countries during their periods of rapid economic growth, even though China’s overall economic growth was considerably faster (Table 1).<sup>4</sup> China’s level of urbanization in 2004 (40-45%) was below the 55% level typical for a country with China’s level of real income per capita as shown in Figure 1, and far below the 70-80% for high income countries. Rapid urbanization will continue, and probably accelerate, in China over the next decade or so.

**Table 1. Annual Urban Population Growth Rates (percent)**

	<b>Brazil<sup>b</sup></b>	<b>Columbia<sup>a</sup></b>	<b>Korea<sup>c</sup></b>	<b>Indonesia<sup>c</sup></b>	<b>China</b>
<b>Annual urban population growth rate</b>	<b>1950-1970</b> 5.2%	<b>1951-1973</b> 4.9%	<b>1960-1970</b> 6.1%	<b>1980-1995</b> 4.8%	<b>1990-2004</b> 3.6%
<b>Annual growth rate of real GDP per capita<sup>d</sup></b>	<b>1965-1975</b> 6.3%	<b>1965-1975</b> 3.1%	<b>1965-1975</b> 6.7%	<b>1980-1995</b> 5.0%	<b>1990-2004</b> 9.1%

Sources: a. Renaud , B., *National Settlement Policies in Developing Countries*, World Bank Report, 1979

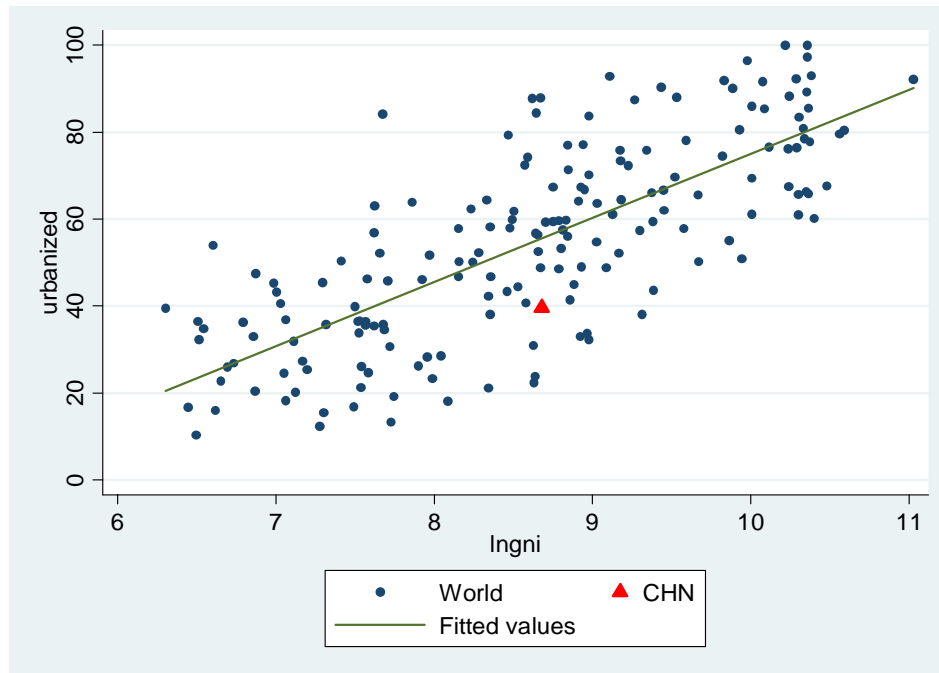
b. *Brazil: Human Resources Special Report*, World Bank, 1979

c. *China Urbanization*, World Bank 2002

d. World Development Indicators, 2006

<sup>4</sup> Given differences in Census urban population definitions between 1990 and 2000, urban population growth rate numbers are estimates, where most estimates suggest a number around 3.6% a year.

**Figure 1. Percentage Urbanized vs. Log (PPP Income per Capita): World Countries 2004**



Source: World Development Indicators, 2006. World Bank

### ***Large and growing urban–rural income gap***

3.3 Through the *hukou* system and other policies, China has maintained a strict separation of the urban and rural sectors, making rural-urban migration more difficult than in other countries. The most important indicator of the need for greater labor market integration and rural-urban migration, with increased urbanization, is the enormous threefold gap in rural–urban income. The gap far exceeds that observed in other Asian countries; and it is increasing, in defiance of the Kuznets hypothesis. The gap rose from 2.8 in 1995 to 3.1 in 2003.<sup>5</sup> China seems well past the point where rural-urban incomes ought to start converge, rather than diverge. Recent studies report that China’s income gap corresponds to a productivity gap of the same magnitude, with generally low marginal productivity of labor in the rural sector. The comparative gaps explain why income inequality in China is the highest in Asia. *But China’s gap also implies that there are enormous gains in national income achievable by further increases in urbanization, moving people from low-productivity rural occupations to high-productivity urban ones.*

