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Foreword

Urban issues are increasingly prominent on national policy agendas in developed and emerging economies alike. Across OECD member countries, these policies encompass plans to solve traditional urban problems and to address newer issues such as urban competitiveness, city marketing, environmental sustainability and innovation. In much of the non-OECD world, governments are working to manage urbanisation processes that are unprecedented in speed and scale, confronting many of the same problems as OECD members but in a far more dynamic economic and social context. This dynamism, in turn, entails both challenges and opportunities: managing fast-growing cities can be harder than coping with stable ones, but it also offers more chances to innovate and, in many cases, avoid mistakes made in countries that urbanised much earlier – such as lock-in to a car-dependent urban form.

OECD Urban Policy Reviews are conducted by the OECD Regional Development Policy Committee. The Reviews analyse the role of urban areas in regional development and national performance. They provide a comparative synthesis of urban policies, focusing on the role of central governments, as well as cross-national comparisons and recommendations on the integration of sectoral policies into urban development policy, planning and management.

The Urban Policy Review of China is the first undertaken of a non-member country. Initiated by the OECD and the National Development and Reform Commission of the People's Republic of China (NDRC), the report has been prepared by the OECD for the NDRC, to review China's urbanisation policies and provide policy recommendations for the implementation of China's new urbanisation plan. It focuses on the steps needed to bring these policies into line with the authorities' aim of moving to a new model of growth that relies more on domestic consumption, efficient resource use and productivity gains and that delivers more immediate improvements in the quality of life for China's citizens. A more sustainable, equitable and efficient urban model will require changes in policies in three broad areas: social and labour-market policies affecting internal migrants and their integration into the cities; land use, transport and urban planning; and local public finance and governance. China's success in transitioning to a new growth and urbanisation trajectory will have enormous implications for the well-being of its citizens and, given its size and extraordinary dynamism, for the world as a whole.

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Acronyms and abbreviations

BRT	Bus rapid transit
CASS	Chinese Academy of Social Sciences
CLC	County-level city
CNY	Chinese yuan
EBF	Extra-budgetary funds
EKC	Environmental Kuznets curve
EPB	Environmental protection bureau
FAR	Floor area ratio
FDI	Foreign direct investment
FUA	Functional urban area
FYP	Five-year plan
GAO	US Government Accountability Office
GDP	Gross domestic product
LAL	Land administration law
MEP	Ministry of Environmental Protection
MLR	Ministry of Land and Resources
MLSSS	Minimum living standard security system
NAO	National Audit Office
NBS	National Bureau of Statistics of the People's Republic of China
OEI	Open environmental information
NDRC	National Development and Reform Commission
PLC	Prefecture-level city
PPP	Public-private partnership
RCMS	Rural co-operative medical system
SPRH	Small property rights housing
UDIC	Urban development investment corporation
WHO	World Health Organization

Executive summary

Key facts

- *China's urbanisation is unprecedented in scale and speed*. Its urban population has roughly quadrupled in the last 35 years to more than 700 million, thanks chiefly to internal migration, and is likely to rise by a further 240 million over the next 35, lifting the urbanisation rate to around 75%.
- *China's urban system is growing more concentrated*. Analysis based on functional urban areas, rather than cities defined by administrative borders, suggests that China now has 15 urban areas with more than 10 million inhabitants, and the concentration of population in the largest cities is continuing. Altogether, over 60% of the population lives within the functional labour market area of a city of at least 200 000 inhabitants.
- *Urbanisation is driven by China's fast economic growth but is also an important contributor to it*. Chinese cities clearly generate – and benefit from – the agglomeration economies associated with urbanisation. Overall, large cities enjoy high levels of income and productivity, although there is also some evidence of convergence in *per capita* output, with poorer cities growing faster.
- *Urbanisation has raised the living standards and transformed the life chances of hundreds of millions of Chinese, but it also generates important social challenges*. Inter-personal inequality has risen sharply, with the Gini coefficient for income rising to above 0.4, higher than in the United States but below the levels of Turkey and Mexico. Inequality is reinforced by the system of residence registration known as *hukou*, which affects access to education, health care, pensions, social protection and other key services.
- *Rapid urbanisation is also contributing to important environmental problems*. Air quality is extremely poor in many Chinese cities, and the economic and human costs of air pollution are high and rising: excess deaths owing to emissions of large particulate matter are estimated at 350 000 per annum. Urbanisation has also generated important stresses with respect to arable land and water supply in some regions.
- *The quality of urban development is increasingly important for economic growth.* There is some evidence to suggest that when countries cross the 50% urbanisation threshold, as China has recently done, the relationship between urbanisation and growth becomes less automatic and depends critically on how urbanisation processes are managed.

Key policy challenges and recommendations

- *China needs a new model of urbanisation*. Urbanisation in China was long underpinned by cheap labour, cheap land, the under-pricing of environmental externalities and rising export demand. None of these factors can be counted on in future. Recently, Chinese policy makers have therefore begun to place greater emphasis on domestic consumption, efficient resource use and productivity. At the same time, urban policies must become an instrument to achieve greater equity, environmental protection and quality of life for citizens, in addition to output growth – what Chinese leaders call "people-centred urbanisation".

- *Labour-market duality must be overcome*. As many as 275 million migrant workers live in Chinese cities but hold rural *hukou*; as a result, they suffer from systematic disadvantage on the labour market and with respect to education, health care, the pension system and other forms of social protection. As well as being unfair, such discrimination undermines labour-market efficiency and thus growth. The authorities have been working to correct this but much more needs to be done. Making it easier for migrants to change *hukou* is desirable but matters less than simply breaking the link between *hukou* and public service provision.
- *Equal access to education is perhaps the most critical challenge of all*. The disadvantaged position of migrants' children when it comes to education is a particularly serious problem. Most children of migrants (around 60 million) remain in their home regions; a minority (estimated at 35.8 million in 2010) accompany their parents to the city. Both groups face systematic disadvantages when it comes to education. The long-term costs of under-educating a generation of Chinese young people are likely to be substantial, particularly as China's working-age population peaks and then declines. With population ageing and a shrinking labour force, labour productivity will be an ever more urgent priority.
- *Land conversion processes need substantial reform*. There is no privately-owned land in China; rural land is owned by village collectives, and land converted for urban development belongs to the state. Local governments have the largest say in determining when and how rural land is converted to urban uses, and it is they who then sell urban land-use rights to developers. This creates strong incentives for them to make the most of their ability to manipulate the land market, particularly because the sale of land-use rights is by far their most important source of income. The result is often unfair treatment of rural dwellers, inflated housing costs for urban residents and inefficient land use in cities. The government urgently needs to proceed with plans to strengthen the protection of rural dwellers in connection with land conversion and to make requisition procedures more regular, transparent and market-oriented.
- *Better urban planning can make cities greener as well as more efficient.* Despite a strong tradition of urban planning, economic and political pressures ensure that much new urban development is characterised by extreme functional segregation, the development of very large superblocks, poor internal connectivity and inadequate investment in public transport. Desirable steps include building economic indicators into planning processes and designing road networks to better support foot traffic and public transport. Managing density at smaller scales could allow more transit-oriented development, more multi-functional urban spaces and greater competition among developers.
- *Reform of local public finances is critical to improving the quality of urbanisation decisions*. Fiscal relations across levels of government should be changed to eliminate the perverse incentives that many local governments face. Such changes can also help open up new ways to finance for urbanisation. These reforms, in turn, need to be linked to a clearer allocation of competences across levels of government, with a better matching of resources to responsibilities.
- *Policy co-ordination at a metropolitan scale will be increasingly important.* Mechanisms for co-ordination across local government jurisdictions are weak, reflecting the fact that Chinese cities have traditionally had rather broad administrative boundaries and thus little need for co-ordination across city lines; they were geographically quite distinct entities. As Chinese cities grow together to form vast urban regions, however, they will need more robust mechanisms to ensure appropriate co-ordination of issues like land use and transport across the various local governments that constitute a metropolitan area.

Assessment and Recommendations

Overview: A new model of urbanisation to match a new model of economic growth

Over the last three decades, urban development has taken off in the People's Republic of China, in tandem with its extraordinary growth performance. On the whole, urbanisation and development have reinforced one another. The growth of cities has been driven in large part by the dramatic growth in agricultural productivity set in motion by the first wave of reforms and the end of the 1970s, which reduced the need for labour on the land and generated unprecedented income growth. This, in turn, helped spur the development of China's urban sectors, which took off as the country opened up to external markets, turning China into an export powerhouse. As cities grew larger and denser, the economic benefits of agglomeration came into play, helping to sustain productivity growth. The results have been staggering. The urban population has roughly quadrupled, reaching more than 750 million. Hundreds of millions of people have been lifted out of poverty, and China has been transformed from an overwhelmingly agrarian and relatively poor country into a predominantly urban, industrial middle-income economy. GDP has risen more than 16-fold, and its share of global GDP has risen almost 7-fold.

Nevertheless, Chinese policy makers have for some time been aware that this model of growth was reaching its limits. Hitherto, both growth and urbanisation have been underpinned by four factors: cheap labour, cheap land, the under-pricing of environmental externalities and robust export demand. These cannot form the basis for sustained – or sustainable – growth or urbanisation in the future. The era of cheap labour is drawing rapidly to a close. While large-scale rural-urban migration is projected to continue for some time, labour force growth is already flat and China's population is ageing rapidly. At the same time, the authorities are increasingly determined to correct the policies that have long distorted urban land markets, and to address the environmental consequences of rapid development, particularly air quality. As for export demand, it can never again be the motor for growth that it was, even if global growth should pick up, because the scope for expanding export market share is much more limited now that China is, on some measures at least, the world's largest economy. The country's leaders are thus working to shift the country's growth model towards greater reliance on domestic consumption in place of the previous focus on investment and external demand. This, in turn, will require a new model of urbanisation.

China's urban policies have indeed begun to change in line with the shift in its approach to economic growth and development. Urbanisation has been increasingly prominent in the most recent Five-Year Plans, and the State Council adopted a new National Urbanisation Plan for 2014-20 in March 2014. The plan includes commitments to a wide range of reforms that touch on virtually every major facet of urbanisation. Its focus is on the *quality* of urban growth, giving greater priority to questions of equity, environmental protection and quality of life in cities, in addition to output growth – what Chinese leaders call "people-centred urbanisation".

Fortunately, this double transition, involving both growth and urbanisation models, is remarkably coherent. As will be seen, many of the policies that will help China build better cities can also reinforce the shift towards a more sustainable, efficiency-oriented pattern of economic growth. Moreover, while macroeconomic and economy-wide structural policies can do much to foster this economic transition, it will also require changes in many facets of urban development: otherwise, the incentives facing local governments and the prevailing patterns of urban development will work against the achievement of the government's major economic priorities. National- and city-level policies need to be adjusted together. Urban policies that promote faster integration of migrants, more efficient use of land and resources, and more efficient location decisions by firms will all help to keep China on a path of sustained growth, while contributing to greater equity and better environmental outcomes.

Chinese policy-makers' focus on the *quality* of urbanisation comes at a critical phase in its development. Cross-national comparisons suggest that when countries pass a level of urbanisation of around 50%, a threshold China has recently crossed, the relationship between urbanisation and economic growth becomes less automatic and depends critically on how urbanisation processes are managed. While no country has achieved very high levels of per capita income without becoming predominantly urban, many have become overwhelmingly urban without becoming rich: they have concentrated population in cities but have failed to generate the kind of productivity benefits that are often associated with agglomeration. In many poor but urbanised countries, large conurbations do not function as cities but are instead characterised by fragmentation of labour markets, poor internal connectivity, a lack of co-ordination in land-use planning and poor provision of infrastructure and essential services like electricity, education and sanitation. In short, such cities experience a dysfunctional density that is neither economically efficient nor environmentally sustainable. The key to realising agglomeration benefits, then, is creating cities that function well as economic systems.

The dynamics of Chinese urbanisation

China's urban system is growing more concentrated

By any measure, China's cities have enjoyed several decades of explosive growth. According to the official data, the country passed the 50% urbanisation threshold in 2010, and the urbanisation rate had already exceeded 54% by 2014. However, the degree of actual urbanisation and the structure of the urban system remain the subject of some debate. In the first place, there is no single, universally accepted definition of "urbanisation" that is employed across all countries; measuring urbanisation is complex and a wide range of criteria are used in different countries, including population densities, economic structure and built-up area. In China, the measurement of the urban population is particularly complex, because cities have historically been defined administratively rather than on the basis of the kinds of criteria used elsewhere. As a result, many Chinese cities encompass areas that would doubtless be classed as rural elsewhere, and some areas still classified as rural are both densely populated and specialised in non-agricultural activities. A considerable part of the increase in urbanisation in China has, in fact, stemmed from the reclassification of places from rural to urban, but many such anomalies remain.

In an effort to address this and to provide some better understanding of Chinese urbanisation in a comparative context, this Review has employed a modified form of the OECD method for calculating "functional urban areas" (FUAs). This method aims to

define cities as functional economies, in terms of actual settlement patterns and labour-market flows, instead of on the basis of administrative boundaries. It is similar to the calculation of statistical metropolitan areas in the United States and some other countries, but the method is somewhat simpler, in order to allow its application across countries. This is more than a statistical exercise. Of course, a functional approach can offer a more accurate picture of urbanisation processes: even the list of China's largest urban areas, for example, looks rather different when based on functional criteria. However, its more important implications concern policy and governance: where governance arrangements do not adequately reflect urban realities, service provision, infrastructure investment and other policies may be distorted or poorly co-ordinated. For China, as for many OECD member countries, the challenge of governing cities as real, functional economies, rather than discrete administrative units, is an increasingly important issue, particularly as regards the co-ordination of things such as environmental protection, transport and land use, where fragmented decision-making will tend to yield poor outcomes.

The results of this analysis suggest that China's urban system is even more concentrated than it appears in the official data on Chinese cities. The country has no fewer than 15 megacities – FUAs with more than 10 million inhabitants. By contrast, the official data for that year show just 6 megacities. The 15 FUAs with over 10 million inhabitants were home to as many as 260 million residents in 2010, with around 190 million of them residing in officially designated "urban areas". In addition, there are 23 FUAs with populations of 5 million to 10 million, hosting a further 148 million inhabitants, with 91 million being urban dwellers. Altogether, around 820 million Chinese lived in FUAs with populations of at least 200 000. Moreover, concentration is increasing over time: cities' total population growth during 2000-10 was fastest in the megacities, and the average growth rate was directly related to the size class of the cities – faster in cities of 5 million to 10 million than in those with 1.5 million to 5 million and so on. The sole exception to this rule concerns growth rates in the non-metro FUAs (populations of 200 000 to 500 000), which were slightly above those of the metropolitan areas in the 500 000 to 1.5 million range. However, there is substantial variation within these broad categories, and some of the smaller/medium sized FUAs are booming, with annual population growth rates above 2%.

It is important to note that FUAs, being based largely on settlement patterns and commuting flows, include both urban and nonurban dwellers, as do cities defined on Chinese official data. This is no surprise, since many people live in the hinterlands of major cities but commute to work or rely on the cities for consumption opportunities and services, etc. Thus, while the total population of the FUAs in 2010 amounted to around 820 million, their *urban* population was just under 510 million. It is in this sense that the numbers suggest that China is both more and less urban than it appears. In 2010, the official urbanisation rate was 50.7%, but the FUA analysis finds the population *urban* dwellers living in FUAs of at least 200 000 in that year to be 38% of China's population. There are also around 170 million individuals who live in "urban areas" outside FUAs. These are smaller cities or towns that are classified as "urban" by the Chinese authorities but do not meet the size, density and distance criteria to form an FUA or be part of one.

In another sense, though, the FUA analysis suggests that urban China extends even further than might be inferred from the total urbanisation rate. The *total* population of the FUAs with populations of 200 000 or more (including nonurban residents) amounted to over 61% of China's population in 2010. This means three-fifths of the population was located *within the functional labour market area* of a significant city.

Larger cities also enjoyed stronger economic performance…

It is well known that productivity and incomes tend, other things being equal, to be higher in cities, particularly large cities. This relationship is attributed to the so-called "agglomeration economies" that come with size and population density, mainly due to thicker labour markets, provision of specialised inputs and knowledge spillovers. When investigating the extent of agglomeration economies in China, the FUA analysis reveals that, as in OECD cities, there is a clear, if imperfect, relationship between city size and productivity: larger cities tend to be more productive. This is clearer when focusing on the *urban* populations of the FUAs. When total populations are used, the positive population-productivity relationship flattens out for the dozen densest cities: this is perhaps what one would expect given that, at some point, the costs of rising density may match or even outweigh the gains from agglomeration. However, productivity appears to increase with the urbanised population share throughout the distribution. This analysis points to the potential for improving urban infrastructure and services in the hinterlands of many of the FUAs, which are in some cases dense but not really delivering urban amenities, such as public transport and infrastructure, or agglomeration economies.

Overall, then, China does not appear to have exhausted the economic potential of its urbanisation and agglomeration processes.

China's fast growth has come with rising inequality as well: income inequality among citizens is higher than in any OECD countries except Chile, Mexico and Turkey, and is comparable to the levels seen in Russia, while it faces a particularly wide urban-rural income gap. Nominal incomes in urban areas are about triple those of rural areas on average, although this gap has been shrinking recently. Less well-known, however, is the degree to which China has experienced some *reduction* in inter-regional disparities: the growth of GDP per capita in the last decade has been faster in the less developed regions of the country and measures of interregional inequality have declined over the period. The analysis of FUAs suggests that this is occurring at city level, as well: on the whole, poorer FUAs grew faster in the latter part of the decade than did those that were richer at the start of the period. The data for the FUAs cover only a five-year period, but this declining inequality across cities is a useful reminder of the fact that forces of convergence and agglomeration are both at work at different scales.

When FUAs are grouped by size, the strongest growth in per capita terms is observed in FUAs of 1.5 million-5.0 million inhabitants. When controlling for other factors, city size (in population or area) is not associated with stronger *growth*, only with higher *levels* of income and productivity. An econometric analysis of the FUAs' growth over 2006-10 suggests a number of interesting remarks. First, geography matters: there has been a degree of convergence at macro-regional level, in the sense that cities in the poorer parts of China – particularly Central and Western China have grown faster. Furthermore, the urban population share of the total FUA population is also associated with stronger growth. The migrant share does not have a clear pattern for the different specifications investigated. Controlling for all these factors, it is found that cities which were poorer at the start of the period, have grown faster in terms of GDP per capita subsequently. This result holds up even when regional factors are included in the analysis, suggesting that this convergence mechanism might take place both at the macro and intra-regional levels.

A cross-sectional analysis for 2010 shows a strong positive relationship between population density and GDP per capita. However, this effect disappears when the urbanisation and the migration shares are included in the regressions, and both exhibit strong positive associations. In other words, the richest cities are the ones that are more

urbanised and with higher migration rates, and not necessarily the largest ones. Of course, this leaves open the degree to which internal migrants are attracted to cities with a high income level as opposed to contributing to it; although both are probably in effect. The inclusion of additional variables points to broadly congruent conclusions: better growth performance is found in cities with higher manufacturing employment, as well as better human capital.

Slower growth in per capita GDP among cities of 5 million or more is not necessarily evidence that they lack economic dynamism, however. As noted above, population growth was directly linked to city size; this is mainly because larger cities were taking in more migrants. Since new arrivals in the city are likely to be less productive than incumbent residents (even if they are more productive in their new locations than in their regions of origin), rapid inward migration may contribute to slower growth in GDP per capita and productivity, even in a city or region that is growing strongly. To that extent, the fact that the megacities, which experienced the fastest population growth, were also recording the fastest growth in per capita terms is quite striking and confirms their exceptional dynamism and suggests that they have yet to exhaust the potential benefits of agglomeration: a policy of size-neutrality among cities would thus be preferable to a deliberate attempt to channel growth away from the biggest cities.

Chinese cities face major social and environmental challenges

Economic success is not, on its own, a guarantee of well-being, and there is growing awareness that China's remarkable combination of growth and urbanisation has brought with it a number of other problems. As noted above, inequality has been increasing, and this is in many instances linked to the system of residence registration known as *hukou*. This system defines individuals as either urban or rural dwellers, a distinction that is particularly salient as regards access to education, health care, pensions, social protection systems and other key services, as well as land rights. The significance of *hukou* has evolved over time – for decades, it was used to restrict urbanisation and keep rural dwellers tied to the land. Now it is applied much more flexibly, but, as will be seen, it remains a source of segmentation and discrimination on the labour market. It thus continues to distort the location decisions of both individuals and firms.

A large and growing proportion of China's urban population consists of individuals who lack *hukou* for the cities in which they work and live. This does not make them "illegal" migrants in any sense, but it does mean that they are subject to a number of barriers and forms of formal and informal discrimination that combine to create what is in effect a dual urban labour market, which undermines both equity and efficiency. Secondly, the environmental impact of Chinese urbanisation is an increasing concern to citizens and policy makers alike. The central challenge for China is thus to devise policies that can begin to address the negative social and environmental consequences of urbanisation while contributing to sustained growth.

Managing urbanisation: Migration, land and planning

Cities are largely about people, land and flows. Urbanisation, of course, is largely defined in terms of the density of settlement and the shift of economic activity away from agriculture – two of the most fundamental dimensions of the relationship between people and the land they occupy. Flows, in turn, are critical, because the benefits of urbanisation – and the environmental and other costs it imposes – depend to a great extent on the organisation of flows of people, goods and resources in the dense environment of the city.

Ensuring the efficiency of these flows is a major challenge, arising precisely from the density of the urban environment. A review of urbanisation policies must therefore look at these three major elements of urbanisation and how they relate to one another. In the Chinese context, this means looking in particular at the challenge of managing rural-urban migration (people), at land conversion practices and their impact on both urban and rural China (land) and at urban planning and transport (flows). An integrated approach to these three sets of issues is essential to devising policies that address urban sustainability in all its dimensions – economic, environmental and social.

Internal migration is reshaping China…

China today is home to around one-third of the world's internal migrants, with an estimated 274 million migrant workers in cities across the country; around 85% are rural migrants, with the balance consisting of migrants moving from one city to another – usually from a smaller to a larger city. Migrant labour has been and remains critical to China's development. By 2010, migrant workers accounted for around half of China's urban population and over half of nonfarm employment, including around 90% of employment in construction, 80% in coal mining and 60% in textiles. Much of the urban economy would struggle without them, and many cities experience labour shortages each winter during the Spring Festival, when migrants tend to return home. Migration to the cities is also contributing to the transformation of rural China. On the one hand, it contributes to higher rural incomes, as remittances are an important resource for rural economies, and to significant changes to lifestyle and consumption patterns in the countryside. At the same time, it entails significant nonpecuniary costs for rural households in terms of its impact on work and family burdens, as well as the emotional state of migrants' families: altogether, rural China is home to around 47 million women whose spouses have migrated, as well as 60 million "left-behind" children (more than 20% of all children in China) and 58 million "left-behind" elderly.

…but migrants are disadvantaged with respect to social protection and access to basic services

China is one of the very few countries with policies in place that support rural-to-urban migration: far more countries work to *restrict* urbanisation than to encourage it. This is good news for China, given the pressures for urbanisation that exist. Efforts to facilitate change and reduce its costs are preferable to attempts to hold it back, which, as the experiences of many countries attest, are usually not very successful. Nevertheless, the barriers to migrants' integration in the cities are considerable. Above all, these are connected to their rural *hukou* status: it is often very difficult, if not impossible, for migrants to change their *hukou*, even if they remain in the city for very long periods. Yet possession of rural *hukou* brings with it disadvantages with respect to access to education, social protection and even physical infrastructure. Migrants tend in many respects to be treated as second-class citizens by both employers and the local authorities. Data on their employment conditions, earnings, housing arrangements and participation in social insurance schemes all point to this conclusion. The disadvantaged position of migrants' children when it comes to education is a particularly serious problem: whether they remain in rural areas (as most do) or accompany their parents to the city, they are likely to be in poorer schools and to have far fewer opportunities to advance their education than their urban counterparts.

The long-term costs of under-educating a generation of Chinese young people are likely to be substantial, particularly as China's working-age population peaks and then declines. Population ageing makes labour productivity an increasingly urgent priority.

As might be expected, the issue turns to a great extent on money. The reluctance of local governments in the cities to offer migrants urban *hukou* reflects above all their own extensive spending responsibilities and limited resources. Central government allocations for many key services are allocated to local governments based on *hukou* population, so funds for, say, migrants' health care needs are paid to the regions from which they come. Moreover, service provision tends to be more expensive in the cities, owing to higher land and labour costs, as well as the fact that the quality of services there tends to be far higher, and the grants to finance service provision in rural areas are smaller, so merely adjusting transfer formulae would not cover the additional costs. Moreover, since many migrants work in the informal economy and live in informal settlements, they pay little in the way of local taxes, a fact that reinforces local governments' reluctance to spend on services for them and their families. Moreover, there is a fear that relaxing the barriers to migrants' access to education or affordable housing programmes would simply trigger more or faster migration.

The upshot of all this is that China has a dual labour market. The evidence suggests that this labour-market segmentation has deleterious consequences for consumption growth, equity and labour-market efficiency. Correcting this state of affairs will help not only rural migrants but the economy as a whole, as China shifts towards growth model that gives increasing emphasis to productivity and domestic consumption, as opposed to low labour costs and export demand.

Policy towards migrants is changing but much remains to be done

The authorities have in recent years been working to improve migrant integration and to reduce the duality that characterises the labour market. The new National Urbanisation Plan contains a number of key commitments with respect to migrants' access to education and skills development, as well as social protection. Significantly, it also addresses rural policy and proposes broader changes that affect not only migrants but all rural dwellers. This is a critical point: the issue is not primarily the *hukou* status of migrants but the status of rural dwellers as a group. In many respects, they continue to be treated as a separate social estate, with different rights, obligations and opportunities with respect to such diverse issues as social protection, land rights and even local governance. For more than a decade, the central government has encouraged local authorities to improve the provision of education for migrant children in the cities and to broaden their access to higher education, but much remains to be done, particularly in respect of access to tertiary education – there is a tendency to push migrant children towards vocational schools instead. Similarly, there have been major efforts in the last decade to extend the social safety net in rural China and to increase the portability of benefits across rural and urban pension and social protection systems. However, the separation between rural and urban systems, as well as the fact that the latter tends to be more generous, continue to create difficulties in many places and, in turn, reduces the incentives for migrants to work in the formal sector.

There has been extensive debate for many years over the reform of the *hukou* system. However, such reforms have often been timid, owing to the determination to limit migration into the largest cities, and national reform efforts have sometimes been countered by local action: many local authorities have been linking *hukou* status to such

things as car ownership, thereby increasing rather than reducing the importance of *hukou* in determining an individual's life chances. Attempts to facilitate *hukou* conversion have often focused on small and medium cities, in essence making it easier for migrants to secure urban *hukou* in places they do not wish to go, while the barriers to *hukou* conversion in the most promising big cities have increased.

The authorities have recently set very ambitious targets for the improvement of conditions for migrants. The National Urbanisation Plan for 2014-20 envisages the settlement of a further 100 million urban dwellers by 2020, raising the urbanisation rate to 60%. Further rural-to-urban migration on such a scale makes it all the more urgent to address the question of migrants' status. Thus, the Plan calls for ensuring that migrants benefit from insurance coverage and access to public services under the same conditions as urban residents. Social welfare benefits are also to be extended to migrant workers: the urbanisation plan sets targets of 90% and 98%, respectively, for the coverage rates of the basic pension and basic medical insurance by 2020, and access to social housing is projected to nearly double to at least 23%. Migrant children are to be enabled not only to enrol in city schools where they reside but also to sit for high school entrance exams. Migrant children will be exempt from tuition fees at vocational secondary high schools and preschool enrolment is encouraged. More could still be done here, though: local quotas for entrance to university should also be abolished and all children should be allowed to sit university entrance exams in their places of residence. Under the plan, migrants will be obtain residency identification in the city they work and live after six months and can move their home residence registration to the city once the conditions set by the city are met. Some provinces have already moved quite far in allowing all workers to join the unemployment, maternity and other social insurance systems; all local authorities should be encouraged to move in this direction.

The ultimate aim of the new policy is to eliminate the distinction between urban and rural *hukou* and create a national household registration system for all citizens in its stead, but this will be a gradual process. New arrangements for making *hukou* conversion easier have been announced, but these primarily affect small and medium-sized cities: restrictions in respect of large cities are set to remain stringent and may even be tightened. A more promising path, therefore – and one that is also on the policy agenda – is to break the link between *hukou* status and access to pensions, health care, education, etc. The underlying problem in any case is not the ease or difficulty of changing *hukou* but the huge gap between urban and rural dwellers' access to essential services. In an economy where people are increasingly mobile, it makes little sense, in terms of either equity or efficiency, to provide pensions and social protection on the basis of place of origin. As long as parallel systems exist, though, more attention needs to be devoted to technical issues such as ensuring that portability of rights is easy and does not result in big losses to workers.

These changes will not come cheap, and they cannot be realised at all without reforms to the system of fiscal federalism (see below); many officials express concern about the relatively high cost of "urbanising" migrants, but the longer-term costs of failing to do so will be higher still. Given China's demographic transition and the rapid ageing of its population, future growth will depend ever more on productivity gains. Policies that restrict the access to education and training for tens of millions of migrant children are thus inefficient from a purely economic perspective, as well as unfair, since they undermine the country's future growth potential. Equity in access to education should be central to any inclusive growth strategy for China.

Land-market segmentation parallels labour-market segmentation

Urbanisation in China is generating increasing pressure on land use and prompting much debate over the need to restrict the spread of Chinese cities. The urban built area in China increased six-fold between 1980 and 2012 and it continues to expand; indeed, the rate of growth has accelerated substantially since 2000. At the same time, the growing appetite of cities for land has generated increasing market distortions and social tensions, owing to the way in which local governments are able to convert rural land, which is owned by rural collectives (represented by their village councils) into state-owned urban land.

There is no privately-owned land in China; rural land is owned by village collectives, and land converted for urban development belongs to the state. Local governments have the largest say in determining when and how rural land is converted to urban uses, and it is they who then sell urban land-use rights to developers. While the legislation governing land conversion is in some ways rather strict on paper, the reality is that local governments are frequently able to acquire rural land very cheaply, convert its designated use to urban purposes, and then to auction the land-use rights (though not the land itself) to developers or other urban users for sums that are a large multiple of the compensation paid to farmers. Given extensive expenditure responsibilities and limited tax bases, city governments have a strong incentive to make the most of this opportunity, and the sale of land-use rights has in recent years accounted for the largest share of their total revenues (two-thirds in 2010).

The situation is aggravated by other distortions. First, local governments have strong incentives to provide land very cheaply to footloose industrial investors, while restricting the supply (and thus raising the price) of land for residential and commercial purposes. This bias is evident even in the mechanisms used for land allocation, which vary to some extent according to the type of investor/developer (negotiation as opposed to various types of auction). Secondly, the regulation of rural land categories greatly restricts the ability of rural collectives to develop their land for anything but defined rural purposes (farming, housing for the farmers themselves and rural infrastructure) or to use it to generate non-agricultural income. Thirdly, food security policies focus on the preservation of a minimum volume of farmland, with land conversion quotas being administered centrally.

The consequences of this state of affairs are well known: wasteful use of prime urban land for industry, while commercial and residential uses are very expensive; widespread corruption in land conversion deals and the abusive expropriation of rural collectives' land; the formation of sometimes very large informal settlements on unconverted rural land in or near cities; pressure to game the system governing farmland conversion; and, finally, the emergence of property bubbles in some cities and ghost towns in others. Land conversion issues are often at the root of local social conflicts and corruption scandals, and the distorted character of the land market explains in large measure why Chinese cities often combine very wasteful use of land, particularly for large and often undeveloped industrial parks, alongside very high densities.

The country's leaders are committed to unifying the land market

The Chinese authorities have long been aware of these problems and are taking steps to address them. Land reform was particularly prominent in the decisions taken by the November 2013 Plenum of the Central Committee of the Communist Party, which called, *inter alia*, for a unified market in construction land, a reduction in the scope of land

expropriation and standardisation of expropriation procedures, with appropriate guarantees for the affected farmers; fairer distribution of the benefits of land reallocation among the state, the rural collective and the individual; developing the secondary market in land leasing, transfer and pledge; and improving the system for allocating and using rural housing land and facilitating the transfer of housing property rights. The plenum also called for giving farmers greater freedom to use their land to generate income. These priorities are also reflected in the National Urbanisation Plan adopted a few months after the Plenum.

Realising this ambitious agenda in practice will not be easy and will probably require some experimentation and adjustment along the way, especially since it will need to unfold in tandem with *hukou* reform and other changes in rural dwellers' rights and status, but there are some key elements that could form the basis for such a reform package:

- ensuring that rural dwellers affected by land requisition receive a far greater share of the development value of the land, even if it would be undesirable on grounds of equity to allow them to realise the entire conversion windfall;
- giving rural collectives greater freedom to use rural construction land to generate nonfarm income, for example by constructing housing for rental or sale;
- making the requisition procedures used by local governments more regular, more market-oriented and more transparent, including clarification of the legitimate public purposes for which requisition may be used;
- regularising the property rights status of informal settlements on rural land that has been urbanised in practice but not formally re-designated as urban under the law;
- using tax and regulatory changes to create incentives for more efficient land use in cities; and
- introducing greater flexibility into the regulation of farmland conversion, while pursuing other measures, such as land consolidation, that could strengthen food security.

It is important to stress that such reforms need to be accompanied by measures to strengthen the position of ordinary farmers when it comes to protecting and exercising their land rights in practice. That implies not only strengthening the judiciary but also improving the governance of rural collectives themselves, which are too often run by individuals whose actions may benefit them rather than the rural communities they represent.

Chinese cities are going to spread out, but their growth needs to be managed with care

Controversies over land conversion are linked to concerns about the spatial expansion of Chinese cities, which has been extremely rapid in the recent past. This is likely to continue: historically, cities in China and elsewhere have tended to grow in size in response to four factors: rising incomes, increasing population, falling transport costs and declining agricultural rents on the urban periphery. These factors are all at work in China today, and there is no reason to think that Chinese cities will not spread out as a result. Containing urban development should therefore *not* be the main emphasis. Strict containment policies in such circumstances often lead higher prices for housing, land speculation and high prices on the urban fringe and the underestimation of future land and infrastructure needs. When such policies fail, as they often do, the result tends to be

worse outcomes than planned accommodation of growth might have delivered, including leapfrog development and unplanned development in places where it is highly undesirable. In any case, Chinese cities are far denser on average than cities in OECD countries (despite wasteful use of land for industrial parks), and recent reductions in density have so far been greatest in the cities that were densest to start with.

The risk, of course, is that uncontrolled spatial expansion will lead to urban sprawl, with undesirable economic, social and especially environmental consequences. This suggests that the spatial growth of cities in China is probably inevitable but needs to be managed with care. Most obviously, this points to the need for things like transport-oriented development in China and approaches to land-use planning that favour density. Public transport provision, in particular, is failing to keep pace with urban growth, raising the risk that Chinese cities will evolve towards an ever more car-dependent urban form. When it comes to public transport provision, many Chinese cities might benefit from the development of bus rapid transit (BRT) rather than focusing on underground and over-ground rail: BRT systems tend to be cheaper to put in place and can more easily be adapted as traffic patterns change, which is a key advantage at a time when cities are growing rapidly. They can also be developed much more rapidly and can make use of local streets when beyond the limits of their dedicated rights of way, thus getting passengers on the urban fringe closer to their destinations. At the same time, congestion charges, parking fees, low-emission zones and other such instruments can be used to reduce both congestion and transport emissions. In an environment where cities are still taking shape, this should help favour a less sprawling urban form. Controlling urban sprawl will also be easier if policies that positively encourage sprawl are eliminated. These are surprisingly common in most countries – regulatory and tax provisions often work against efforts to build at higher densities. In China, many of these are rooted in the fiscal incentives that drive local governments to convert land and also to allow very wasteful land use for industrial parks.

Overall, the aim of policy should be to ensure that the spatial growth of cities is not excessive and to ensure that land-use in growing cities is both efficient and consistent with social and environmental goals. Urban growth boundaries should be generous but credible, identifying where there is scope for expansion and planning ahead for the infrastructure and amenities it will require, but also making clear where expansion should be restricted for environmental or other reasons. Around fast-growing cities, selective protection of nonurban land is likely to be more credible than very tight growth boundaries. Policies that are more accommodating but also more credible should offer markets greater certainty about the future, thereby reducing the risk of excessive speculation, and should enable policy makers to prepare for urban growth while avoiding uncontrolled sprawl.

There is considerable scope to improve urban planning

China has a history of urban planning that stretches back more than 2000 years, and urban planning today is sometimes very sophisticated. There is increasing attention to multifunctional zoning, environmental concerns and the preservation of local heritage and identity. Examples of innovative best practice are not difficult to find, such as the eco-cities being built in places like Tianjin. However, they are not the norm. A number of factors combine to ensure that a great deal of urban development is dominated by extreme functional segregation, the development of very large superblocks, organised around an arterial grid of roads that tend to be both very wide – more like motorways than city streets – and very far apart. This reduces internal connectivity, makes cities less

pedestrian-friendly and tends to encourage the use of private automobiles rather than public transport. It also makes cities less liveable for China's growing population of elderly people, as well as for those younger households – still the great majority in China – who cannot afford private cars. To a great extent, these practices persist because they are cheaper and faster to implement, but some official planning guidance also points to their desirability.

A number of changes could help to improve the planning of new urban development. These include incorporating economic indicators into the planning process, which at present is governed mainly by physical units (land, population, densities, etc.). Road networks could be better planned to support foot traffic and public transport, and density could be managed at smaller scales, allowing better connection between densification and infrastructure development (e.g., with higher densities close to public transport interchanges). Breaking up superblocks could allow both more multi-functional urban spaces and greater competition among developers, making new urban developments more liveable for young and old alike. Sorting out the land market will also help, since more realistic land prices will strengthen the incentives for efficient land use and location choices. This might also help to stimulate growth in small and medium-sized cities, since it would strengthen the incentives for land-intensive industry to relocate to places where land was cheaper.

Building better cities will also help China to build cleaner cities

Rapid urbanisation has brought tremendous benefits to China, but it has come at a high and increasing price in terms of environmental degradation. Over the last decade, however, environmental concerns have risen steadily up the policy agenda. The majority of Chinese cities have concentrations of major air pollutants that are well in excess of =']\standards, water scarcity and water quality are both increasingly urgent issues, and the quality of land in China is deteriorating as a result of pollution and increasing desertification. Chinese policy makers have no choice but to confront these challenges, as the environmental hazards involved are neither diffuse nor distant: in many cities, the costs of pollution in terms of both human health and economic efficiency are all too apparent. High concentrations of large particulate matter (PM_{10}) contribute to as many as 350 000 premature deaths each year, and air pollution levels around major cities regularly necessitate the closure of major highways and the restriction of intra-urban traffic.

The good news is not only that there has been growing attention to environmental concerns linked to urbanisation in recent years but that many of the policies described above should also contribute to greener urbanisation. More efficient land use, transit-oriented development and improved urban planning can all help to make Chinese cities cleaner and more liveable, as well as more efficient. The dramatic environmental footprint of Chinese is cities is needlessly enlarged by the wasteful provision of land for industrial use and the continued reliance on urban planning models that promote private transport, in particular. Changes to national policy frameworks can also make a huge difference: for example, a meaningful carbon price would greatly enhance the economic attractiveness of investments in greener buildings, public transport and renewable energy. More generally, market-oriented reforms will tend to improve environmental outcomes to the extent that they encourage more efficient resource use. Thus, the elimination of fossil-fuel subsidies, reform of water pricing and direct pollution pricing will all effect the economy as a whole, but their impact will be especially great in cities. So will better implementation and enforcement of environmental regulations and levies that already exist.

Governing Chinese cities

The distribution of responsibilities across levels of government could be clarified

China's institutional arrangements are not fully adequate to support the ambitious urbanisation goals set out in the New National Urbanisation Plan 2014-2020. For example, the relations between levels of government are not only characterised by mutual dependence (authority comes from the upper levels), but also by a series of co-ordination gaps. There is also an uneven and unclear distribution of responsibilities across levels of government. In general, city governments have limited resources but extensive expenditure responsibilities, not least for such things as education and health care. However, there are also important variations in the extent of the problem, not only because of the differences in the hierarchical status of different cities but also because the allocation of responsibilities to various tiers of sub-national government can vary according to province. Moreover, important expenditure assignments need to be reconsidered, such as county-level responsibilities for pensions, unemployment benefits and other income-support schemes: in an economy with very low levels of labour mobility, such a delegation of responsibility might have made sense but in contemporary China, with its very high levels of internal migration, it is a problem. There is also a case for re-centralising the provision of some services that have strong spillovers (e.g. compulsory education, skills training, and affordable housing programmes).

Achieving a clear-cut allocation of competences across levels of government is extremely difficult even in countries far smaller than China: most areas of domestic policy involve all levels of government, which means that co-ordination mechanisms are as important as clear assignment of specific responsibilities. In untangling these problems, therefore, the Chinese authorities may want to consider implementing a decentralisation framework that includes scope, objectives, dimension (administrative, economic, fiscal and territorial), stages and a timeline for implementation. At the same time, some functions may need to be re-centralised, particularly in the field of social protection and pensions.

Much can be done to rationalise the system of fiscal relations across levels of government

One of the biggest challenges for China is to finance the ambitious urbanisation process. The gap between mandate and fiscal capacity at sub-national level largely reflects the limited formal sources of funding at the disposal of local governments: since 1994, the fiscal system has become far more centralised on the revenue side, and most major taxes flow into the central budget. Moreover, local governments' budgets are fragmented and budget information is scattered and not always reported in full. The creation of Urban Development Investment Corporations, for example, has given local leaders a convenient vehicle for financing urbanisation but their emergence has also reduced fiscal transparency, as there is limited supervision from central and even local authorities, and led to the rapid accumulation of debt. This trend is unsustainable and needs to change. Many local governments lack investment plans or balance sheets that show their total debt levels. There is the lack of a robust investment plan that tells where to invest and if borrowing is necessary, then for how much.