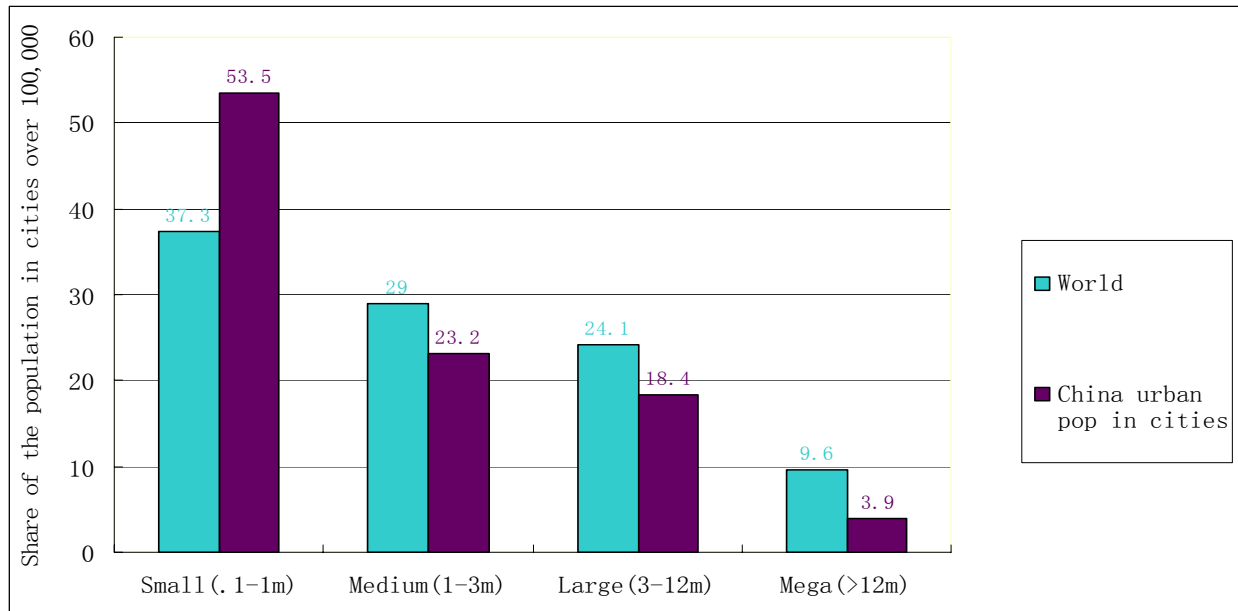
### ***Too many cities; too few people***

3.4 China’s urbanization is highly localized, with little long-distance migration compared to other large countries, such as Brazil or the USA. In 2003, only 35–40 million rural migrants had crossed provincial boundaries to live in cities, about 6–7% of

<sup>5</sup> Source: Knight, Shi, Song (2004), Oxford University. Cited numbers are actually based on per capita consumption gaps, as is typical. Income gaps in China tend to exceed consumption gaps consistently, by a small amount.

the urban population. In the 1990s, half of China’s increased urbanization simply involved local reorganization, or reclassification of ‘rural’ areas as cities. The result of highly localized migration is diffuse urbanization, leaving most cities in China too small to exploit urban agglomeration economies efficiently, thereby limiting urban productivity gains and economic growth. As Figure 2 illustrates, relative to the rest of the world in 2000, China distinctly lacks cities in the population range of 1–12 million. While China has suitably large cities, such as Shanghai, Beijing and Guangzhou, research suggests that, in 1997, many prefecture-level cities were about half their efficient sizes. A *doubling of the populations in such cities would lead to 20–35% increases in real output per worker*. Although some cities have experienced heavy in-migration in the last few years, it remains the case that China has too many cities with too few people.

**Figure 2. Share in Urban Population of Each City Size Category: World vs. China, 2000**



Covers metropolitan areas over 100,000. China’s data are from the 2000 Census, courtesy of Yang Du of CASS.

### *Economic structure of cities*

3.5 Compounding the problem of under-populated cities is an insufficient degree of specialization of individual industries within cities. Historically, Chinese economic planning favored the production of a wide range of manufactured products in most cities, typically produced at an inefficiently small scale. In large countries, medium- and smaller-sized cities tend to be highly specialized (e.g. in steel, autos, textiles, and other basic products). Markets induce local concentrations of employment in a single industry or a set of inter-related industries, in order to exploit scale economies in production more fully. Larger cities have a wider economic base, and are more focused on high-tech industries and on business and financial services. Nevertheless, they still specialize.

China has moved rapidly in this direction, and many locally unprofitable lines of production have been abandoned. Yet many cities continue to support state-owned enterprise (SOE) production, in industries either for which cities have little comparative advantage or which operate at an inefficiently small scale without local critical mass.

3.6 China is at a stage in development where manufacturing should be decentralizing from the largest cities to medium- and small-sized cities. While decentralization is occurring, it is impeded. City leaders, based on their training and work experience, often are biased towards manufacturing. Also, they may perceive a financial incentive to retain manufacturing, because manufacturing generates a share of value added tax (VAT), revenues for the city, even though services generate business tax revenues. Higher-order cities, with their greater powers and resources, have an unfair advantage in competing for manufacturing and in setting up industrial parks to attract and retain industry, at a time when they would otherwise focus more on service-sector development. This hinders the decentralization process and the development of medium-sized cities.