In this context, systematic review of the relationship between revenue assignment and expenditure responsibilities could be of great value, since many of the most problematic

behaviours of local governments stem from their reliance on revenue from land transactions to fund services and infrastructure provision. In the absence of a property tax, the one-off conveyancing charges from land conversion procedures are a huge source of income: Chinese cities need broader, more stable taxes and user charges, as well as greater predictability with respect to intergovernmental grants. Given the likely need to re-centralise some services, increased central transfers may be needed, but these should be accompanied by changes in transfer allocation formulae that reflect real population movements and needs rather than *hukou* registration. The central government may also need to build certain conditionality requirements into the transfer instruments to ensure a degree of consistency between national objectives and local actions.

While every effort should be made to focus on strengthening the incentives, as well as the capacity, of local governments to operate in a fiscally responsible manner – not least by weaning them off over-reliance on land conversion procedures – there is also room for increased supervision and control from above. Requirements for local governments' financial reporting should be tightened, particularly in respect of off-budget financial vehicles, debt service and borrowing plans. Compliance with such transparency requirements could be linked to the restructuring of local debt as part of a reform of local public finances, and perhaps also to local governments' ability to access financial markets. The central authorities have recently been piloting a scheme to allow local governments to tap capital markets to finance urbanisation. Care should be taken to avoid signals that suggest that central monitoring of local debt implies a sovereign guarantee. Whatever mechanism the authorities eventually adopt, it will be critical to send the message that rules need to be respected.

Local governments have many incentives to compete but few to co-operate

Poor horizontal co-ordination among local governments in large urban areas undermines urban development. There is no legal requirement in the Urban and Rural Planning Law for co-ordination across levels of government, nor are there fiscal incentives for enhancing co-ordination and building a metropolitan or for promoting regional urbanisation initiatives. This is a matter of growing importance, since Chinese cities, as they grow, are increasingly "growing into one another", forming large conurbations that are effectively functional economies and that face challenges that cannot adequately be addressed by individual local governments. While inter-jurisdictional competition can stimulate experimentation and efficiency, it can also result in race-to-the-bottom contests to attract investors with cheap land, tax breaks or other benefits. It may also impede urban specialisation. At the same time, lack of co-operation in spheres where local governments face common problems can impede efforts to tackle such issues as environmental protection or infrastructure provision at an efficient scale.

This suggests a need for initiatives to strengthen metropolitan governance – the effective co-ordination of policy at a scale that may well encompass many adjacent administrative cities. OECD work on such horizontal co-operation points to three key conclusions. First, the failure to co-ordinate urban policies at the relevant scale does have negative effects on economic performance, citizen satisfaction with essential services and well-being. In particular, where cities have grown together into large conurbations, the effective co-ordination of land-use and transport policies is important to economic, environmental and social outcomes. Secondly, collective action problems are real: in many instances, local leaders in an area clearly see the need for co-operation but none has the capacities or incentives needed to make it happen. While bottom-up initiatives suffice in some spheres, some leadership from above is usually required. National and provincial

governments thus need to begin looking at metropolitan areas rather than cities and to act accordingly. Thirdly, this does not by any means imply that local-government mergers are the answer: on the contrary, the results of municipal mergers are often disappointing and there are many "lighter" arrangements for assuring metropolitan co-ordination that work well. Dedicated metropolitan bodies are often formed on the basis of constituent municipalities and delegated to handles specific issues that require a metropolitan-scale approach.

Local capacity-building challenges remain

Since the 1980s, China has worked to improve the quality and ability of the people staffing the administrative organs of government, particularly at the local level. The last decade has seen the introduction of important reforms to the civil service system, touching on recruitment and selection, training, appraisal, compensation and discipline. Nevertheless, important rigidities continue to limit the effectiveness of these changes. Four, in particular, stand out. The first is the need to recruit on a yearly basis the new civil servants to fill vacancies. The second is that the arrangements for filling positions with strong requirements for special skills still require the permission of the administrative department above the provincial level. The third is the system of established posts, which controls the number of staff in departments across different levels of government and which is largely based on standardised criteria, such as the registered population of an area. Finally, centrally controlled and managed leadership positions may compromise accountability for service delivery. Moreover, the centralised character of the system, which entails mobility across the civil service and across different levels of government, is a mixed blessing for cities. On the one hand, it promotes internal flexibility and the development of generic skills. On the other, it means that officials often have no long-term investment in the cities they serve: in many cases, key urban development decisions may be taken by officials working with private developers, neither of whom is local or will be there to live with the long-term consequences of their choices. Altogether, these arrangements impede flexibility in the public administration and have led to a growing reliance on provisional staff at local level, which is often a financial burden on local governments.

There is thus much that can done for Chinese cities – and for public administration as a whole – in the field of workforce management. Strategic workforce planning and management could address capacity gaps at local level, while further steps could be taken to strengthen the performance orientation of the public workforce to ensure it focuses on impact, better utilisation of resources and public service improvement. Finally, there is much that can be done to strengthen the integrity of urban administration, improving ethics training, transparency and the enforcement of anti-corruption measures.

Conclusions

The agenda for urban policy set out in this review outlined above is indeed vast. Nevertheless, it is feasible and broadly congruent with the economic, environmental and social goals of the government: the shift to a new model of urbanisation will support the twin goals of improving environmental performance and quality of life, as well as the move to a growth model that relies more on domestic consumption, efficient resource use and productivity growth. Indeed, as the chapters that follow will show, the success of many of the measures proposed here will be enhanced by – and in some cases depend on – progress in other areas of economy-wide structural reform, particularly reforms to the

financial and fiscal systems. Moreover, the various elements of the approach outlined here are coherent with one another: reforms to policies governing migration, land use and urban planning can reinforce each other, breaking down the segmentation of both land and labour markets, while improving resource allocation – and in particular, the more efficient use of land. Moreover, these policies are entirely consonant with the authorities' determination to reduce the environmental impact of urbanisation and to achieve a more "people-centred" urbanisation.

Chapter 1

The Chinese urban system and its challenges*

This chapter presents an overview of China's recent urbanisation, looking first at the growth of Chinese cities' populations and the evolution of the urban hierarchy and then at their economic performance. It considers both the continuing concentration of population in the largest cities and the differences in economic performance observed across different classes of city. This analysis is based in large part on the redefinition of Chinese functional urban areas rather than administrative units. When cities are defined on the basis of settlement patterns and commuting times rather than administrative borders, the picture of China's urban hierarchy changes substantially. The chapter also examines trends in inequality at different spatial scales, as well as interpersonal inequality, and at the economic structure of Chinese cities. Finally, it explores some of the environmental challenges facing China's fast-growing cities, particularly with respect to air quality.

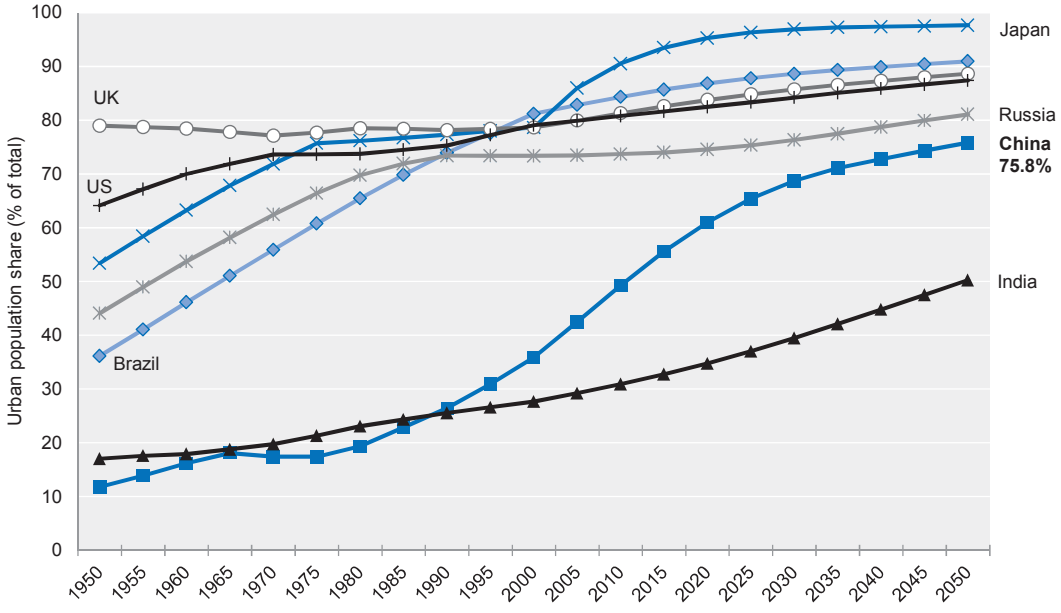
* The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Introduction

Since the onset of the period of reforms and opening up in 1978, the People's Republic of China (hereafter "China") has transformed itself from an under-developed and largely agrarian country into a rapidly urbanising industrial economy. It has managed to sustain high growth of rates of almost 10% per year for the last three decades. The sectoral structure of the Chinese economy has changed rapidly, as it has become an industrial powerhouse with an emerging services sector. This mainly export-led economic growth has raised the living standards of the Chinese people and offered economic opportunities in new sectors and locations. Urbanisation has to a large extent proceeded in parallel with the growth of the economy, which has entailed a massive migration of rural dwellers to cities. China has in recent decades been the most rapidly urbanising major country in the world, with an annual growth rate of the urban population of 4.2% since 1978. The overall urbanisation rate rose moderately from 12% in 1950 to 19% in 1980, before almost doubling in the next 20 years to 36% in 2000 and rising to just over 54% in 2014. The Chinese authorities expect the rate to reach 60% by 2020 (National Plan, 2014-2020), a goal that will be easily met according to the UN projections (Figure 1.1).

Figure 1.1. **Urbanisation trends in China and selected countries**

1950-2010



Source: UNDESA (2014), *World Urbanization Prospects: The 2014 Revision*, United Nations Department of Economic and Social Affairs, June; accessed online January 2015.

This Review considers the issues that are raised by the projected growth of China's urban population by perhaps 240 million people over the next 35 years. Such massive, sustained urbanisation presents both opportunities and challenges for the authorities, for whom urbanisation policies constitute an increasingly important part of the overall economic reform agenda. It also entails important changes in the governance of Chinese cities. This chapter presents an overview of urbanisation in China and an analysis of its economic drivers and impacts. Urbanisation is fundamentally about shifts in settlement

patterns – that is, about the relationship between people and land. Chapter 2 thus focuses on policies concerned with these two factors: the human (rural-urban migration and the social policy implications of urbanisation) and the physical (land conversion and use, urban planning). Finally, Chapter 3 explores the governance and financing challenges raised by China's continued transformation into an urban society.

China and its urban areas

Defining and measuring "urban areas" is difficult…

Urbanisation is most often defined as the process whereby the number of people living in cities (urban areas) increases relative to the number of people living in rural areas. This definition, of course, begs a number of questions, particularly the definitions of urban and rural areas. Above all, cities are distinguished from rural places in terms of their higher population density and the consequent degree to which human, as opposed to natural, geography defines their character. In addition, factors such as the extent of the built-up area and the share of the population engaged in "urban" (i.e. secondary and tertiary sector) activities come into play. Many developed countries, for example, define urbanised areas on the basis of land use and density criteria, and utilise satellite remote-sensing information in order to delineate urban area boundaries. In developing and middle-income countries, like China, India, Russia and South Africa, there is often an additional criterion concerning the share of the population not employed in the primary sector (agriculture, fisheries or mining). Such differences complicate the task of discussing urbanisation processes in a comparative context. Even when relying solely on density as a criterion, definitions vary across the world, because the densities typical of both rural and urban areas vary so widely (OECD, 2012 and 2013d).

Even where common criteria for urbanisation are applied, city definitions vary widely across countries, since they are often based on political and historical criteria, as well as current policy priorities. A large urban area may consist of a very large number of local administrative units (cities or municipalities). This has implications for the availability of data on cities, which is most often based on administrative definitions, making cross-country – and even within-country – comparisons highly problematic. While some countries have definitions of statistical cities, like the metropolitan statistical areas in the United States, many do not, relying wholly on data broken down by administrative units. In order to overcome this problem, the OECD, with the support of the European Commission, recently established a new method for defining cities according to functional economic linkages rather than administrative boundaries (OECD, 2012). Urban policies that do not treat cities as functional economies, based on human settlement and activity, may fall short, particularly when it comes to implementing effective co-ordinated actions in land-use management, transport and labour markets. The OECD method takes into account population density and commuting patterns to define functional urban areas (FUAs), so that they correspond to integrated urban labour markets (Annex 1.A1).

… particularly in China

China presents a particularly complex challenge when it comes to defining the term "urban", for two additional reasons:

- Historically, urban areas have been defined administratively rather than on the basis of the kinds of criteria used elsewhere. As a result, Chinese cities can encompass within their boundaries places that would probably be classed as rural elsewhere in the world. At the same time, much of "rural China" is now both densely settled and largely dependent on nonrural economic activities. Over time,

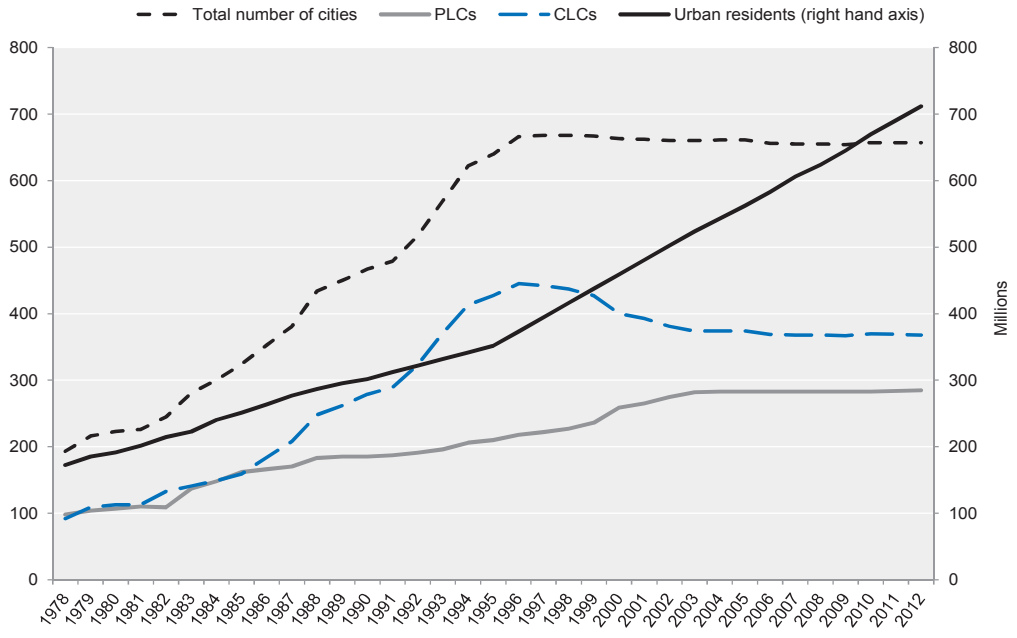
the significance of this factor is declining, as places are reclassified – around 15.5% of the increase in China's urban population during 1970-2010 has been the product of redesignation of places as urban rather than the result of migration or natural increase (OECD, 2013a). Nevertheless, the historic patterns of urban/rural designation continue to bedevil comparisons of China with other places and assessments of actual (as opposed to purely definitional) changes in urbanisation over time.

- As noted above, density thresholds are relative. Many undoubtedly rural places in China (i.e. not simply places that are so designated but places where agriculture really is the mainstay of the economy and urban amenities/lifestyles are lacking) are very dense by Western standards (Friedmann, 2006).

The current Chinese definition for designating statutory cities, such as prefectural-level cities (PLCs) and county-level cities (CLCs), takes into account both density and non-agricultural employment criteria. However, during the period of rapid urbanisation since the mid-1990s, the total number of statutory cities has remained stable, at around 657 (Figure 1.2). Reclassification of cities (from CLCs to PLCs) and the incorporation of urbanised areas within their periphery have been the prevailing patterns, rather than the creation of new statutory cities. Just as the criteria to designate statutory cities have changed since the formation of the People's Republic,[1] so there have also been important changes in the definition of "urban areas" (Box 1.1). These factors should be borne in mind when assessing data on the scale and speed of Chinese urbanisation. While there is no doubt that an extraordinary transformation is under way – both economic and geophysical data make this clear – it is not always possible to be very precise about the extent of Chinese urbanisation at any given time or about comparisons to other countries.

Figure 1.2. **China's statutory cities over time**

1978-2012



Note: The left vertical axis refers to the number of prefectural-level cities (PLCs), county-level cities (CLCs) and the total number of cities (PLCs + CLCs). The right vertical axis refers to the percentage share of urbanisation in mainland China ("urban population"/total population).

Source: Authors' calculations based on NBS data provided by the China Centre for Urban Development.

Box 1.1. **Current Chinese definitions for designating "statutory cities" and "urban areas"**

The standards for designating cities and towns in China include indicators such as total population, population density, economic scale, fiscal income and infrastructure. According to the standards, a county can be designated a county-level city if it meets the following requirements:

1. population density is over 400 persons per square kilometre, non-agricultural employment exceeds 80 000, and the non-agricultural share of total employment exceeds 30%; or
2. population density is between 100 and 400 persons per square kilometre, non-agricultural employment exceeds 120 000 and non-agricultural share of total employment exceeds 25%.

For a county-level city to be upgraded upgraded into a prefectural-level city, it must meet the following requirements: total non-agricultural population in excess of 150 000 with a non-agricultural population in the seat of government of at least 120 000, and a tertiary sector share in total GDP of at least 30%. Nevertheless, the central government has not formed the detailed and unified standards for merging villages into designated towns, and it is left for local government to define standards for designating towns.

According to the *Stipulations on Statistical Classification for Rural and Urban Areas* (adopted in 2008 and applied to the Sixth Population Census, 2010), "urban areas" include the urban areas of cities and towns. The *urban areas of cities* include: municipal districts, cities without districts and the associated residents' committees and other areas. *Urban areas of towns* include: seats of county government that are not classified as cities, and the associated residents' committees, as well as other places.

Source: Zhang J. and Y. Cai (2012), "Urbanisation in China Today", in OECD (2012), *Redefining "Urban": A New Way to Measure Metropolitan Areas*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264174108-en.

Most research on urbanisation in China uses administrative definitions of cities. This can be problematic, since they do not always correspond to economically meaningful spatial entities. Nevertheless, some recent approaches have deviated from this pattern and attempt to use definitions that correspond more closely to functional urban areas (Kamal-Chaoui, Leman and Rufei, 2009; OECD, 2013a). The difficulty of defining and measuring urbanisation in a way that allows for cross-country comparisons is relevant to assessments not only of China's level of urbanisation at any given time but also to debates about the relationship between its industrial and urban development.

The definition of China's urban population is further complicated by the fact that around one-third of the country's urban dwellers are classed as rural citizens for administrative purposes. Although a majority of Chinese now live in areas classified as urban (54% in 2014), only 36% of the population holds urban registration permits (known as *hukou*[2] in Chinese).[3] Almost 20% of the Chinese population consists of internal migrants from rural areas. Estimates of the exact number of internal migrants who live in cities without holding a local *hukou* vary, ranging from 234 million (National Plan, 2014-2020) to 275 million (OECD, 2013a). These migrants do not have full access to the public services in such fields as education, health care, pensions, employment and social housing, which are available to registered urban residents (local *hukou* holders). The consequences of this situation and possible policy responses will be treated in depth in Chapter 2, but it is important to understand the *hukou* system at the outset, because it is central to many debates about different aspects of Chinese urbanisation, including the structure of the urban system and the question of whether China is under- or over-urbanised. This is because the *hukou* system has impeded the mobility of citizens and thus the natural growth of cities. City size has not been determined freely, through a demand and supply mechanism between residents and available jobs and amenities offered in cities.

The lack of free movement of labour has deprived China of an important equilibrating force between its rural and urban areas, as well as between its more prosperous eastern cities and its lagging western ones. Recent liberalisation of the system in many cities (notably Shanghai) has been a positive change, but it may take time to reverse patterns that were shaped over decades. Migrants are in important respects treated as second-class citizens, and they, along with their families, are unable to take full advantage of the benefits of urbanisation. The disadvantage for the migrants themselves in terms of human capital development and access to opportunity is a cost for Chinese cities and the economy as a whole, since it means that cities are not realising the full potential of their residents in economic, social and cultural terms.