3.7 The natural economic base of the very largest cities is the business-service and financial sector, but in China these sectors are very small (albeit fast growing). Many business service activities (e.g., advertising) are newly freed from extensive government control, but others (e.g., legal and financial services) are still under strict control. The lack of transparent, autonomous legal and financial systems is a major impediment to the emergence of global cities in China comparable to Tokyo, London or New York.

### *Urban governance*

3.8 Mayors in China act as chief executive officers (CEOs) of their cities. They are given performance standards and objectives by higher levels of government, and they are accountable for performance. Most mayoral energy is focused on economic growth and development issues. This focus on economic development follows from the planning era. In a modern economy, economic allocations are made by market forces, not by the mayor; and the defining role of urban government is to serve residents with good schools, crime prevention, parks and local streets, clean water, and sewerage and drainage. These items account for almost all local expenditures in most countries.

### *The urban administrative hierarchy*

3.9 China's urban system operates on a strict administrative hierarchy: provincial-level cities, provincial capitals, other prefecture-level cities, and county cities. There are two distinctive features. First, higher-level cities 'oversee' the governance of low-order ones. Second, cities higher in the hierarchy are favored in important ways: greater autonomy in decision making, more public finance resources, greater access to transport corridors and rail capacity, etc. Many small cities and rural areas have insufficient fiscal capacity to fund public services properly. Bigger cities appear to have greater access to 'off-budget' revenues, and some enjoy conspicuously high levels of public infrastructure investment funded by the center. In much of the world, general purpose and special purpose governments are defined spatially by non-overlapping jurisdictions. Across



jurisdictions, general purpose governments enjoy identical powers, and special purpose governments do as well. Consequently, the local government responsible for specific services is well-defined, and localities compete for resources on a level playing field. Of course national (or provincial governments) may in practice intervene to favor a national capital or other city which is the seat of national elites. But in general the tendency is for most cities, regardless of size, to compete on an equal basis.

3.10 Furthermore, in China's hierarchy, firms in cities at the top of the hierarchy have favored access to domestic capital and *de facto* to foreign direct investment (FDI). Studies show that rates of return on capital investment in China are higher in smaller cities and rural areas, an unusual feature which is indicative of relative over-investment in favored locations. Studies further show that cities at the top of the hierarchy in China are not inherently more productive than other cities; they are just favored.

3.11 What are the problems with favoritism? The first is misallocation — for example, capital is invested in low-return activities when higher-return opportunities are available. The second is more insidious. In many developing countries, migrants are excessively attracted to a national capital or an elite city, with better job opportunities and public service levels, created by favoritism. Migrants follow the money. Too often this results in an over-crowded, poorly managed mega-city, with a low quality of life. In China, previously, migration restrictions induced migrants to move locally to smaller cities and towns. As migration restrictions have eased, the pattern has changed. In the period 1996–2001, for example, the population growth rate (including migrants present for over 6 months) of provincial capitals and provincial-level cities was double that of other prefecture cities and four times that of county cities. While some of these cities can still readily absorb and benefit from population growth, the four provincial-level cities and some provincial capitals are already very large, approaching mega-city status. Moreover migrants do not necessarily choose cities that would most benefit China from population growth; instead, they choose cities favored in the hierarchy.

### *Living conditions of migrants in cities*

3.12 In comparison with other developing countries, rural migrants to cities in China are discriminated against as a matter of policy, leading to dualism in urban society. Rural migrants are either denied basic public services, or they can obtain only low-quality services at high cost. They are not eligible for basic job-training programs, and most are not part of local social insurance (unemployment, health, accident) and social security programs. It is important to note that migrants in many developing countries, even in the absence of officially sanctioned discrimination, suffer from poor urban living conditions, with attendant problems and social unrest. The situation in China is aggravated by two key differences.

3.13 A principal benefit of migration enjoyed in other countries – an educational opportunity afforded to migrants' children in principle equal to that of other residents, as well as job training for migrants themselves – is still missing in China, despite recent State Council actions. Because economic growth is built upon knowledge accumulation,

denial of high-quality education at a reasonable price and job training has strong negative consequences for subsequent labor force quality and economic growth.

3.14 In developing countries, much rural-urban migration is understood to be permanent; while in China past policy seems based on a presumption that most migration is temporary, or “round-trip”, despite the irreversible march to full urbanization. That raises important issues. One is that migrants have limited opportunities to invest in and establish life in cities, given lack of portability of rural wealth and lack of access to urban credit markets. In other countries, migrants are free to sell their rural land holdings and any shares in local rural enterprises which they own. In China, this is not the case as discussed later. Non-portability of wealth limits the ability of migrants to buy urban housing, invest in urban businesses, and integrate into urban civil society. In many other countries, while migrants may initially rent when they move to cities, typically they move quickly into owner-occupied housing. For example in Brazil, 60% of migrants who are in the *bottom 20%* of household income nationally and who moved into a city in the 1990s by 2000 owned their urban dwellings.

#### **4. Policy Options for Urbanization in the Next Decade**

4.1 Key policy reforms are needed to provide incentives for individuals and city governments to make appropriate decisions concerning city sizes, migration, and city spatial structures, rather than relying on increasingly ineffective directives and quantity targets imposed from above. The reforms will enhance the potential for economic growth and improved food security, reduce income inequalities between the urban and rural populations, and promote sustainable development.

##### ***Harmonious rural and urban development under rapid urbanization***

4.2 Four policy issues are considered in this section. The suggested reforms are intended to reduce the urban–rural income gap, promote a harmonious urban society, prevent urban slums, and avoid the problems of over-crowded mega-cities. A goal of reform is to integrate the urban and rural sectors, creating unified national labor and capital markets. With unified markets, resources can freely flow to the locations of their most productive and highest return use, whether a mega-city, or a town specialized in textile production. Integration is critical to nationwide economic efficiency and sustained modernization and growth, and is an *essential* part of reducing the rural-urban wage gap. Another goal is that China should try to escape the past experience of many Latin American countries and initiate now the policies and institutional reforms needed to integrate rural migrants into urban society and avoid the festering of urban slums.

##### ***Remove barriers to the flow of rural surplus labor to cities***

4.3 Historically, migration in China was regulated by aspects of the *hukou* system which controlled population flows. The system sharply discouraged migration by reducing the personal benefits of migration to individuals far below the high social

benefit to the economy of China. The policy objective is to foster a free, competitive national labor market, just like markets for goods, rather than a poorly regulated market for labor.

4.4 The *hukou* system must be further reformed to completely divorce *hukou* status from the right of access to urban public services, to urban credit and housing markets, to urban social insurance and social security, and to education and job training. This divorce will help economic growth and diminish urban–rural income gaps by providing better incentives for migrants to leave low-productivity rural jobs for higher-productivity urban jobs. For future growth, reforms need to recognize that migration will and should generally be permanent and the needs of families, not just single migrants, need to be accommodated. Moreover, reform will dissipate any perceptions of a dual urban society based on *hukou* status, which over the long term will be a threat to socio-political stability.

4.5 Besides specific reforms discussed below, more general reforms of the *hukou* system under experimentation in different provinces could be considered for implementation nationwide. One example is to permit free and unfettered migration *within* all provinces. This can be accomplished by restructuring the *hukou* system, so that rights of access to services, schooling, jobs, and so on are defined at the provincial rather than the village level. All those from the same province living in cities would have identical rights, regardless of rural versus urban origins. Permitting free migration within each province would foster urban agglomeration generally, but it would also divert migrants from Beijing and Shanghai. A different example would be to accelerate in all cities policies which grant full local *hukou* rights to migrants and their families regardless of origin, whenever the household head has secured employment. Employment should be defined as holding a job for a reasonable period (say, a year or less), whether that employment is in the formal or in the informal service sector. Such a policy would however increase the population pressure on Shanghai and Beijing and would need to be coupled with capital market and fiscal reforms discussed later.

4.6 A concern with increased migration is the resulting age structure in rural areas, which contain a disproportionate share of the elderly. With migration, filial piety may diminish. Migrant remittances may decline and become insufficient, once migrants become absorbed in urban life and raising families in cities. As a first step, the *di bao* could be extended to the rural elderly, to ensure they have sufficient incomes.

#### *Invest in rural labor, migrants, and their children*

4.7 One great advantage for China in industrializing and urbanizing has been its relatively well-educated rural labor force. From the 2000 census, over 75% of workers in the rural sector have junior-middle-school level education or more, with an even higher percentage among the rural population finishing school. This means rural migrants have in the past arrived in cities with fundamental skills. This is very unusual in developing countries, and has facilitated China's high economic growth rates. A challenge for China is to maintain and improve upon this good record in the face of the under-funding of rural schools that has emerged in the last decade. While there has been some improvement in

funding in the last year or so, much higher levels of investment than currently planned would bring high returns. A second absolutely critical reform is to further encourage urban state schools to admit migrant children on the same basis as local *hukou* holders, regardless of the permit status of parents, and strongly discourage closure of “underground” schools which educate many migrant children. Other reforms include promoting job training of migrants in urban areas and granting of urban hukou to rural youth with post-secondary technical education, which is in short supply. Reforms concerning the education of migrants and their children are essential to long-term skill acquisition and sustained economic growth.

#### *Improve living conditions of migrants*

4.8 Other key policy reforms would (a) further integrate migrants into mainstream urban society and (b) integrate urban villages into the mainstream city.

4.9 The dormitories, urban villages, and rural fringe areas where migrants live are often in inaccessible locations, isolated from the city proper. They also provide poor infrastructure services, such as sanitation, sewers, and water supply. Their conditions and their disconnection from local urban society are reminiscent of Brazilian *favelas*. Urban infrastructure services should be extended in full to urban villages within cities, to improve health and living conditions. Below we discuss the fiscal and land planning implications of such a policy.

4.10 To improve the ability of migrants to invest in the cities in which they work, migrant families should be given better access to housing credit markets. Their rural wealth should be made portable (see later), including the ability to sell their *de facto* shares of village ownership of TVE holdings. Access to the home ownership opportunities available to residents, as well as increasing formal sector housing rental opportunities, would give migrants housing options other than in dormitories and urban villages, leading to better social and economic integration.