The *hukou* system, along with prevailing land use and industrial policies, might have created a distorted urban system (Lu and Wan, 2014). There is a growing literature examining whether China is under-urbanised or not. Most researchers and policy makers would agree that China is under-urbanised, in the sense that its urbanisation process lags behind its rapid industrialisation and economic development due to policy distortions (Au and Henderson, 2006; Chang and Brada, 2006; Lu and Wan, 2014). However, there are also studies that argue that China might be over-urbanised, as it has grown faster than its economic growth since the mid-2000s (Chen and Patridge, 2013). This literature usually compares China's city-size distribution to those of other countries at similar stages of economic development, in order to draw inferences about the optimal or "normal" city-size distribution. It is in general associated with research that studies whether different categories of Chinese cities (megacities, medium, small) underperform and whether there are positive or negative spillovers from neighbouring cities' growth (Chen and Partridge, 2013).

This review redefines functional urban areas in China

In order to address the under-/over-urbanisation debate, and many other critical issues related to Chinese urbanisation, it is first necessary to establish meaningful definitions of what a Chinese city is. It is not possible to apply the OECD/EU method for defining FUAs to China, due both to the lack of commuting data and the absence of a population grid based on the most recent census. An alternative approach was thus followed based on urban density, as well as information on transport and geomorphological characteristics that can offer plausible estimates for the commuting zone of each city. The details of this method are set out in Annex 1.A1.

The focus of the analysis here is on cities with populations above 200 000.[4] This would correspond to *medium-sized areas* (200 000 to 500 000 inhabitants) and *metropolitan areas* (above 500 000 inhabitants) according to the OECD (2012) classification. Although this classification is used here to facilitate comparison, it should be noted that cities of 200 000 to 500 000 might be regarded small by Chinese standards. Since the urban system has a large number of cities of above 5 million, two additional subcategories of the metropolitan areas were defined: very large metropolitan areas (5 million-10 million) and megacities (above 10 million). The final classification of cities for China is thus the following:

- *medium-sized urban areas*, with a population between 200 000 and 500 000;
- *metropolitan areas*, with a population between 500 000 and 1.5 million;
- *large metropolitan areas*, with a population between 1.5 million and 5 million;
- *very large metropolitan areas*, with a population between 5 million and 10 million; and
- *megacities,* with a population larger than 10 million.

China may be both more and less urbanised than the official urbanisation rate suggests

Application of the adapted OECD method results in the definition of 375 Chinese FUAs with populations of above 200 000 (Table 1.1). Of these, 292 can be classified as metropolitan areas, since they have populations above 500 000. The population living in the identified FUAs corresponds to 61% of the total national population, with the vast majority – equivalent to 59% of the national population – living in functional *metropolitan* areas (i.e. those with more than 500 000 inhabitants). This is well above the 54% level that is usually given for China's urbanisation rate. However, it is important to stress that this does *not* mean that one figure is wrong and the other right: the 61% figure includes only urban dwellers in cities of at least 200 000 (residents of smaller cities and towns are excluded), but it also includes millions of rural dwellers who nevertheless live within the hinterlands of relatively large conurbations. The point is not that 61% of the population are urban residents but that they live either in or in close proximity to relatively large cities – in their "gravitational pull", as it were. In that sense, China may be more urbanised than it usually appears. However, because the building blocks for the construction of FUAs are administrative units that can include both urban and rural areas, it is not possible to define FUAs based on areas that are purely urban and thus to offer an appropriate distinction between urban core and hinterland.

Table 1.1. **Functional urban areas in China**

Population 2000-10

Population range	1. Number of FUAs	2. Population 2000	3. Population 2010	4. Annual growth rate 2000-10	5. Urban population 2010
Megacities (> 10m)	15	212 860 603	260 549 325	1.86%	190 024 964
Very large metro areas (5m-10m)	23	128 863 733	148 007 123	1.40%	91 231 962
Large metro areas (1.5m-5m)	89	215 694 602	234 603 655	0.90%	134 145 464
Metro areas (0.5m-1.5m)	165	137 959 460	146 644 039	0.66%	77 023 351
Medium-sized areas (0.2m-0.5m)	83	28 713 162	30 601 406	0.76%	17 076 090
Total metro areas	292	695 378 398	789 804 142	1.28%	492 425 741
Total FUAs	375	724 091 560	820 405 548	1.26%	509 501 831
Total China		1 265 830 000	1 339 724 852	0.57%	678 624 285
FUA share of total population:		*57.2%*	*61.2%*		*38.0%*
Metropolitan areas' share of total population:		*54.9%*	*59.0%*		*36.8%*
Total urbanisation rate					*50.7%*

Note: The total urbanisation rate in 2000 was 36.2% (458 770 983 / 1 265 830 000).

Source: Authors' calculations based on the NBS 2000 and 2010 National Census.

The share of China's population found in functional *metropolitan* areas (i.e. FUAs with at least 500 000 inhabitants) is thus well above the OECD average of 40%. While China is indeed seeing a rapid concentration of population in very large cities, this contrast partly reflects the peculiarities of the method employed here for adapting the

OECD approach to the available Chinese data. The geographical building blocks used to construct Chinese metropolitan areas are counties and districts. While districts are generally quite urbanised, Chinese counties are rather heterogeneous. Large counties often contain both urban and rural areas. There is no information available to subdivide the counties into urban and rural parts, and thus use only the urban areas in the construction of the FUAs. However, the National Bureau of Statistics provides data on the "urban population" of each county and district, and this can be used in order to derive estimates of the strictly urbanised population of the metropolitan areas.[5]

According to the 2010 national census data, the "urban" population living in metropolitan areas corresponds to 36.8% of the total national population. In other words, only 64% of the total metropolitan areas' population (i.e. 492 million individuals out of 790 million) lives in parts of the metropolitan areas that can be strictly identified as urban, according to the working definition of the Chinese authorities. This suggests that a large share of the 59% mentioned above – perhaps as many as almost 300 million people – are likely to be living in small towns or rural areas in proximity to big cities but without the infrastructure and density to be classed as urban. The identification of these areas could help the Chinese authorities in managing future urbanisation: focusing in the nonurban parts of the metropolitan areas for infrastructure upgrade and densification could help reduce the tendency toward sprawl, while improving conditions in peri-urban areas that are already in many cases very dense. There are also around 170 million individuals who live in urban areas outside FUAs. These are smaller cities or towns that are classified as urban by the Chinese authorities but that do not meet the size, density and distance criteria to form an FUA or be part of one.

The proportion of the population living in metropolitan areas has been rising over time, with an increase of four percentage points between 2000 and 2010. This is a relatively modest increase compared to the rapid pace of Chinese urbanisation (Figure 1.1), and it reflects some distinct features of China's urbanisation that are captured by the different indicators. China's urbanisation takes place through three main processes: rural to urban migration, reclassification of rural areas as urban, and natural growth of the urban population. The former two correspond to roughly 40% each of the growth of urban population, while the latter corresponds to the remaining 20%. Migration *within* metropolitan areas is not reflected in the four-point increase, nor is the effect of reclassification, since the metropolitan boundaries used are the same for both periods; it thus reflects only the effects of long-distance migration and natural increase (including the growth of the non-urban population in those areas, which tends to be faster, owing to the application of the one-child policy). The total urbanisation rate, by contrast, reflects both the reclassification of rural areas to urban (raising the urbanisation rate even in the absence of any change in settlement patterns) and the rural-urban migration within metro areas. For the period between the last two censuses, the relevant increase is 14 percentage points, from 36% to 50% (Table 1.1).

China has far more megacities than the administrative data would suggest

The FUA analysis suggests that China's urban system is even more concentrated than it appears from the official data. The country has no fewer than 15 megacities – FUAs with more than 10 million inhabitants. By contrast, the official data for that year show just six megacities. Tables 1.2 and 1.3 give an indication of how the FUA analysis changes the profiles of China's most populous cities in terms of both total population and urban population.

Table 1.2. **FUAs and statutory cities: Total population, 2010**

FUAs		Statutory cities	
City	Population (millions)	City	Population (millions)
Shanghai	34.0	Shanghai	22.3
Guangzhou	25.0	Beijing	18.8
Beijing	24.9	Chongqing	15.7
Shenzhen	23.3	Tianjin	11.1
Wuhan	19.0	Guangzhou	11.1
Chengdu	18.1	Shenzhen	10.4
Chongqing	17.0	Wuhan	9.8
Tianjin	15.4	Dongguan	8.2
Hangzhou	13.4	Chengdu	7.4
Xian	12.9	Foshan	7.2
Changzhou	12.4	Nanjing	7.2
Shantou	12.0	Xian	6.5
Nanjing	11.7	Shenyang	6.3
Jinan	11.0	Hangzhou	6.2
Haerbin	10.5	Haerbin	5.9
Zhengzhou	9.7	Shantou	5.3
Qingdao	9.6	Jinan	4.3
Shenyang	7.7	Zhengzhou	4.3
Wenzhou	7.6	Changchun	4.2
Nanchang	7.4	Dalian	4.1

Source: Authors calculations based on NBS data; NBS (2010) *China Statistical Yearbook 2010,* China Statistics Press, Beijing.

Table 1.3. **FUAs and statutory cities: Urban population, 2010**

FUAs		Statutory cities	
City	Urban population (millions)	City	Urban population (millions)
Shanghai	28.2	Shanghai	20.2
Guangzhou	21.0	Beijing	16.4
Shenzhen	21.7	Chongqing	10.8
Beijing	19.2	Shenzhen	10.4
Wuhan	12.6	Guangzhou	9.7
Tianjin	11.6	Tianjin	9.6
Chengdu	11.3	Wuhan	7.5
Chongqing	11.1	Dongguan	7.3
Hangzhou	9.3	Foshan	6.8
Nanjing	8.3	Chengdu	6.3
Xian	7.8	Nanjing	5.8
Shantou	7.5	Shenyang	5.7
Changzhou	7.3	Xian	5.2
Shenyang	7.0	Hangzhou	5.2
Jinan	6.9	Haerbin	4.9
Haerbin	6.4	Dalian	3.9
Qingdao	6.2	Zhengzhou	3.7
Zhengzhou	5.8	Shantou	3.6
Wenzhou	5.3	Jinan	3.5
Nanchang	4.2	Changchun	3.4

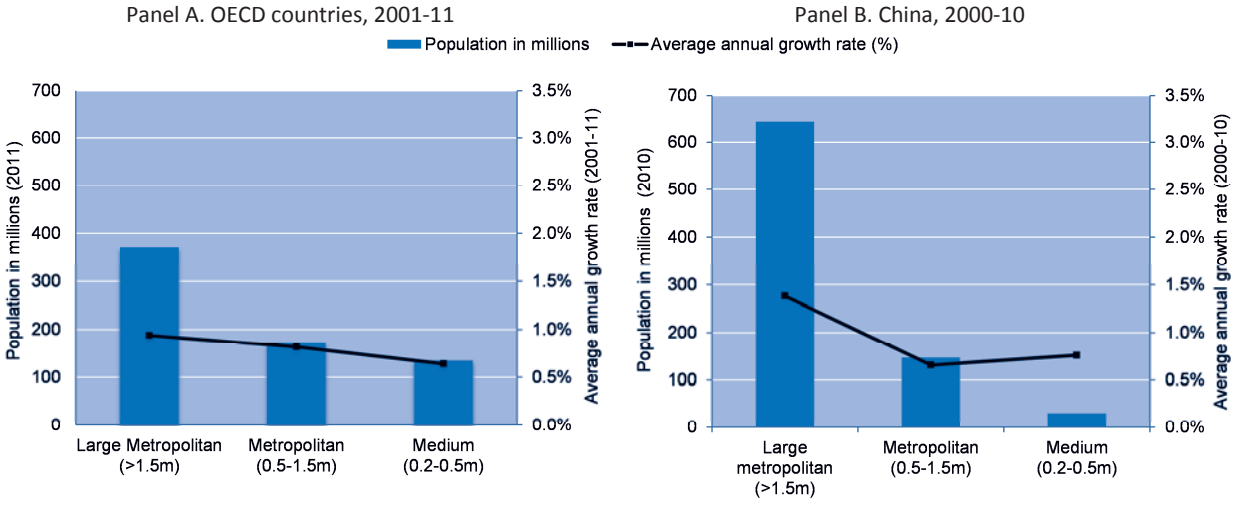
Source: Authors calculations based on NBS data; NBS (2010) *China Statistical Yearbook 2010,* China Statistics Press, Beijing.

Urban trends in China

China's urbanisation is being led by the rapid growth of the largest cities

In the OECD area, the majority of the urban population tends to live in metropolitan areas with populations above 1.5 million (OECD, 2013d). There are almost 540 million people living in metropolitan areas of more than 500 000 inhabitants in OECD countries, 370 million of whom live in metropolitan areas with populations above 1.5 million (Figure 1.3). Metropolitan areas also exhibit the highest population growth, with an annual compound growth rate of around 0.85% over the last decade. FUAs with populations of 0.2 million-1.5 million recorded growth rates of around 0.7%. China's *medium-sized FUAs* (200 000-500 000 population) and the *metropolitan areas* (500 000-1.5 million) have been growing at roughly similar rates, around 0.7% annually. However, the *large* metropolitan areas (above 1.5 million) exhibit a growth rate of 1.4%, which is much higher than the average for OECD countries.

Figure 1.3. **City size and city growth of FUAs: OECD countries and China**

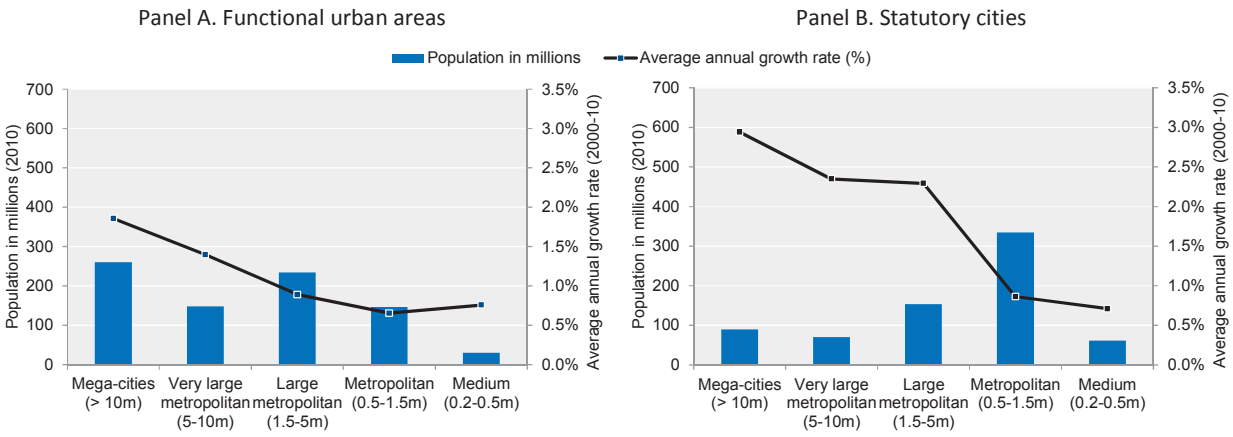


Note: *Small urban areas*, with a population of between 50 000 and 200 000 people; *medium-sized urban areas*, with a population between 200 000 and 500 000; *metropolitan areas*, with a population between 500 000 and 1.5 million; and *large metropolitan areas*, with a population of 1.5 million or more. The OECD Metropolitan Areas Database includes 275 metropolitan areas.

Source: OECD (2013), "Metropolitan areas", *OECD Regional Statistics* (database), http://dx.doi.org/10.1787/data-00531-en (accessed on 20 October 2014).

Breaking the large metropolitan areas category down further reveals that this difference is mainly the result of growth in cities with populations of above 5 million (Figure 1.4). The very large metropolitan areas (5 million-10 million) and the megacities (above 10 million) have been growing at rates of 1.4% and 1.9% respectively, while the cities with populations between 1.5 million and 5 million exhibit growth rates similar to those found in OECD economies. The rapid population growth of big cities might in part reflect a policy bias in favour of the largest cities on the part of the Chinese authorities, in terms of infrastructure provision and funding allocation (Henderson, 2009). Investment in fixed assets per capita in China's municipal-level cities and provincial capitals was double that of prefectural-level cities and four to five times that of county-level cities in mid 2000s, helping them attract firms and migrant workers.

Figure 1.4. **City size and city growth for Chinese cities: FUAs vs. statutory cities**



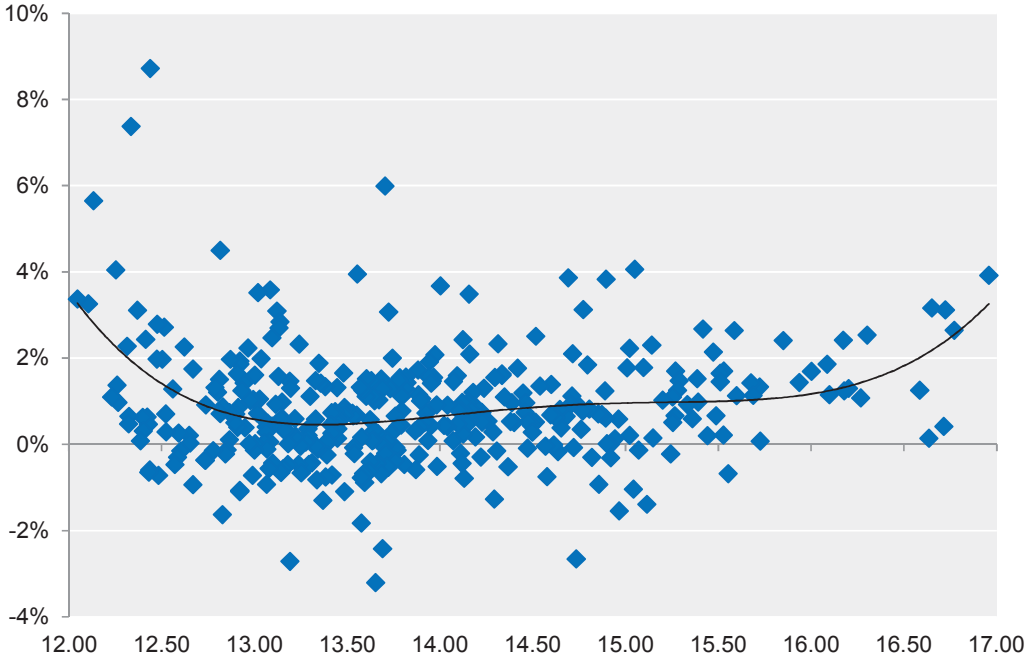
Source: Authors' calculations based on NBS data.

Figure 1.4 reveals what a difference the FUA method makes when it comes to understanding the structure of China's urban system. While the FUA definition shows the bulk of the population living in urban areas with populations above 1.5 million, data based on the administrative definition show the urban population divided almost equally between cities of 0.5 million-1.5 million and those with populations above 1.5 million. Around two-thirds of this difference stems from the "reclassification" of individuals living in statutory cities of less than 1.5 million, which are found to form parts of larger agglomerations, and one-third from individuals living in counties that are not officially part of any statutory city but that fall within an FUA.[6] Therefore, it appears that the larger boundaries of the constructed FUAs capture recent changes in the urban hierarchy, while the administrative definitions of cities appear to be slow in adapting to change. Neighbouring counties and districts might form functional urban labour markets that extend beyond the boundaries of the statutory cities and, in that respect, establish *de facto* agglomerations that the current governance structures do not reflect. Furthermore, the growth rates of the constructed Chinese FUAs and the statutory cities display different trends. While the situation is not very different for the medium/smaller cities, statutory cities with populations above 1.5 million demonstrate robust annual growth of almost 2.5%, compared to the 1.4% observed for the FUAs of similar size. (The growth rates for statutory cities are higher across the board; this reflects in part the effect of holding the FUA boundaries constant, as noted above.)

A look at how the individual cities are performing demonstrates that there is a great deal of variation within each category (Figure 1.5). Furthermore, it appears that there are some cities with relatively small populations that are booming and that exhibit annual growth rates above 2%.

Figure 1.5. **Population growth rate and initial population for China**

FUAs 2000-10



Note: The *x*-axis represents FUA population logged for 2000 and the *y*-axis represents annual population growth rate for the period 2000-10.

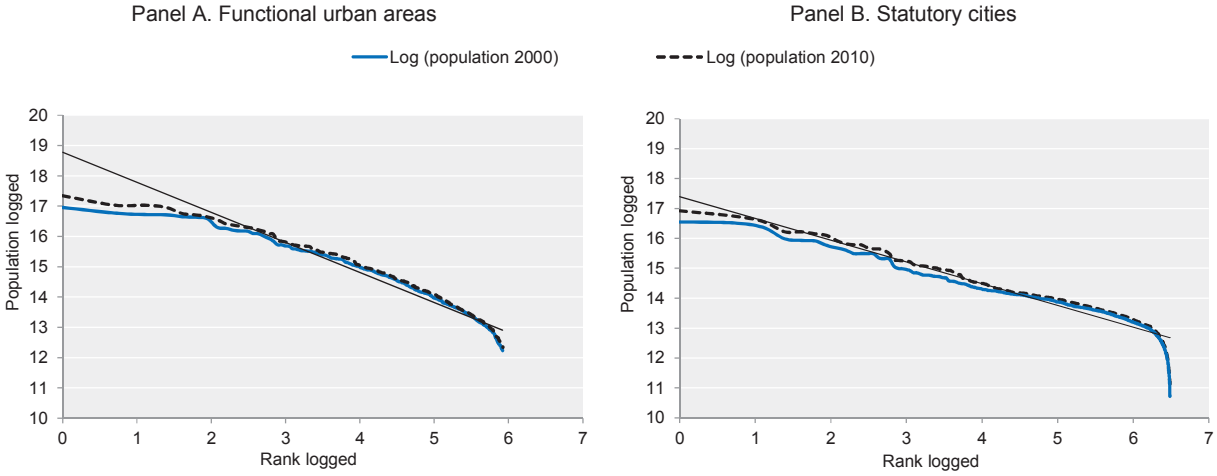
Source: Authors' calculations based on NBS data.