4.11 There is a more general issue of housing for all low-income people in cities. The housing which the lowest income families in many countries can afford may be of such low quality in such crowded neighbourhoods, as to offend public sensibilities, or else to pose physical and mental health risks. One policy adopted historically in other countries has been public housing for the poor, which has a long, extensive record of policy failure, often eventually offering conditions as unhealthy, neglected and crowded as the ‘slums’ they replaced. Private housing markets work well; but bureaucratically managed ones, with few exceptions, have a record of failure. The increasingly favoured solution is to dismantle public housing systems for the poor, leaving housing provision to the market. So low-income people can afford better housing, one policy is to offer housing vouchers or other housing subsidies.

4.12 To make a program of housing subsidies work, the government should not impose demolition of existing low-income housing in cities, particularly in more historical neighbourhoods, even if it is clearly of a lower standard than new construction. The

quality of viable low-income housing will be upgraded by market forces if the effective demand of low-income workers is increased by housing subsidies.

*Avoid the emergence of over-crowded mega-cities*

4.13 As we have indicated, national income will be increased and rural-urban inequality reduced if barriers to migration are further relaxed, encouraging rural-urban migration and urban agglomeration. However, that still leaves the problem of fiscal and capital-market favoritism which could then induce excessive in-migration to provincial-level cities. As noted earlier, one solution which encourages migration and urbanization overall, but limits cross-province migration, is to permit unfettered migration within but not across provinces. But in the end, more general market reforms would help avoid the emergence of over-populated mega-cities. In particular would be the opening of the entire capital market to free competition for financing across all firms, cities, and the rural sector, so those further down the hierarchy will be better able to attract investment and migrants. Such a reform also promotes sustained economic growth by ensuring capital goes to the highest return ventures, not just politically favoured ones. *Reform of capital markets to create an integrated national market complements labor market reform and is an integral part of integration of the urban and rural sectors.*

*Promote efficient use of natural resources*

4.14 There are many implications of urbanization for natural resource use and the environment. The focus in this report is on food security and land use, but other issues are important. For example, there are the energy needs of industrialization and the energy demands that come with rising urban incomes (for automobiles, appliances, air conditioning, and heating in the winter) that can result in environmental degradation, absent appropriate policies. Reportedly, there are water shortages in the north of China. However, urbanization and the concomitant advances in agricultural productivity can conserve water. Modernized agriculture with better irrigation, conservation, and mechanization can reduce water usage in agriculture. Consider the high agricultural productivity of Israel despite its poor water resources. And we know from Singapore and other international experience that urbanization and high population density make water treatment and recycling cheaper, and make universal metering feasible, encouraging individual conservation.

*Achieve food security*

4.15 In general, urbanization is associated with improvements in agricultural productivity and food security. The most profound change is in the use of agricultural land. Rural-urban migration transforms agriculture from peasant farming on small plots to modern farming, where farm businesses assemble large tracts of land and invest in land improvements, mechanization, and human capital. Better-educated farmers are better equipped to adopt new technologies, make better crop and input choices, and understand market conditions. As an example of what can be achieved, consider Korea, a country with poor agricultural conditions, where food and grain security is a major policy issue.

Since 1975, Korea has reduced its farm population from 13.2 million to 3.4 million, reduced land in paddies by 9%, and reduced overall agricultural land by 16%. At the same time, grain production increased by 61%. The key is technological advance coupled with the education of farmers, together with consolidation of land holdings and mechanization. China could replicate this success with huge reductions in the farm population and even some loss of agricultural land.

4.16 To improve food production and security, two key reforms were noted earlier: improve rural education and reform the financial sector to allow more investment in agriculture. Here we focus on reforms governing the use of agricultural land itself, in particular strengthening property rights in the rural sector. These three reforms together would raise farm incomes to help close the urban–rural income gap and also encourage some talented rural youth to choose farming as an occupation, rather than migrate. In the next section, we turn to reforms that would discourage excessive urban expansion into agricultural areas.

4.17 *Strengthen rural property rights* Agricultural leaseholds should be lengthened to 70 years or more, to provide stronger incentives to invest in land improvements and machinery. Leaseholds should be fully transferable and saleable, so as to encourage investment in agriculture and assemblage of land into larger holdings, raising the scale of farm businesses. A current problem is that migrants are discouraged or prohibited from disposing of their leaseholds when they move to cities. When such leaseholds are, instead, rented out, those renting have less financial incentive to invest in the land. The retention of rural leaseholds by migrants to cities is viewed as some form of economic security for them, as if migrants could return to farming if cities faced some kind of crisis. This is an illusion: sustained urbanization of the type China has experienced over the last 25 years will not be reversed. A migrant who left a village as a teenager and returned 15 years later would not know how to farm. There is no personal security from the forced retention of these leaseholds – and no food security for China. And, as noted earlier, portability of rural wealth helps the integration into urban society of those who migrate.

*Encourage efficient land use and reduce urban sprawl*

4.18 There are two aspects to urban land-use policy: (a) policies allocating land between the urban and rural sector, so as to use land efficiently, thus providing the correct incentives to conserve agricultural land and green space; and (b) policies governing the land internal to the city, so as to avoid disordered use and unhealthy, poorly serviced neighborhoods. Reforms involve both strengthening property rights of individual holders and better regulation of land usage patterns.

4.19 There is a popular worldwide concern about ‘urban sprawl,’ the ‘over dependence’ on the automobile, and the removal of farm land as cities expand. Yet the incentives faced by city mayors in China encourage the taking of farm land for urban use and the dependence on automobiles. The chief restraints on this behaviour are directives from above, for example, ‘prohibiting’ agricultural land conversion, or requiring that

cities meet some arbitrary minimum population density. These restraints well illustrate the difficulty of the command-and-control approach to urban management. These edicts generally do not sufficiently recognize that expansion into farm areas should differ across cities (depending on geography and population and per capita income growth), or that higher average densities are appropriate for larger cities with certain histories and geographies, but not for many other cities.

4.20 Incentives under current policies promote the inefficient use of land. First, many cities have fiscal incentives to focus on ‘green-field’ development rather than ‘brown-field.’ Under green-field development, cities seize agricultural land at the fringe and sell leaseholds to urban developers. The alternative way to acquire land for new uses is brown-field development, the redevelopment of land within the city. In some cities, negotiating the acquisition of urban land held by SOEs or by housing authorities is much more costly and time consuming than the profitable taking of agricultural land, which often may be acquired at below opportunity cost. Second, people are encouraged to travel by automobile, through the significant under-pricing of motor fuel (at about half the European price). This under-pricing makes it individually cost effective for people to commute long distances from low-density suburban areas.

4.21 Key reforms to improve the efficiency of land use include the following:

*Ensure that cities pay the true cost of taking agricultural land* If cities faced the opportunity cost of taking agricultural land, less would be taken and cities would be denser. First, the range of compensation for farmers for land taken -- set by national law based on income generated in agriculture -- may be insufficient. Defining appropriate compensation is tricky since part of the market value of agricultural land on the urban fringe reflects nearby urban infrastructure improvements (such as highway construction) for which farmers may not be paying their share of costs. Yet the value of agricultural production also appreciates with urban growth and enhanced demand for local agricultural products. Second, actual compensation is negotiated with the village head. The head may not adequately represent the village interests (as opposed to his personal interests), and may be induced to sell at a low price. Following one policy experiment under way, if all rural village residents were recognized as shareholders in the village land and if these shareholders had to approve land sales, this transparent decision process would provide the village head with a stronger incentive to negotiate in good faith. Third, as part of acquiring rural land, villagers should be offered urban *hukou* so that the city faces the full opportunity cost of the land reallocation.

*Encourage brown-field development* In the 1990s, brown-field development was encouraged in some cities (e.g., in Guangdong and Shanghai provinces), by allowing state enterprises to redevelop their land (“land development rights”) — providing a fiscal incentive to pursue land redevelopment more quickly. Reinstatement of greater property rights for historical (pre-1988) users of urban land would facilitate redevelopment, especially in cities that have redeveloped slowly. However reinstatement might conflict with the current policy of all urban land being developed through the auction of leaseholds and strengthening of property rights of those users.

*Raise automobile costs* Urban residents pay far less than the social costs of operating vehicles – including both their contribution to congestion and their environmental costs. A substantial rise in gasoline taxes would encourage use of other transport modes, conversion of fuels, and air-quality improvements. In the largest cities, other incentive schemes would also reduce congestion and auto use: higher fees for parking, dedicated bus lanes to encourage bus travel, and development of ‘congestion-free zones,’ as in London, and congestion tolls, as in Singapore. Encouraging the maintenance of high population densities in the largest cities in turn helps make public transport viable, even underground systems in some cases, where cost-effective provision requires high usage over short distances.

*Land-use planning and market operation to achieve livable cities*

4.22 There is a tension in all urban land markets between allowing a free-wheeling market on the one hand, so land is sold to the highest and best use, and imposing land-use planning to regulate the market on the other hand. Even in the most market-driven countries, land markets are regulated. This regulation achieves two purposes. The first is to ensure that land allocated among different use types is separated, so ‘obnoxious’ users (e.g. industrial, polluting users) are separated from other users (e.g. residential users). This assures residents that a polluting factory cannot move nearby, imposing hazards and pollution and lowering property values. The second is to integrate private land uses with public ones, such as for transport infrastructure, so that industry is served by highways and other transport nodes, and so that residential users are near rail and bus facilities for commuting and shopping.

4.23 There are two issues for China. First, although the land market is certainly free-wheeling, it is not fully competitive. Developers may not face the true costs of land acquisition. Second, in terms of regulation, as in more developed countries, cities in China have master plans for land use. While, in China, these master plans are referred to as ‘zoning plans’, they do not have the force of law that zoning plans have in developed countries which bind land allocations, based on master plans.