China's urban hierarchy is growing more concentrated

The constructed FUAs follow to a large extent the expected relationship of the between population and rank (Figure 1.6) as described by "Zipf's law" (Box 2). Zipf's law presents an empirical regularity, rather than the urban ideal for a nation. There has been some argument that China's megacities might be over-sized, while the medium-sized cities might be under-sized (Au and Henderson, 2006), but the data suggest that the largest cities are in fact smaller than one might expect. Looking at the evolution of the rank-size relationship between the last two census years, there is a shift of the distribution towards a Zipf's law pattern, with the highest population increase occurring in the largest 50 cities and particularly the first dozen. The functionally defined cities appear to conform better to Zipf's law than the statutory cities. This is consistent with other work suggesting that functionally defined urban systems approximate better the rank-size rule than administratively defined systems (Veneri, 2013; Cheshire 1999). Also remarkable is that for the statutory cities, a substantive shift upwards also takes place at the middle of the distribution and not just at its upper limits, as was the case for the FUAs.

Figure 1.6. **Zipf's law for China's functional urban areas and statutory cities**

Relationship of population logged and rank logged (2000, 2010)



Note: The fitted lines of the rank-size distribution in panel A is y = -1.0208x + 18.995, R^2 = 0.9461; with a slope very close to -1 for 2010 and y = -0.9926x + 18.779. For panel B, the fitted line for 2000 is: y = -0.727x + 17.393; R^2 = 0.8488; the fitted line for 2010 is: y = -0.7627x + 17.686; R^2 = 0.8762.

Source: Authors' calculations based on NBS data.

This suggests that, in the absence of strong policy interventions, the concentration of China's urban system is likely to continue. The implications of this are explored in more detail in Chapter 2. Zipf's law has no obvious normative implications of its own and it does not constitute the basis for any policy recommendations; it merely suggests where the urban hierarchy is likely to be evolving. However, given the scale and cost of interventions designed to reshape that evolution, as well as the lack of strong evidence that China's large cities have exhausted the potential to generate agglomeration benefits, such plans should be viewed with great caution. While Chinese leaders are understandably concerned to avoid uncontrolled urban growth, the example of a city like Tokyo shows that a metropolitan area of very high density can function quite well even with a population of more than 30 million. However, cities of such scale require advanced urban management and well-functioning institutions if they are to avoid congestion, environmental degradation and slums (Henderson, 2009).

Box 1.2. **Zipf's law and the urban hierarchy**

In the context of urban studies, the term "Zipf's law" refers to an empirical regularity concerning city-size distributions that has been observed and debated for over a century (Auerbach, 1913; Zipf, 1949): the population ranks of cities in various countries follow a power law of a specific type such that, under the hypothesis of a Pareto probability distribution, the log(rank)-log(size) relationship is linear, with a coefficient equal or close to -1. Put more simply, this implies that the largest city is twice as large as the second-largest city, three times as large as the third and so on along the urban hierarchy. While the relationship tends to break down at very small scales, it holds remarkably well for many countries across a very wide range of city sizes (Gabaix and Ioannides, 2004). The relevance of Zipf's law in the context of city-size distribution is twofold.

Box 1.2. **Zipf's law and the urban hierarchy** *(cont.)*

First, it relates to efforts to understand the distribution of population and human activity across space; Krugman (1996:40) has argued that such regularity is "spooky" and that there should be a theoretical explanation for it. There is also the question of whether Zipf's law implies some constraints in the pattern of urban growth, i.e. that the growth trajectories of individual cities could not change the overall city-size distribution (Duranton, 2007). Others raise the question of whether there are different levels of economic efficiency for different urban forms (numbers of cities and their sizes) (Storper, 2013).

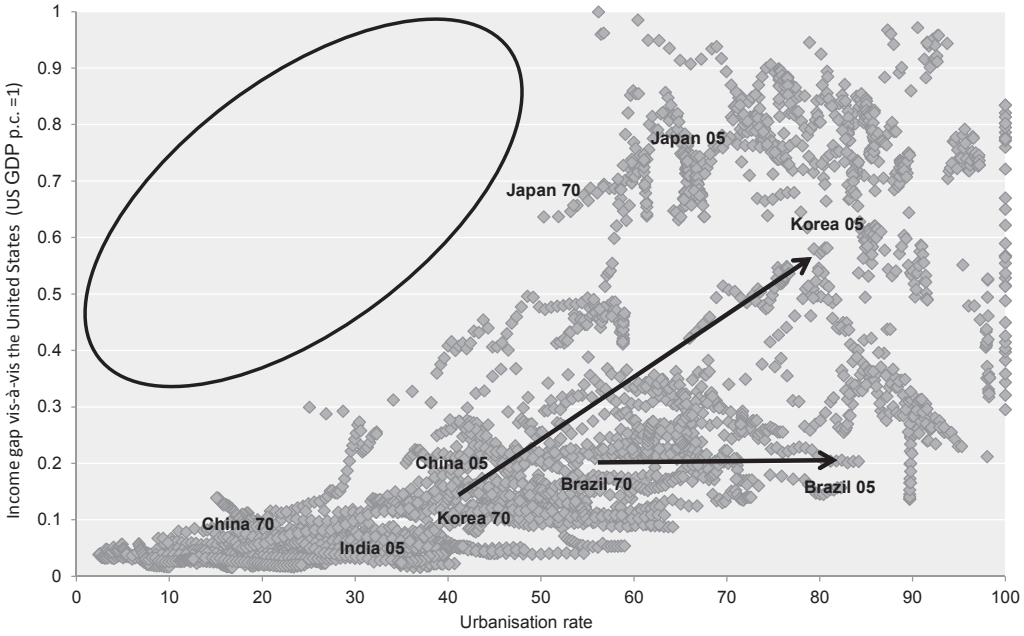
Sources: Veneri, P. (2013), "On City Size Distribution: Evidence from OECD Functional Urban Areas", *OECD Regional Development Working Papers*, 2013/27, OECD Publishing, Paris, http://dx.doi.org/10.1787/5k3tt100wf7j-en; Auerbach, F. (1913), "Das Gesetz der Bevölkerungskonzentration", *Petermanns Geographische Mitteilungen*, No. 59, pp. 74-76; Gabaix X. and Y.M. Ioannides (2004), "The Evolution of City Distributions", in J.V. Henderson and J.F.Thisse (eds.), *Handbook of Regional and Urban Economics*, Ch.53, North Holland, Amsterdam, pp. 2 341-2 378; Duranton, G. (2007) "Urban Evolutions: The Fast, the Slow, and the Still", *American Economic Review*, Vol. 97, No. 1, pp. 197-221; Krugman, P. (1996), *The Self-Organizing Economy*, Blackwell, Cambridge, Massachusetts; Storper, M. (2013), *Keys to the City. How Economics, Institutions, Social Interaction, and Politics Shape Development,* Princeton University Press, Oxford; Zipf G. (1949), *Human Behavior and the Principle of Least Effort*, Addison-Wesley, Cambridge, Massachusetts.

Urbanisation and economic development

Urbanisation is necessary but not sufficient for development

A country's urbanisation trajectory has important implications for its economic growth. While urbanisation does not cause development, sustained economic development does not appear to occur without urbanisation. Moreover, the evidence suggests that well-managed cities can and do support economic growth, by allowing countries to enjoy the economic benefits of agglomeration. Some countries have become highly urbanised without becoming rich, but no country has achieved very high levels of per capita income without becoming predominantly urban – as can be seen from the large empty space in the upper left of Figure 1.7. Brazil, for example, saw its urbanisation rate rise from 55% to 85% during 1970-2005, without achieving any progress with respect to income convergence with the United States. Korea, by contrast, managed to reduce the gap with the US by two-thirds, while its urbanisation rate doubled. As China has started from a lower level of urbanisation, it has considerable potential to catch up in terms of both future urbanisation and economic development. The main challenge it faces now is to avoid the middle-income trap and move its economy to a higher position in the global value chain. The experience of countries that faced similar urbanisation challenges in the past can be a useful guide for China in designing policies that will favour smart, sustainable and inclusive urbanisation.

Figure 1.7. **Urban population and income**



Note: Data cover 92 countries for the period 1970-2005.

Source: OECD calculations based on World Bank (2014), *World Development Indicators* (database), http://data.worldbank.org/data-catalog/world-development-indicators.

China has hitherto managed to combine its rapid urbanisation with strong economic development, in a period characterised by vast industrialisation and technological advancement. With its growth rates slowing to 7.0%-7.5% from the double-digit figures that have prevailed in the recent past, China faces an important challenge in a global economy that is cooling down and where export-led growth appears to have reached its limits. In such a setting, the future urbanisation of China can prove valuable in raising the incomes of a new urban middle class that will feed the consumer demand for China's industrial production as well as for the emerging service sector. Urbanisation thus coincides well with the authorities' aim of rebalancing the economy's growth model towards greater reliance on domestic consumption.

External demand can no longer drive Chinese growth, as it once did

This rebalancing is all the more important in view of the increasingly difficult external situation that China now faces. World Bank (2015) estimates that global growth in 2014 reached just 2.6%, only slightly above the 2.5% recorded the year before. For 2015, the Bank envisages only a limited acceleration in the growth of both global GDP and world trade. While softer commodity prices may support recovery in many countries, particularly the OECD area, there are significant downside risks associated with volatility on financial and commodity markets, geopolitical tensions and domestic difficulties in the euro zone and Japan, in particular. Even if this assessment proves overly pessimistic, the scope for reliance on export demand continues to decline as China's share of world exports and GDP rises. The country long benefited from both expanding global demand and rapidly increasing market share; this was much easier when the Chinese economy and its share of global markets were both far smaller. Lower oil prices and rising export

demand will thus continue to support Chinese growth, but not to the same extent as in the past. The good news is that the rebalancing of growth that China seeks is broadly consistent with its urbanisation agenda: as will be seen in Chapter 2, policies that aim to improve the quality of Chinese urbanisation tend to support the overall structural reform agenda to which the government is now committed, including fiscal and financial sector reforms.

That said, this agenda is not without its own risks. Many of these reforms – particularly those that will tend to slow down rapid credit growth – are important for long-term stability and the sustainability of growth, but they may contribute to a rapid slowdown if other sources of demand fail to emerge quickly enough. Urbanisation policies can clearly play a role here, not only because urbanisation tends to be associated with consumption growth but also because service-sector growth, in particular, should contribute more to job creation. In the first three quarters of 2014, services contributed to half of Chinese growth. As Hofman (2015) observes, services growth can help to sustain the expansion of domestic consumption precisely because a larger share of value added in services goes to salaries; moreover, he notes that the growth of the services sector is less dependent on credit growth and thus less likely to be choked off by fiscal and financial reforms.

Agglomeration economies are central to the benefits of urbanisation…

The productivity of a country is largely determined by the productivity of its cities, which makes it important for a country's economic development to implement policies that foster robust urban growth. It is well documented that productivity tends to rise with city size. This relationship is attributed to agglomeration benefits that accrue to cities with size and population density, mainly due to thicker labour markets, provision of specialised inputs and knowledge spillovers (Box 1.3). There is a large empirical literature that examines the magnitude of the agglomeration benefits and shows great variation in estimates for different countries (see Melo, Graham and Noland, 2009 for a meta-analysis; Combes, Duranton and Gobillon 2011 for a recent review). Accounting for the fact that more productive individuals tend to live in larger cities, recent work that combines data for five OECD countries finds agglomeration benefits with elasticities of 2%-5%. In other words, a doubling of population while other city characteristics (demography, skills endowments, industrial structure, etc.) remain the same is associated with an increase in productivity of between 2% and 5% (Ahrend et al., 2014). It is important to stress, of course, that this is in addition to other sources of growth commonly associated with urban development – this refers to the "pure" agglomeration after controlling for selection effects and the like. A similar exercise for China has found agglomeration benefits to be much higher, at around 9% (Combes et al., 2013). Even the lower estimate for OECD countries would be meaningful in China: few OECD cities double their size in any very short period, but some Chinese cities have doubled in size two or three times in recent decades. Furthermore, Au and Henderson (2006) find that China has a large number of medium-size cities that would benefit substantially from increases in size, so that a doubling of their population would increase real output per worker by 20%-35%. Although this research refers to data from the 1990s and does not take into account sorting of the more productive individuals to the larger cities (like the Combes et al. 2013 study), it might still suggest that agglomeration benefits for China have higher elasticities than are typical of developed countries.

Box 1.3. **Agglomeration economies**

Three main mechanisms work to produce agglomeration economies:

1. Mechanisms that deal with sharing of:

- *indivisible facilities* such as local public goods or facilities that serve several individuals or firms. Some examples, other than public goods, are facilities such as laboratories, universities and other large goods that do not belong to a particular agent but where some exclusion is implicit in providing them.
- the *gains from the wider variety of input suppliers* that can be sustained by a larger final goods industry. In other words, the presence of increasing returns to scale along with forward and backward linkages allow firms to purchase intermediate inputs at lower costs.
- the *gains from the narrower specialisation* that can be sustained with higher production levels. Certain firms specialise in producing complementary products, reducing overall production costs.
- *risks*. This refers to the idea that an industry gains from having a constant market for skills. If there are market shocks, firms can adjust to changes in demand if they have access to a deep and broad labour market that allows them to expand or contract their demand for labour.

2. Matching mechanisms by which:

- Agglomeration improves the *expected quality of matches between firms and workers*, so both are better able to find a good match for their needs.
- An increase in the number of agents trying to match in the labour market also *improves the probability of matching*.
- *Delays are alleviated*. There is a possibility that contractual problems arising from renegotiation among buyers and suppliers will result in one of the parties losing out to the other party in a renegotiation. However, if the agglomeration is extensive enough, agents can find an alternative partner.

3. Learning mechanisms based on the generation, diffusion and accumulation of knowledge. This refers not only to the learning of technologies, but also the acquisition of skills.

OECD metropolitan regions benefit from agglomeration effects and thus tend to display higher levels of productivity, higher rates of employment and higher levels of GDP per capita than other regions. These benefits, however, are limited by congestion costs, diseconomies of scale and oversupply of labour, among other potential negative elements, and many metro regions have in recent decades tended to underperform national economies.

Source: Duranton, G. and D. Puga (2004), "Micro-foundations of Urban Agglomeration Economies", *Handbook of Regional and Urban Economics*, 4:4, February; OECD (2009), *OECD Economic Outlook*, Vol. 2009/1, OECD Publishing, Paris, http://dx.doi.org/10.1787/eco_outlook-v2009-sup1-en.

While important, city size and population density are not by any means the only factors that matter for a city's growth. If density were the critical variable, then *favelas*, shanty towns and refugee camps would be among the most productive places on earth. Many cities in the developing world combine very high densities with weak public transport, inadequate power and sanitation infrastructure, and poor planning (e.g. extreme functional segregation at relatively large scales). The result in many cases is long commutes, severe congestion and heavy reliance on private motorised transport. Often such large conurbations do not function as cities but are instead characterised by fragmentation of labour markets, poor internal connectivity, a lack of co-ordination in

land-use planning and infrastructure provision, and high levels of conflict among constituent municipalities. In short, such cities experience a dysfunctional density that is neither economically efficient nor environmentally sustainable (OECD, 2015). The key to realising agglomeration benefits, then, is creating cities that function well as economic systems; as OECD (2013a, pp.67) concludes, "cities, rather than urbanisation, are key to growth."

The distinction between density and agglomeration is thus critical: though closely related, the two are not the same. Agglomeration benefits arise as a result of the ease with which people can interact with large numbers of other people. It is thus possible to increase agglomeration without increasing density by, for example, removing transport bottlenecks in a given place, so that agents can move more easily around the city. Likewise, one can achieve very high densities with little agglomeration benefit if cities are fragmented, internal transport is difficult and markets remain segmented. As OECD (2015) observes, this is characteristic of many cities in the former Soviet Union, where large conurbations were often built as networks of adjacent factory towns, with each part of the city organised around one major production complex, with all of the social and other infrastructure that was needed. Movement around these urban districts was often easy, but movement above them could be difficult, not least as they were often separated by swathes of land given over to large-scale transport infrastructure. This has implications for China, too, given the influence of Soviet urban planning in the first years after the Revolution, which has had a lasting effect on the urban fabric of China's cities (see Chapter 2 for more detail). As will be seen in chapters 2 and 3, well-functioning cities need to be knit together with soft tissue as well as a "skeleton" of physical planning and infrastructure: thus co-ordination across sectoral policies and governance are critical concerns alongside questions of urban form.

Just as density is not enough, neither is size. While OECD research points to agglomeration benefits increasing in city size (OECD, 2014b), it also finds that better connectivity *among* cities can have a beneficial impact on productivity, too. There is evidence that cities can "borrow" agglomeration benefits from near neighbours and in that respect, good connections to larger cities are important. Due to positive spillovers, cities that are closer to nearby populous cities tend to have higher productivity (Ahrend et al., 2014); this relationship is not limited to physical distance – it also holds up when travel times are used (Ahrend and Schumann, 2014). In that respect, the authorities can help a city reap agglomeration benefits by improving external connectivity via transport infrastructure investments. This finding has relevance for attempts to generate growth in satellite cities around the largest Chinese conurbations.

Finally, it is critical to note that a large part of what is meant by "reaping agglomeration benefits" is in fact about mitigating the *costs* of agglomeration: urban diseconomies like congestion, pollution and higher prices for land and other production factors can all inhibit cities' growth. This is a key point, because it is often easier for cities to address the costs of agglomeration rather than its benefits. While there might be limited scope for the authorities to increase the benefits of agglomeration with public spending, many of the key drivers of productivity typically depend on national-level policies (e.g. regulation, competition, human capital and innovation) and on the actions of firms (cluster economies), which policy is ill-equipped to address – cluster policies are popular but the evidence for their effectiveness is thin (Duranton, 2011). When it comes to things like human capital and innovation, regional- and city-level action is often needed to enhance the effectiveness of programmes by adapting them to local conditions, but city-level interventions are rarely decisive, and the relationship between policy

intervention and outcome is still poorly understood and hard to predict. By contrast, there is much that policy makers can do to alleviate agglomeration *costs* like congestion and environmental pollution, which affect economic efficiency, environmental sustainability and quality of life. Moreover, it is usually clearer in these cases what can be done and what the results are likely to be.

OECD work on urban and regional growth also underscores the importance of identifying and exploiting complementarities among different strands of sector policies, while managing or mitigating the trade-offs among them: many of the key factors supporting growth only appear to operate in the presence of other factors (Box 1.4). Such cross-sectoral co-ordination implies a need for enhanced co-ordination between and across levels of government, (OECD, 2014b; OECD, 2013b). Less fragmented governance arrangements and a better fit between policies and public investments, on the one hand, and the functional economic boundaries of cities, on the other, has been found to improve cities' performance (Ahrend et al., 2014; Cheshire and Magrini, 2009). For a given population size, a metropolitan area with twice the number of municipalities is associated with around 6% lower productivity, an effect that is mitigated by almost half when a governance body at the metropolitan level exists (Ahrend et al., 2014). This problem is of increasing relevance to China (for an extensive discussion see Chapter 3 in this review). Chinese cities, as administrative units, were initially created with rather generous boundaries around them, so there were not so many problems arising with respect to the governance of very large but administratively fragmented conurbations; usually, the functional city was rather *smaller* than the administrative city. That has changed, though: as is clear from the estimates of FUAs presented above, there is now a large discrepancy between statutory cities and functional urban areas in many places.