4.24 *Ensure land goes to the highest and best use* Urban land held by local land bureaus in China is allocated to developers through leasehold sales.. One issue has concerned the method of sale, given a history of negotiated sales with favored developers. All leaseholds should be sold at auction (e.g., “pai mai”), where bid price plays the determining role, subject to ability to pay and meeting past contract requirements. Developers should face the true costs of their projects: besides paying market prices for land, they should pay for the necessary infrastructure required by their development (secondary roads, sewerage systems and roads, etc.). Alternatively, the cost of required infrastructure can be recovered through impact fees on the development set by the city.

4.25 *Strengthen property rights in urban villages and integrate into city administration* What should be the treatment of urban villages located within cities? While perhaps cities should have purchased the land in such villages long ago, given these lands have been



developed for urban purposes, property rights of land users should be respected. In particular, to reduce current uncertainties in local land markets, it should be made clear that villager leasehold sales are legitimate. However, urban villages within the city and on its fringe should be incorporated into the city administration. They should receive full city services, and be subject to all municipal taxes. Redevelopment projects of the village should be subject to the master and zoning plans of the city (discussed next).

4.26 *Institute zoning plans* Within the context of a competitive market for land, overall spatial patterns in the city should be governed by zoning laws. Zoning ensures that land-use decisions are not completely controlled by individual developers, who can ignore the objectives of master plans, resulting in disorderly land use. In developed countries, zoning plans restrict property rights, by limiting the legal right to build in a location to particular types of use and intensities. Plans are amended periodically as long-term demand conditions change. Plans are subject to the granting of variances – allowing a non-conforming use at a particular location. To ensure that the intent of the plan is met, the granting of variances occurs through a transparent public process. Those adversely affected are represented and generally must consent to the variance (perhaps with inducements provided by the applicant).

4.27 In enacting zoning, one agency, presumably the city land bureau, should be responsible for master planning for the entire city. The design of master plans should not be out-sourced to land developers, due to conflict of interest. Zoning laws should govern all future land redevelopment (including national-owned, military, and village-owned land) within the jurisdiction. Approval of master plans by the local People's Congress would be a first step in giving legal bite to these plans. Cities will need lead time to develop plans and appropriate institutions, with investment in training professionals in city and transport planning and real-estate demand forecasting.

### *City management*

4.28 City management reforms involve redefining the role of mayors, restructuring urban finances, and reforming the administrative hierarchy.

#### *Redefine the role of mayors*

4.29 The major role of urban government is to provide residents with good public services, as well as to complement private-sector investment with appropriate public infrastructure investment. As noted in section 3, mayors in China currently play a role more like the CEOs of firms, subject to control and incentives from above. While mayors face performance standards, these have little to do with the quality and delivery of urban public services. Some standards may deal with national objectives, concerning, for example, rural land acquisition or urban density, but these are often ignored with impunity. Rather mayors may be de facto heavily graded on industrial growth performance.

4.30 Enforcement and design of performance standards is an issue in many countries; the focus in the modern era is to structure incentives for managers of cities to meet reasonable performance standards of their own volition. Many countries rely on other institutional regimes to provide incentives for mayors to serve their residents well. In an elective political process, as mayors seek election, poor performance leads to removal from office by voters. Just as local elections have been introduced into the rural sector, China should experiment with reform of political institutions for cities to make mayors more accountable to the city residents.

4.31 In the absence of aggressive institutional reform, the government should be more creative in devising appropriate incentives for the managers of local government. Just as managers may now face performance standards for industrial growth, land acquisition, or investment, they can be given performance standards for service delivery to urban populations. For example, it would not be difficult, as an administrative matter, to specify that school attendance and completion reach a given level among all the youth (including migrants' children) in a city. More attention should be paid to devising measurable standards which can be achieved by local city managers in delivering urban services and improving the quality of residents' lives. CEOs who meet these objectives should be rewarded.

4.32 Besides redefining performance standards, in general incentive structures should replace command-and-control regimes so city bureaucrats and local investors make better decisions affecting city life, in particular in the operation of land markets and urban public finance, as discussed next.

#### *Restructure urban finances*

4.33 Restructuring urban finances requires reform of accounting practices, reform of capital financing, and introduction of new tax instruments.

4.34 *Transparent accounting* The first step in regularizing urban finances is to introduce a transparent accounting system covering all on- and off-book revenues, with strict separation of operating and capital accounts. Larger Chinese cities have relatively free access to off-budget revenues from balance-sheet transactions – revenues which can be spent on goods and services as if they were financed from the operating budget. Off-book revenues and the mixing of revenues for capital and operating purposes create a lack of transparency. Transparency has two advantages. First, it would allow the center to assess more accurately the fiscal positions of all cities, and to make better-informed decisions about inter-governmental transfer policies. Second, orderly and transparent accounting systems are a prerequisite in credit markets for market-based debt finance, such as municipal bonds.