Box 1.4. **What makes regions grow?**

Economic growth in urban areas is driven by endogenous factors such as human capital, physical capital, including infrastructure and innovation, but also by spatial factors such as agglomeration economies and proximity to markets. Using a number of econometric techniques, the OECD has developed a regional economic growth model that takes into account endogenous factors and new economic geography elements. Among the results are:

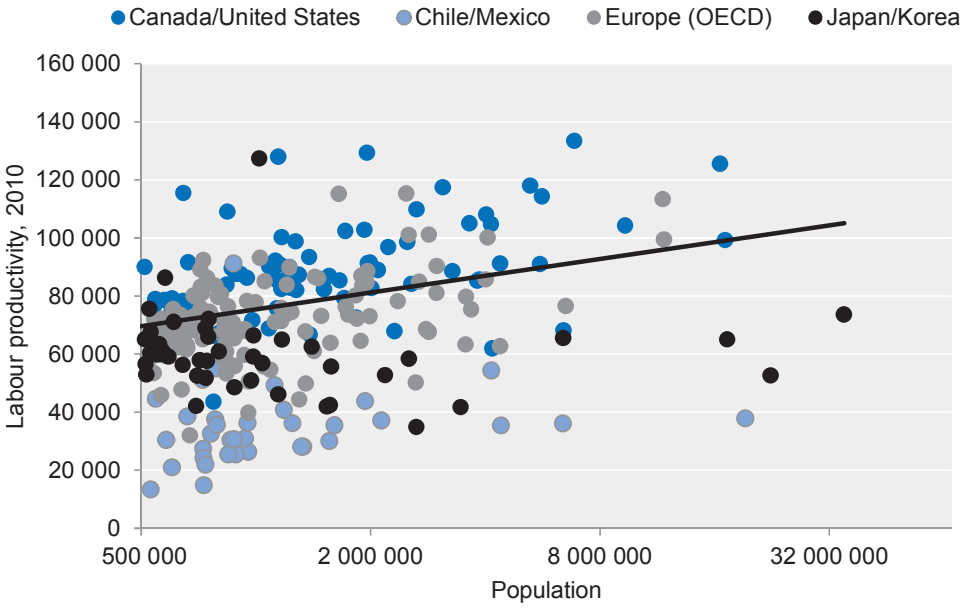
1. Human capital is the most robust factor – taking into account both the presence of workers with tertiary educational attainments and the absence of workers with only modest education – and takes about three years to have an impact.
2. Infrastructure has an impact if other factors, such as human capital and innovation, are also in place.
3. Innovation has an impact on growth, but involves a longer-term process of between 5 to 10 years.
4. Agglomerations in services (measured by a region's specialisation index times its size in financial intermediation) has a positive impact on growth. This result can have particular implications for urban regions, since financial intermediation (or knowledge-intensive services) is confined principally to metropolitan areas.
5. Accessibility to markets has a positive impact on growth, but this result is not very robust, since it is only statistically significant in one model.
6. Urban regions with low employment rates can generate growth if they can manage to mobilise their labour force.

Source: OECD (2009), *How Regions Grow: Trends and Analysis*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264039469-en.

China's growth appears to be benefiting from agglomeration processes

These considerations should be borne in mind when looking at the relationship between productivity and city size in China. Although for OECD countries, there is a clear positive relationship between city size and productivity, for China the pattern is less easy to discern (Figures 1.8 and 1.9), though there is a fairly clear positive relationship for the larger 100 FUAs, that have populations above 2 million. However, if one investigates the relationship between the urban population share of the FUAs and GDP per capita, then the positive association over the whole of the distribution is more apparent (Figure 1.10). A similar pattern appears for the relationship between GDP per capita and the population density of the FUA (Figure 1.11), except that in this case the relationship is clearer at lower densities – at very high densities, it flattens out; this is perhaps what one would expect, given that, at some point, the costs of rising density may match or even outweigh the gains from agglomeration. This suggests that the declining density of many Chinese cities, which has provoked concern in some quarters, may in many cases be good news, especially given that densities have fallen most in the places that were densest to begin with (OECD, 2013a). These results should not come as a surprise, since many of the FUAs calculated for China are quite extended in size and still include large peri-urban and rural areas. This analysis points to the potential for improving urban infrastructure and services in the hinterlands of many of the FUAs, which are in some cases dense but not really delivering urban benefits. Low density and poor internal connectivity will tend to reduce agglomeration benefits.

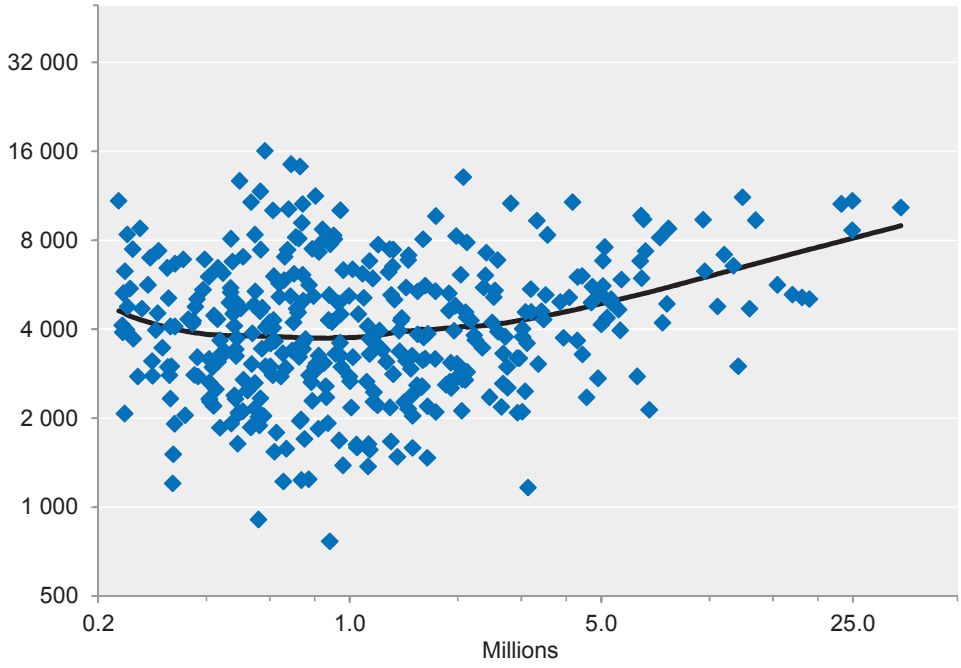
Figure 1.8. **City size and labour productivity: OECD area**



Notes: Labour productivity is measured as GDP (in millions of USD constant PPP, constant prices, reference year is 2005), divided by the total number of employees in a functional urban area. Data refer to 2010 or the closest available year.

Source: OECD (2014) OECD Metropolitan eXplore, http://measuringurban.oecd.org/# (accessed 14 August 2014).

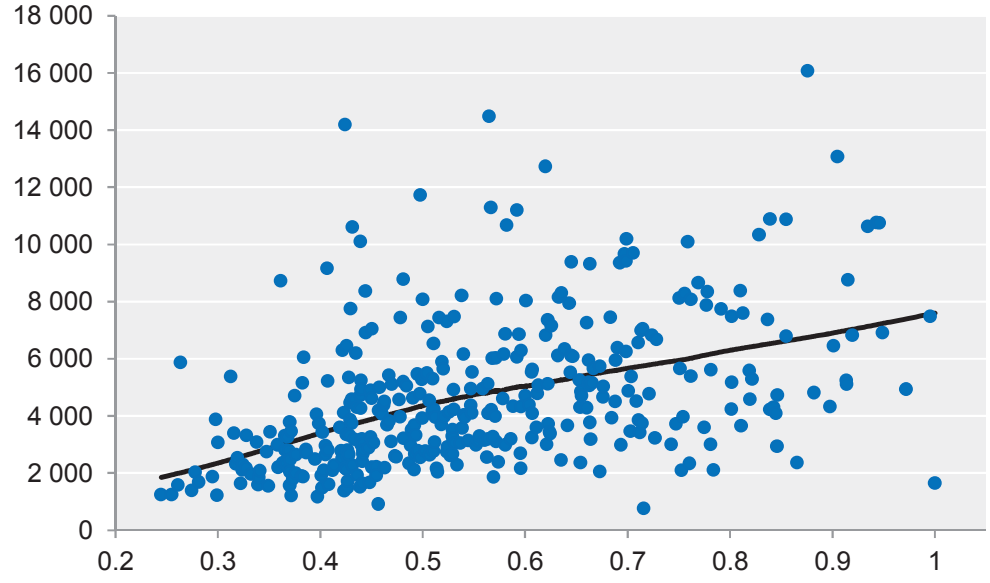
Figure 1.9. **City size and GDP per capita for Chinese FUAs (2010)**



Note: The horizontal axis represents logged values of the 2010 population of the Chinese FUAs. The vertical axis represents logged values of the GDP per capita (in USD) for Chinese FUAs in 2010.

Source: Authors' calculations based on NBS data.

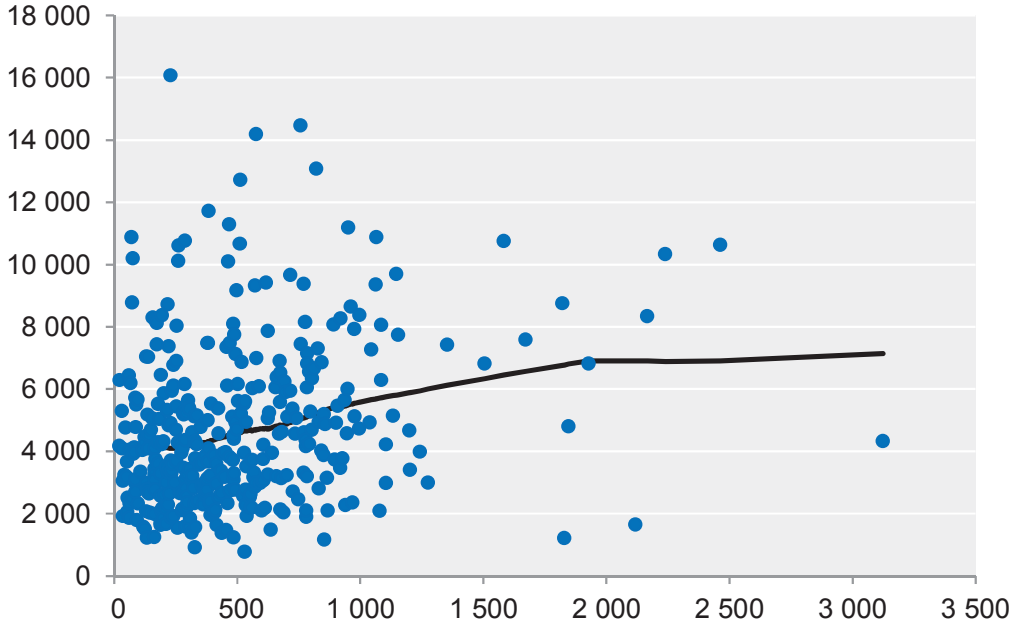
Figure 1.10. **Urban population share and per capita GDP for Chinese FUAs (2010)**



Note: The horizontal axis represents the percentage of the FUA population that lives in urban areas (as defined by the Chinese authorities). The vertical axis represents logged values of the GDP per capita (in USD) for Chinese FUAs in 2010.

Source: Authors' calculations based on NBS data.

Figure 1.11. **GDP per capita and density of Chinese FUAs (2010)**



Note: The horizontal axis represents the 2010 population density of the Chinese FUAs. The vertical axis represents logged values of the GDP per capita (in USD) for Chinese FUAs in 2010.

Source: Authors' calculations based on NBS data.

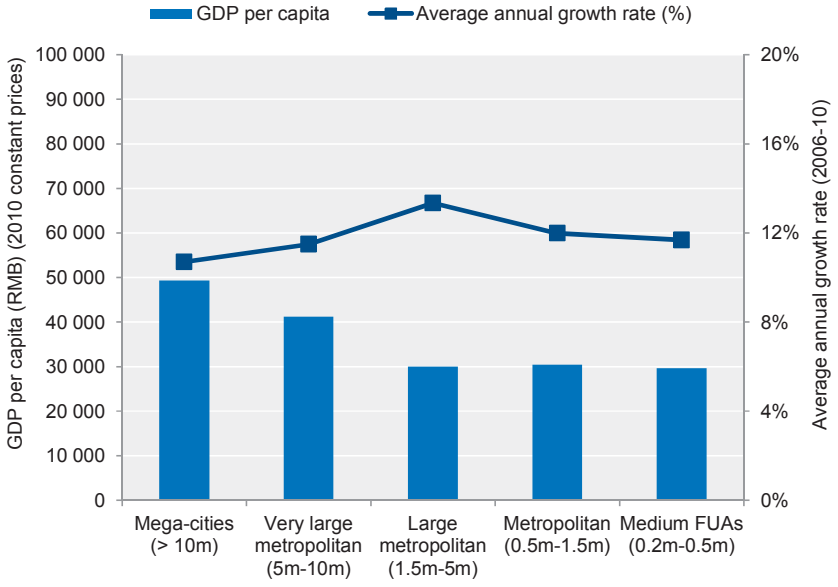
Larger cities enjoyed stronger economic performance

In OECD economies, there is not much relationship between city size and economic growth – larger cities have higher levels of productivity but they do not necessarily grow faster than other places; indeed, they often experience slower growth (Kamal-Chaoui and Sanchez-Reaza, 2012). China is no exception to this rule (Figure 1.12). When FUAs are grouped by size, the strongest growth in per capita terms is observed in the large metropolitan areas of 1.5 million-5 million inhabitants. Other categories experienced slower growth, but still above 10%. This aggregate picture, however, might obscure what happens within each category and the underlying trends. When controlling for other factors, city size (in population or area) is not associated with stronger growth, only with higher levels of income and productivity.

An econometric analysis of the FUAs' growth over 2006-10 suggests a number of interesting observations. First, geography matters: dummy variables for the four main regions of China (east, northeast, central and west) explain a significant part of the observed growth pattern (mainly due to the distinctive pattern for west China), while dummies at the province level have a much stronger effect. This analysis confirms that there has been a degree of convergence at macro-regional level Furthermore, the urban population share of the total FUA population is also associated with stronger growth. The migration share does not exhibit a clear pattern for the different specifications investigated. Controlling for the available FUA variables, it is found that cities which were poorer at the start of the period grew faster in terms of GDP per capita subsequently. This result is robust to the inclusion of regional dummies, showing that the convergence mechanism might be at work both at the macro and the intra-regional levels.

Figure 1.12. **Economic growth by FUA category**

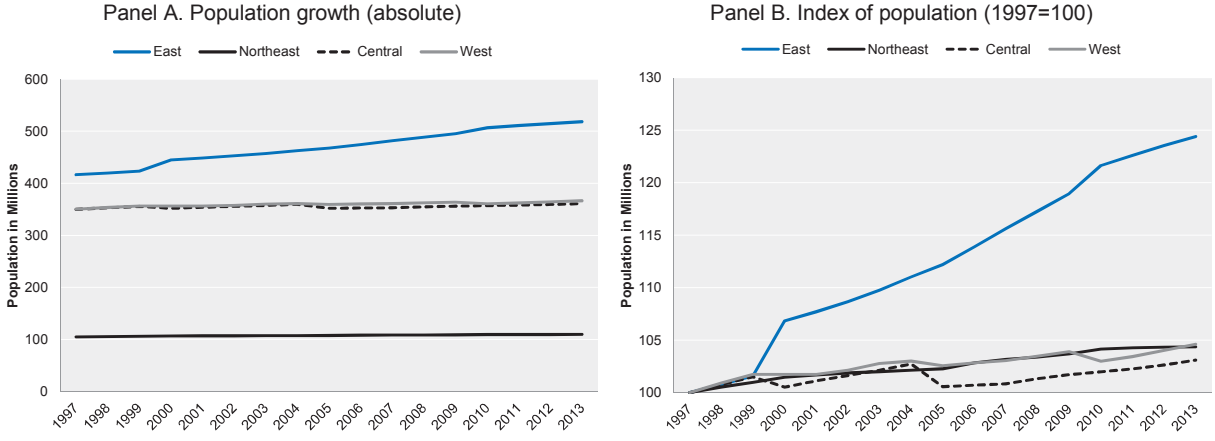
GDP per capita growth, 2006-10 and GDP per capita levels, 2010



Source: OECD calculations based on data from NBS.

Slower growth in per capita GDP among cities of 5 million or more is not necessarily evidence that they lack economic dynamism, however. As noted above, population growth over the period was directly linked to city size; this is mainly because larger cities were taking in more migrants. At the level of macro-regions, this can clearly be seen in the much faster growth of population in the cities of the (already more populous) east of the country (Figure 13). Since new arrivals in a city are likely to be less productive than existing residents, even if they are more productive in their new locations than in their regions of origin, rapid inward migration may contribute to slower growth in GDP per capita and productivity, even in a city or region that is growing strongly and contributing to solid aggregate productivity growth at national level. To that extent, the fact that the megacities, which experienced the fastest population growth, also recorded fast growth in per capita terms (almost 11%) is quite striking and confirms their exceptional dynamism.

Figure 1.13. **Population change in China by macro-region, 1997-2013**



Source: OECD calculations based on data from NBS.

Regarding levels of income, cross-sectional regressions for 2010 give interesting results. There is a strong positive relationship of population density with GDP per capita, and when keeping density constant, cities of larger size (in terms of total land surface) have even higher GDP per capita. However, the coefficients of density and area become insignificant when the urbanisation and the migration shares are included in the regressions; both these variables exhibit strong positive associations. In other words, the richest FUAs are those with higher urban population shares and higher migration rates, and not necessarily the largest ones. Of course, this leaves open the degree to which internal migrants are attracted to cities with a high level of income, as opposed to contributing to it. The inclusion of some other FUA variables points to broadly congruent – and unsurprising – conclusions: the share of farming in total employment is weakly and negatively associated with growth, while higher manufacturing employment is associated strongly with better growth performance. Human capital variables perform as expected, with the negative effect of a large share of illiterate workers appearing stronger than the positive effect of a higher share of tertiary-educated workers.

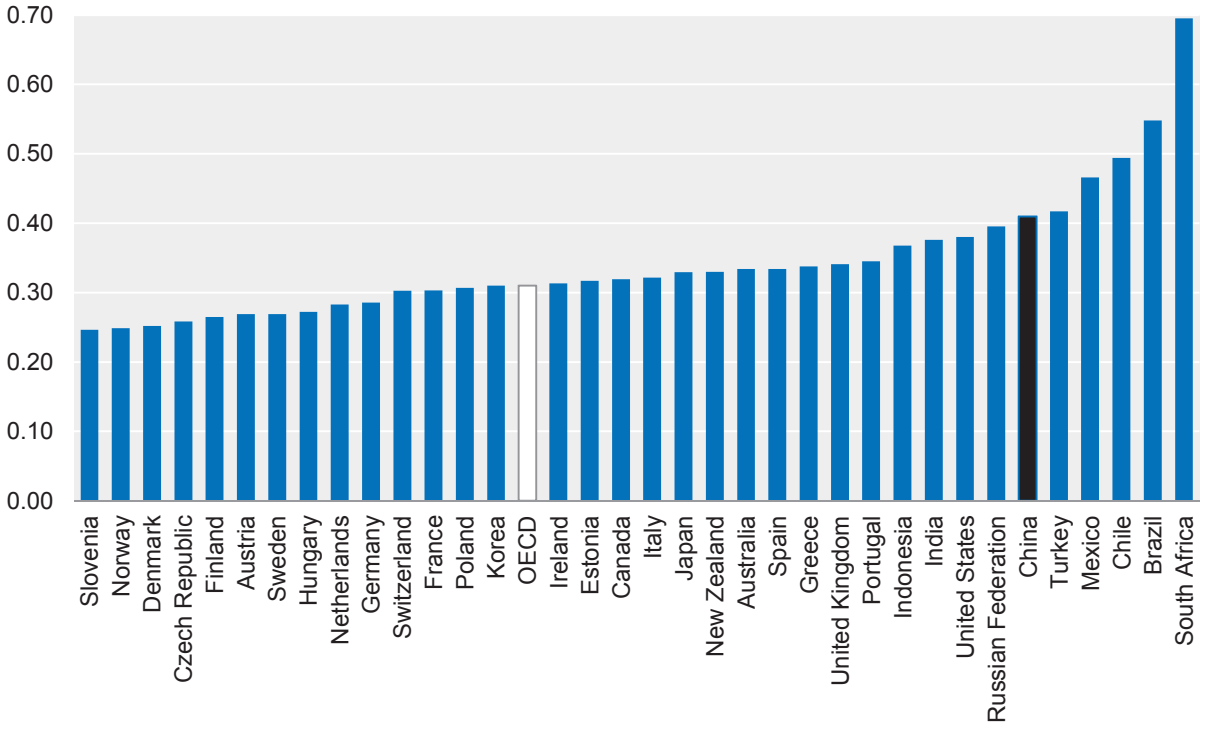
Substantive research confirms the lower human capital of new migrants to Chinese cities and the degree of discrimination they face in the urban labour markets. This results in lower wages (Démurger et al., 2009). However, there is evidence that migrants might have strong complementarity effects with incumbent urban residents in contributing to overall city productivity. Combes et al. (2013) find that an inflow of new migrants to cities that increases total employment from the first quartile to the last quartile of Chinese cities has a positive effect on city productivity of around 30%. Although one-third of this effect is an agglomeration effect, the other two-thirds is a pure migration externality. This should not come as a surprise, as migrants tend to work at low-skill, labour-intensive occupations and thus may not compete with but rather complement the higher-skilled incumbent urban workers.

Fast growth has generated rising inequality…

Since the period of reforms began in 1978, the national economy has recorded growth rates averaging around 10% per year over a 35-year period. This extraordinary period of rapid growth has made possible a dramatic rise in personal incomes and living standards. Nevertheless, China has also experienced the emergence of very high levels of interpersonal and interregional inequality. A comparison of the Gini coefficient as a measure of interpersonal inequality shows China to have levels of inequality comparable to the United States, the Russian Federation and Turkey (Figure 1.14). China also exhibits high levels of territorial inequality when compared with other OECD and non-OECD countries (Figure 1.15). It should be noted, though, that higher levels of territorial inequality tend to be found in fast-growing emerging economies, and China's inter-regional Gini coefficient has actually fallen since the mid-1990s. High levels of territorial inequality can be attributed mostly to the large differences in development and urbanisation rates between the coastal areas of the East and the Central and Western parts of China (Gustafsson, Li and Sicular, 2008b). The uneven development of these regions has been linked to various factors, such as the level of exports and foreign direct investment (FDI), as well as to state policies that might have favoured particular industries in specific regions (Sutherland and Yao, 2010). The extent to which interregional inequality or intraregional inequality can be seen as the cause of the broader social inequality in China is the subject of ongoing research (Knight, 2013; Li and Luo, 2010; Benjamin, Brandt and Giles, 2008; Gustafsson, Li and Sicular, 2008a and b). While some researchers argue that geography might play a key role in explaining China's

inequality, particularly due to the large urban-rural income gaps (Gustafsson, Li and Sicular, 2008b), others have argued that between a half and two-thirds of the inequality can be explained as income differences between neighbours (Benjamin, Brandt and Giles, 2008).

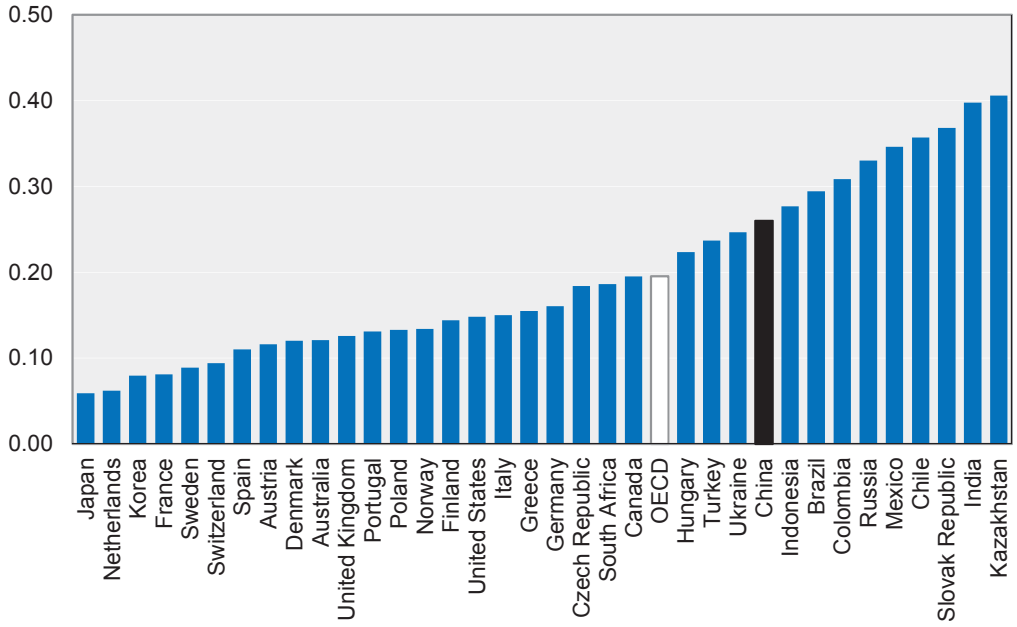
Figure 1.14. **Inter-personal inequality: Gini coefficient for China and selected countries (2010)**



Note: Data refer to 2010 for all countries and measure the level of interpersonal inequality as measured by the Gini coefficient of individual disposable incomes (after taxes and transfers). The Gini coefficient ranges between 0 in the case of perfect equality and 1 in the case of perfect inequality.

Source: OECD (2014), *OECD.Stat*, (database), http://dx.doi.org/10.1787/data-00285-en (accessed 20 June 2014).

Figure 1.15. **Gini index of GDP per capita for selected OECD and non-OECD countries, TL2 regions (2010)**



Note: OECD classifies regions according to two different territorial levels (TL). The higher level (Territorial Level 2) consists of about 362 macro-regions in the OECD member-states, while the lower level (Territorial Level 3) is composed of 1 794 micro-regions. For China, the data refer to the 31 mainland provinces (excluding Hong Kong, Macau and Chinese Taipei)

Source: Authors' calculations based on OECD (2013), "Metropolitan areas", *OECD Regional Statistics* (database), http://dx.doi.org/10.1787/data-00531-en (accessed on 20 October 2014) and NBS data.

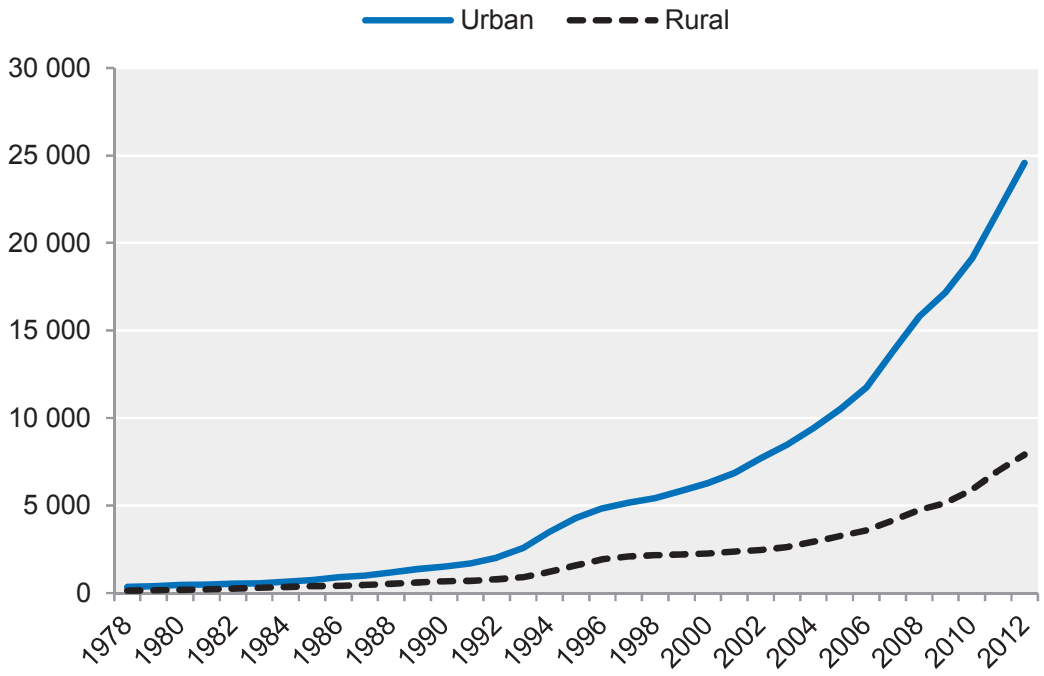
The vast income gap between urban and rural areas is also frequently cited as one of the factors contributing to China's observed inequality. On the official data, the per capita income of urban households in monetary terms in 2012 was about 3.1 times that of rural households (Figure 1.16).[7] The corresponding figure in 1978 was about 2.5 times higher. However, this has taken place against a backdrop of rapid growth in both urban and rural incomes and a dramatic increase in the proportion of the urban population. In any case, these official statistics are widely debated, not least owing to the difficulty of capturing migrants' earnings in the household surveys and the fact that the designation of different places as "urban" or "rural" often has more to do with administrative history than with the actual conditions of the place (see Chapter 2). Some places that are densely built up and reliant on urban economic activities are still classed as rural. Other factors that must be taken into account include the following:

- income subsidies (e.g. via housing) are not included, and since they are higher for urban households, the ratio might be underestimated;
- the cost of living is not taken into account, and since it is higher in urban areas, this would contribute to overestimates of the income gap; and
- the reclassification of rural areas to urban area status hinders meaningful comparison of urban-rural incomes from the official statistics over time.

A number of studies have sought to take account of these and other factors in order to arrive at more reliable estimates of the urban-rural gap (Brandt and Holz, 2006; Sicular, Ximing and Gustafsson, 2007; Gustafsson, Li and Sicular, 2008b; Benjamin, Brandt and Giles, 2008).

Figure 1.16. **Urban and rural income per capita**

1978-2012; nominal income, CNY

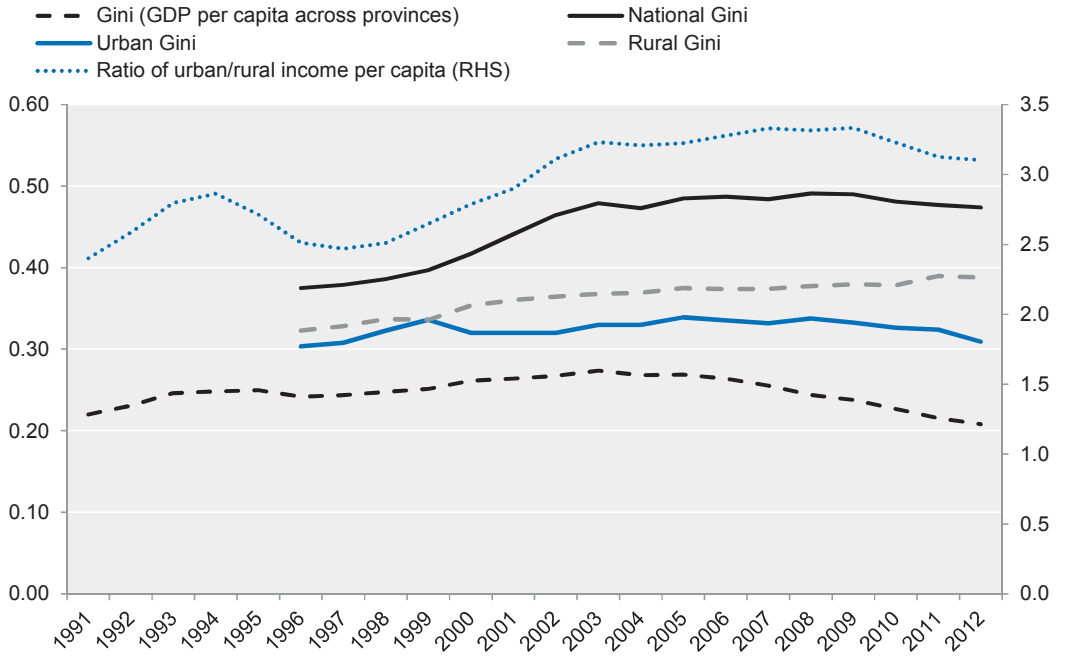


Note: Per capita disposable income for urban households as defined by NBS; per capita net income for rural households as defined by NBS.

Source: NBS (2013) *China Statistical Yearbook 2013,* China Statistics Press, Beijing.

These issues should be borne in mind when examining the evolution of the rural-urban income gap over time as based on the official statistics (Figure 1.17). The income gap fell sharply in the first years of reform, reflecting the fact that the rural sector was the primary target of the first wave of reforms and benefited greatly from them (Wang, Wan and Yang, 2014; Sutherland and Yuao, 2010). As the reforms deepened and the focus shifted towards the urban sector, the urban-rural income gap began to rise again, falling briefly in the mid-1990s. After widening rapidly for several years from 1997, it more or less stabilised at a rather high level in the mid-2000s before falling somewhat in 2009-12. This recent fall in the income gap coincides roughly with a modest decline in the interpersonal Gini coefficient that captures social inequality over the same period. Another contributing factor may be the stabilisation and even slight decline of interpersonal inequality in urban areas over the last five years; however, inequality in rural areas continues to rise.

Figure 1.17. **Time trends for various measures of inequality, 1991-2012**

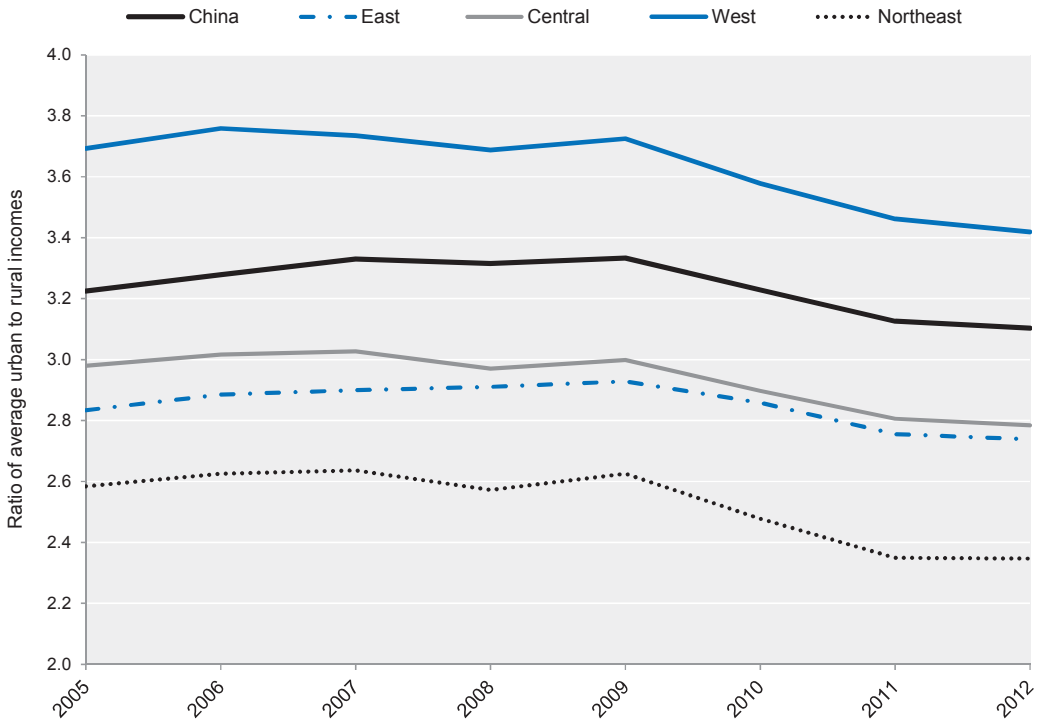


Source: Urban-rural ratio data come from NBS (2013) *China Statistical Yearbook 2013,* China Statistics Press, Beijing; National, Urban Gini and Rural Gini as well as Gini across China's provinces come from the OECD (2013), *OECD Economic Surveys: China 2013*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eco_surveys-chn-2013-en.

Income disparities between urban and rural areas are common in developed and developing countries, but there are some distinct features of the Chinese economy that might explain its large magnitude. The *hukou* system has clearly contributed to the large urban-rural income gaps in China by restricting mobility of Chinese workers between the rural and more productive urban areas (Wang, Wan and Yang, 2014). Free movement of labour would have acted as an equilibrating force between the rural areas that mainly engage in relatively less productive agricultural activities and the urban areas that specialise in manufacturing and service sectors with higher productivity.

The distinct geography of China and the easy access of the coastal areas to trade and export flows, as well as the state's industrial policy, have favoured faster industrialisation and urbanisation in eastern as compared to central and western China. This uneven process of industrialisation and urbanisation has led to higher growth in the east, and living standards in much of eastern China are comparable to those of some OECD members. This process appears also to have benefited the rural parts of the coastal areas, since the urban-rural income gap appears to be smaller in the east and northeast than the rest of China (Figure 1.18). There are substantial differences in the urban-rural income gap across the regions of China, although it has been falling for all of them. The high income-rural gap for western China has been reported elsewhere in the literature (Sicular, Ximing and Gustafsson, 2007; Gustafsson, Li and Sicular, 2008a), although the recent falling trend was not captured in the earlier period data of this literature. What is less clear is the extent to which this reflects the fact that many *de facto* urbanised places in the east are still classed as rural areas – a pattern that is less common in the west, where cities have not so rapidly spilled over their administrative borders. In the west, the complication arises from the fact that many areas that are yet to be urbanised are classed as urban for administrative and statistical purposes.

Figure 1.18. **Urban-rural income gap by geographical area, 2005-12**

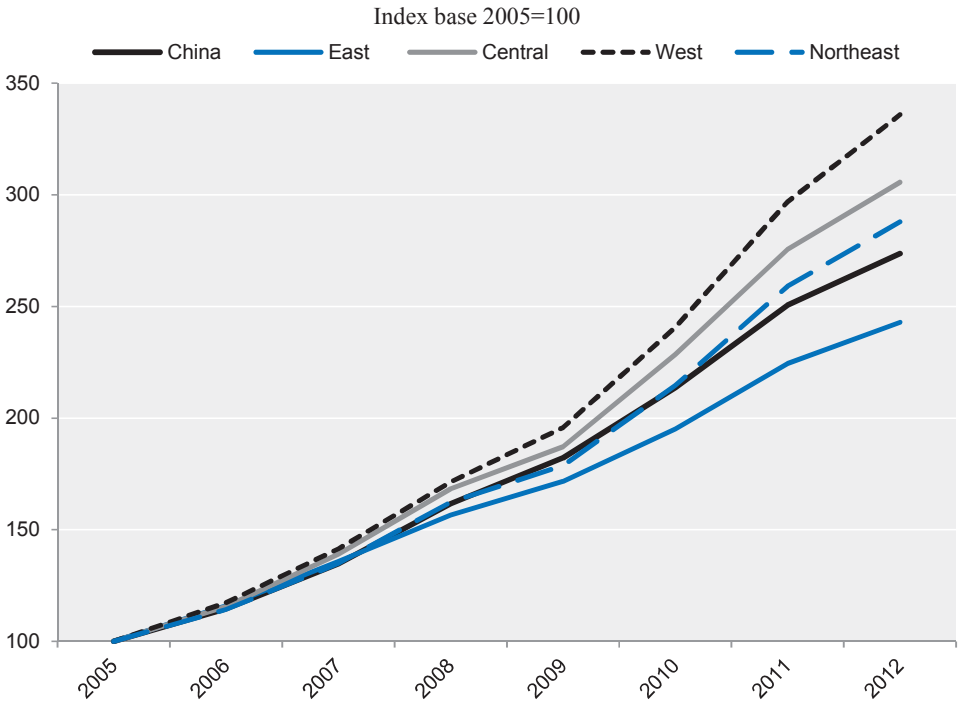


Source: NBS (2013) *China Statistical Yearbook 2013,* China Statistics Press, Beijing.

… but China is experiencing some convergence across regions and cities

While there has been much discussion of rising interpersonal inequality in China, less well known is the degree to which China has experienced some *reduction* in *interregional* disparities: the growth of GDP per capita since 1997 has been faster in the less developed parts of the country like the west and central China (Figure 1.19) and measures of interregional inequality have declined over the period. This convergence trend has also occurred at the province level, with the initial level of income explaining almost 40% of the growth in the 2000s (Figure 1.20). The analysis of FUAs suggests that this is occurring at city level, as well: on the whole, poorer FUAs grew faster in the latter part of the decade than did those that were richer at the start of the period (Figure 1.21). The data for the FUAs cover only a five-year period, but this declining inequality across cities is a useful reminder of the fact that forces of convergence and agglomeration are both at work at different scales. Researchers assert that behind this convergence pattern lies industrial relocation of manufacturing activity towards the central and eastern parts of the country (Houkai, Yeqiang and Mei, 2014). Eastern regions used to account for 53% of the total investment in fixed assets in 2000, but by the end of the decade, this share fell to 42%, with most of the gains going to the western and central region. Houkai, Yeqiang and Mei (2014) note that rising efficiency wages and land prices in eastern regions have narrowed the gap in return on investment between western and central regions. This factor, the increased production efficiency of central and western regions and the shift in Chinese foreign trade policy have all contributed to the shift of manufacturing towards the western and central regions.

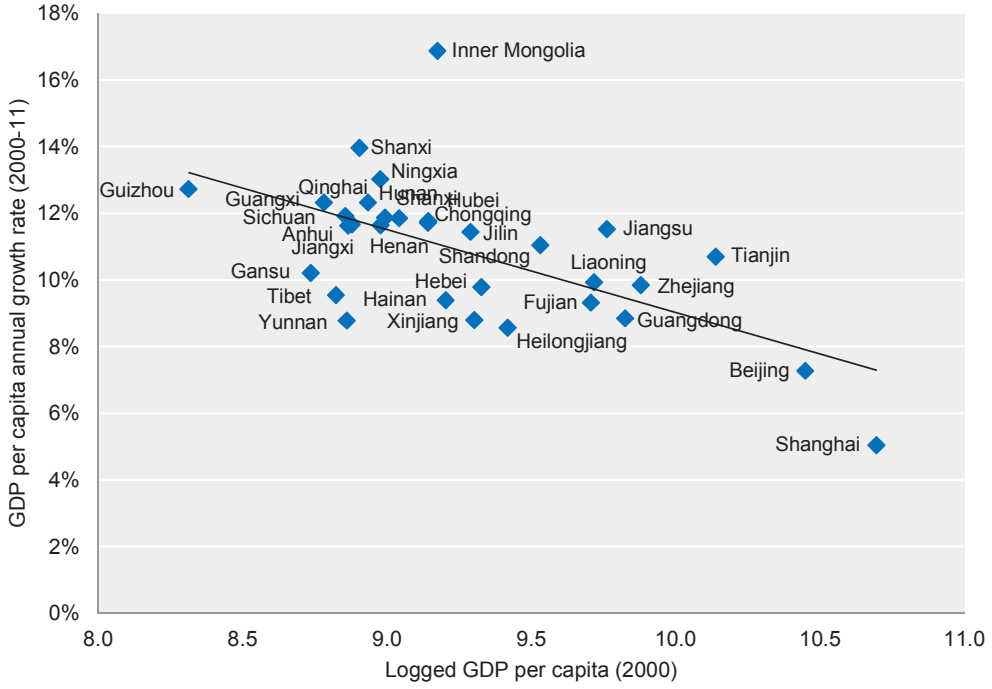
Figure 1.19. **GDP per capita growth rates by geographical area, 2005-12**



Source: NBS (2013) *China Statistical Yearbook 2013,* China Statistics Press, Beijing.