4.35 *Financing the capital budget* Given proper accounting, the issue is then how to finance both local operating and capital expenditures. Currently, leasehold sales are a major source of operating revenue for cities. At the moment, these transactions allow transient public officials to sell off the long-term capital assets of a city, i.e., its land, to

finance current operating expenditures, depriving future generations of the income from these assets. Proceeds from the sale of leaseholds should generally be allocated to the capital budget to match sales of assets to purchase of assets. Any use of such revenues for operating account transactions should be carefully regulated and monitored by higher levels of government. Once proper accounting procedures are in place, capital expenditures not financed by leasehold sales can be financed in two ways. Some portion of baseline infrastructure investments could be financed by inter-governmental transfers, governed by transparent formulas accounting for the fiscal capacities of cities and applied non-discriminatorily. The rest could be financed by borrowing. International experience suggests that borrowing from the central government is problematic: enforcing a hard budget constraint and repayment is difficult. In essence loans become de facto transfers. That leaves market based borrowing.

4.36 *Municipal bonds* Municipal bonds are used to finance local capital expenditures in a number of countries. They allow city residents to raise revenues for lumpy investments, while still facing the costs of the capital assets they acquire. But several inter-related problems in the operation of municipal bond markets and other external borrowing have plagued countries, especially developing countries. The first is the problem of ‘raiding’ of bond funds. Bondholders must be paid as their claims come due. Prudent accounting practice is to establish sinking funds. Cities contribute to these funds regularly, so that cash is accumulated to pay bond issues as they mature. But cities may be tempted to use funds accrued in bond accounts for other pressing expenditures, just as cities in China have raided pension and social service plan funds. The raiding of bond accounts so that monies are not available to pay off bonds as they mature often leads to default by local authorities. As the experience of Brazil and Mexico suggests, this can be further destabilizing if the national government feels compelled to make good on the bonds. The underlying problem is that, unlike corporate bonds, there is no collateral associated with municipal bonds. It is generally impossible for bond holders to seize and sell off city assets to satisfy a legitimate claim. A solution is careful monitoring of city finances by national- or provincial-level government, with potential loss of autonomy for localities if they fail their responsibilities. (The market discipline imposed by a city’s inability to borrow in the future in the event of a default doesn’t solve the immediate problem of financial destabilization.) As a result of this problem, as well as poor accounting practices, local governments in many developing countries rely on inter-governmental transfers to help finance the most basic infrastructure investments. Central governments, in turn, may issue bonds and borrow on world capital markets to finance the transfers.

4.37 *Property taxation* Currently, municipal revenues in China are generated by the VAT and business taxes, as well as land sales. These tax instruments encourage cities to attract business but not residents. One reform would be for China to adopt an *ad valorem* property tax on residential and business property. A tax on residences will provide an incentive for cities to accept new residents, as well as help finance urban services. Importantly, it will help dispel the notion that rural migrants are somehow ‘free riders’ in the urban economy. The tax on business property will cause firms to consider more carefully the opportunities for economy in land and space utilization. It will also align

more closely the services provided to commercial and industrial property with the costs of providing these services. Property taxation would reduce the value of leasehold sales by creating future fiscal obligations. But this would help shift the funding of operating budgets away from the sale of assets to an on-going revenue source.

4.38 *Implementing a property tax system* An *ad valorem* tax system requires registration of ownership, but it need not imply investing in a costly cadastre system. ‘Registration’ only implies that a specific individual or firm (perhaps identified as a fictitious business) is responsible for timely payment of assessments. This need not reveal proprietary patterns of ownership. Moreover, the assessment procedure need not imply complex and expensive imputations of value, which can also be a source of conflict and abuse. An area property tax, similar to the council tax in the UK, may suffice. Properties in each district in a city can be placed into a small set of categories – by land-use type, size and quality – with a rate charged for each category. This avoids expensive assessments at the parcel level. It is essential that any assessment process be transparent and assessments be available publicly, so there are no perceptions of cronyism. Assessments (or the rate structure for an area property tax) should be levied against both land and structures, using estimates of land values derived from sales of leaseholds, or rental rates where available.

4.39 *Impose a VAT on services* An eventual reform would be to introduce a VAT on services, replacing the business tax on services, so both sectors receive equal tax treatment. Such a reform might encourage the largest cities to focus more on services, rather than trying to retain industry. However an on-going issue with any service taxation is poor collection of taxes from smaller enterprises in the informal sector.

#### *Reforming the urban administrative hierarchy*

4.40 China should abandon the fiscal features of the administrative hierarchy where the ‘large lead the small.’ Each city, regardless of size, should have a well-defined administrative area over which it has full autonomy. All cities and towns should have access to the same set of tax bases, revenue instruments, exemptions, and formulae for inter-governmental transfers, as well as the same expenditure responsibilities. That leaves open the question of rural area governance and decisions about when a town becomes a city. In many countries, district governments have the responsibility for providing many services to several villages whose scale is too small to afford public services that have high fixed costs. As districts urbanize, they ultimately become cities. Metropolitan areas may contain several districts and a number of cities.

4.41 As an immediate step to full reform, the fiscal resources available to lower-order locations in general should be *further* enhanced, not restricted. As towns or cities grow, their administrative status should be upgraded promptly, in order to service better their populations. A comprehensive review of the appropriate administrative status of growing cities is overdue.