Figure 1.20. **Income growth and income levels of China's provinces**

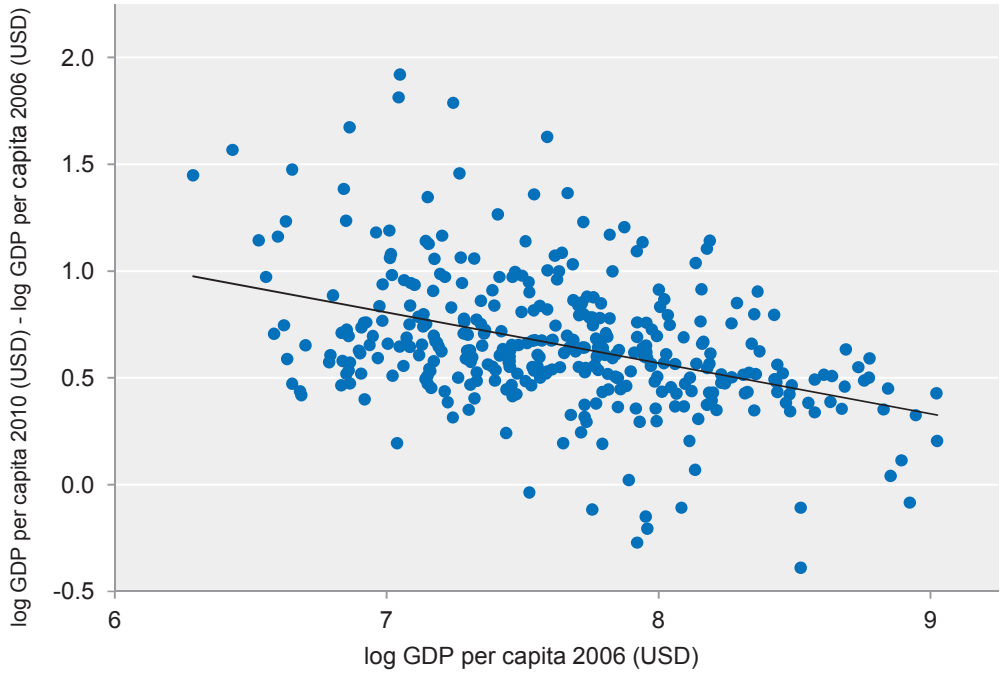
Relationship between GDP per capita growth and initial GDP per capita, 2000-11



Source: Authors' calculations based on NBS data.

Figure 1.21. **Income growth and income levels for Chinese FUAs**

log GDP per capita 2010 - log GDP per capita 2006 vs log GDP per capita 2006

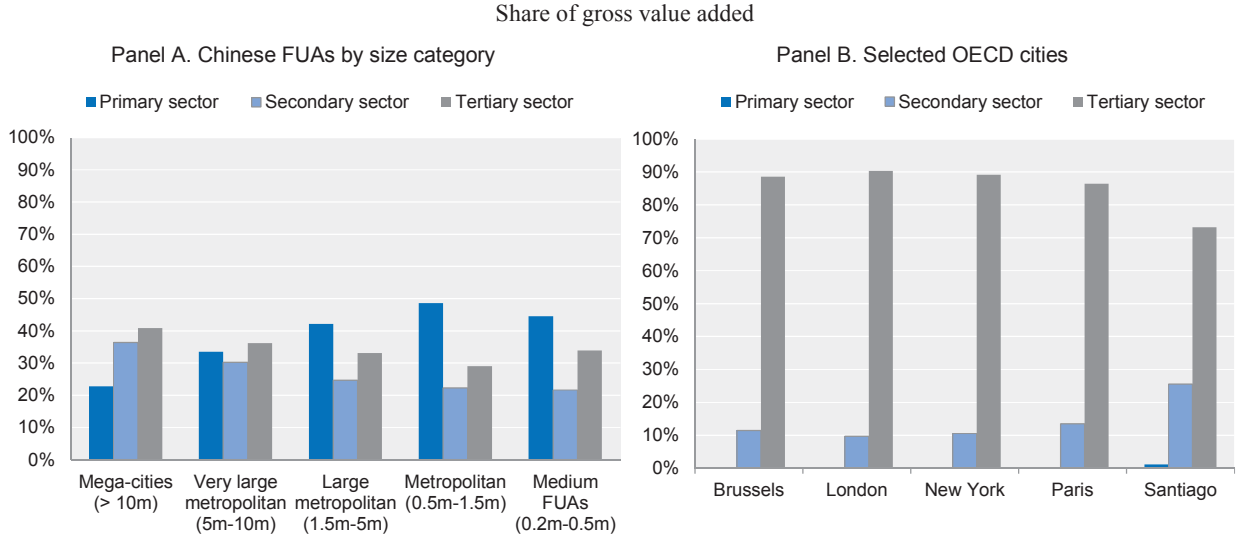


Source: Authors' calculations based on NBS data.

Chinese cities may be "underspecialised"

As noted above, there is some debate about the degree to which fiscal and financial policies privilege the most important cities, possibly leading to inefficient agglomeration patterns (Henderson, 2009). While Chinese cities do not seem to be larger than one might expect, at least in light of Zipf's law, policies that tend to distort land prices and credit allocation could affect firms' location choices. This matter is addressed in greater detail in Chapter 2, but it is important to note at this point that the FUA analysis reveals a surprising pattern of urban specialisation. In particular, China's largest FUAs report a far higher share of industry in value added than would be typical of very large and megacities elsewhere in the world – and a correspondingly low share of services (Figure 1.22). Even in the megacities with populations of 10 million or more, the services sector accounts for only about 41% of gross value added, versus 37% for industry (manufacturing accounts for almost 30% of GVA in such places). This contrasts with service-sector shares of at least 70% in major OECD metros.

Figure 1.22. **Comparison of the industrial composition of China's major cities and that of selected OECD cities**



Source: OECD calculations based on OECD (2013), "Metropolitan areas", *OECD Regional Statistics* (database), http://dx.doi.org/10.1787/data-00531-en (accessed on 20 October 2014) and NBS data.

Environment and quality of life

Chinese cities face major environmental challenges

Though urbanisation is often seen as generating environmental externalities, its impact on environmental performance is more complex than is often realised. First, many of the environmental problems associated with urbanisation are merely the result of rising production and consumption – they would be felt as Chinese citizens became better off, whether or not they lived in urban places. Secondly, concentration of population can lead to energy consumption savings, through shorter journeys and greater reliance on public transport, as well as more efficient provision of heating and power. However, such concentration may aggravate *local* environmental externalities, even if it somewhat mitigates more global impacts: for example, urbanisation might, if well managed, contribute to lower greenhouse gas emissions, while still reducing local air quality. As China continues to urbanise, its success in pursuing greener urban development will have an enormous impact on the health and well-being of its citizens, as well as on global environmental outcomes and, in particular, efforts to address climate change.

There is some evidence that in China, the income effect is stronger than the density effect (Zheng and Kahn 2013; Zheng et al., 2011). In recent decades, China's efforts to modernise its economy and offer higher living standards to its citizens have generated enormous environmental pressures. As China reaches higher levels of economic development, it has the opportunity to make use of cleaner technology and to combine economic growth with environmental sustainability. Growing numbers of urban residents, with higher incomes and better education, strongly prefer to live in greener cities, and the Chinese authorities are taking measures to accommodate these concerns. Unlike countries that took one or two centuries to industrialise, China has achieved the result in half a century, and it can now use the available technology to promote smart, green cities. In

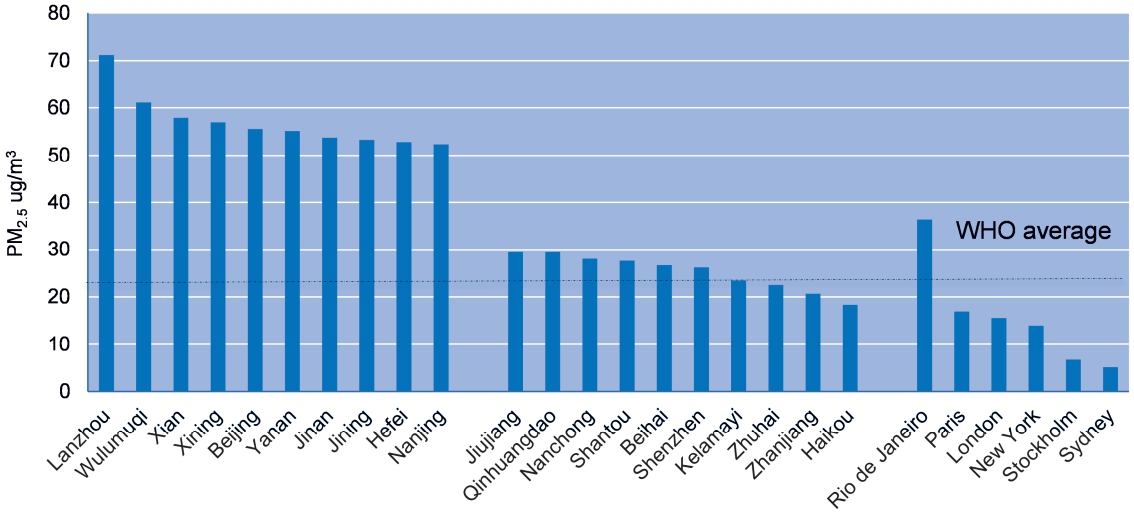
that respect, it can proceed faster down the sloping side of the "Environmental Kuznets Curve" (EKC).

The "EKC" is a hypothesised relationship between economic development and environmental performance that predicts an inverted U-curve, with environmental pressure increasing at the earlier stages of development and declining after a turning point. In fact, there is not one EKC but rather a family of curves: Van Alstine and Neumayer (2010) point to a series of studies highlighting differences in the EKC turning point for various pollutants in substantially similar conditions. Much depends not only on the level of income (richer people tend to be more willing to trade slower income growth for better environmental conditions) but also on the costs of abatement and the damage curves of the pollutants (how severe and how localised the environmental damage is). Although Chinese cities' environmental conditions have deteriorated remarkably in the last 50 years, recent progress on a number of indicators might suggest that China is in a position to reach the turning point in the EKC relatively early (Stern, 2004). Studies analysing the EKC in China find that cities from different regions are at different stages. Some coastal cities have already stepped into the decline stage of the inverted-U curve, whereas most central and western cities with dominant secondary industries are still rising up the curve (Wang, Du and Zhang, 2013; Zhao, Lan and Gan, 2014).

Outdoor air pollution is the major environmental challenge in Chinese cities. Among the 112 cities included in the WHO Ambient Air Pollution in Cities Database 2014, only 22 are below the world average on particulate matter smaller than 2.5 microns ($PM_{2.5}$)[8]. The high level of air pollution is caused by the inefficient use and burning of biomass and fossil fuels in transportation, housing, power production, waste disposal and industry (WHO, 2013). Haikou, a middle-tier prefecture-level city of 2 million situated on Hainan island in the south of mainland China, has the lowest $PM_{2.5}$ (18 μg/m3) among all the monitored Chinese cities (Fig.1.23). Haikou implemented an ambitious programme of environmental action in 1995, including environmentally friendly construction, industrial and other waste treatment, and the expansion of green spaces; since 2009, it has banned the use of petrol-fuelled motorcycles. However, its $PM_{2.5}$ levels are still much higher than those of cities like London, Paris or New York. The Jing-Jin-Ji urban mega-region, which consists of Beijing, Tianjin and part of Hebei province, is one of the country's major growth poles, as well as the most polluted urban cluster in China. Three cities in the area (Tangshan, Tianjin, Handan) are among the cities with the highest SO emissions in China (Figure 1.24), while Beijing ranks fifth in terms of $PM_{2.5}$.

Urban air pollution levels vary among regions (Figure 1.25). High levels of $PM_{2.5}$ and PM_{10} are concentrated in western and central areas. PM values in western cities such as Lanzhou, Wulumuqi, Xian and Xining are the highest in China, exceeding the WHO average almost twofold (Figures 1.23 and 1.24). Following the Chinese authorities' efforts to contain the "urban smog" in eastern cities in recent years, a large number of heavy industries, like coal combustion enterprises, have been relocated to the less developed western and central areas of China. As noted earlier, cities in these areas are experiencing rapid economic development and urbanisation with growing urban infrastructure under an extensive development pattern.

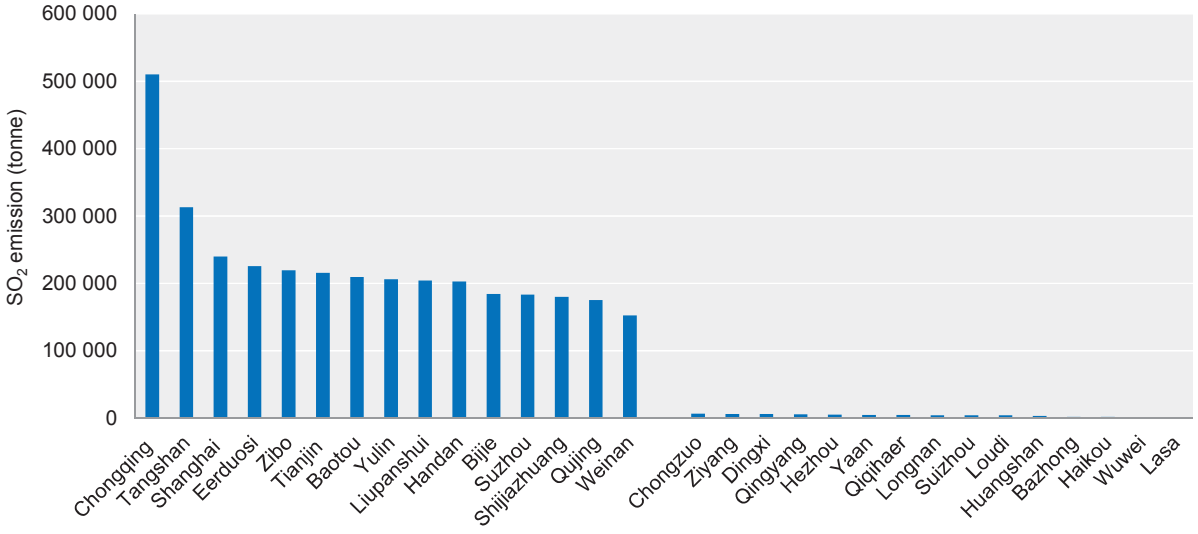
Figure 1.23. **$PM_{2.5}$ emissions of the 10 highest- and 10 lowest-producing Chinese cities and selected foreign cities, 2013**



Note: Out of the 112 cities that are included in the WHO dataset, only 22 have emissions below the WHO average. In the graph, the top 10 and bottom 10 cities are shown, along with selected international cities.

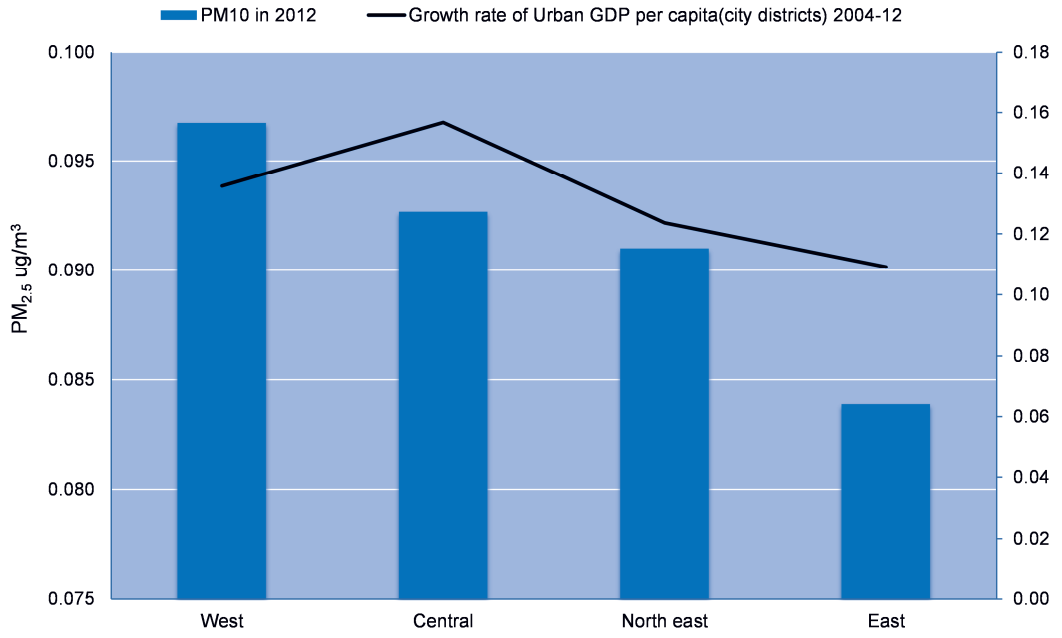
Source: WHO (2014), *Ambient (outdoor) air pollution in cities* (database), http://www.who.int/phe/health_topics/outdoorair/databases/cities/en/ (accessed January 2015).

Figure 1.24. **Top and bottom 15 cities in SO_2 emissions, 2012**



Source: Authors' calculations based on NBS data.

Figure 1.25. **PM_{10} and growth of GDP per capita in regions, 2012**



Source: WHO city PM database, 2014.

The poor air quality in China has increased the incidence of respiratory diseases in the urban population, particularly in infants and other vulnerable groups. The OECD has quantified the cost of air pollution from transport for OECD countries and China (OECD, 2014a). While for the OECD, this cost increased by approximately 10% during 2005-2010 and reached a total level of USD 1.7 trillion, for China, the cost increased by 90%, to reach USD 1.4 trillion. China's death toll due to air pollution rose by 5% over the period and is estimated at close to 1.3 million.[9] Whereas road transport accounts for about 50% of the cost of air pollution in the OECD area, this proportion is lower for China, where booming industrial activity is a major source of pollution (OECD, 2014a). This is the case despite the rapid increase in car ownership in China (Wu et al., 2012). However, as Chinese industry is likely to grow cleaner and motorisation to continue, this pattern could change substantially over coming decades. The rapid growth in motorisation in China is a concern for Chinese cities' future environmental conditions, as is the increasing congestion. By 2010, car ownership in many large and rich cities had already reached over 100 cars per 1 000 inhabitants, and the trend is likely to continue for the foreseeable future (OECD, 2013c). Public transport can mitigate the effects of urban expansion by reducing congestion and increasing accessibility to jobs and services: the development of cleaner vehicles, better public transport and new forms of urban planning will all have a role to play if China is to avoid a heavily car-dependent path (see Chapter 2). However, public transport investment has not managed to keep up with the rapid expansion of Chinese cities.

The forthcoming *OECD Transport Outlook* explores urban transport scenarios for China. Besides a baseline scenario, it presents two alternative scenarios for the China's authorities: one oriented to private transport and one to public transport. Although these two scenarios do not differ that much in terms of the mobility they offer, the results for CO_2 emissions and health impacts are many orders of magnitude apart (Box 1.5).

Box 1.5. Alternative transport scenarios and their impact on Chinese cities

The International Transport Forum (ITF) at the OECD constructed urban transport scenarios with the aim of testing the long-run impact that diverse urban transport policy packages could have on CO_2, pollution and health impacts, if they were adopted as a general strategy for China. The model adopts assumptions on load factors, fuel economy and CO_2 emission factors from the MoMo mobility model of the International Energy Agency (IEA). Emissions of local air pollutants and health impacts that would result from each scenario are calculated by the International Council for Clean Transportation (ICCT). Results presented here correspond to baseline technology and emission standard scenarios from the IEA and ICCT. More information on this work can be found in the *ITF Transport Outlook* 2015 edition.

Four types of variables of the urban context were identified as relevant to transport demand: land use, public transport, road infrastructure and fuel prices. The modelling work is based on analysis of data from the *China Statistical Yearbook* and complemented with extensive city data on public transport and road infrastructure provided by academic experts on the field. The difference in the evolution of variables between scenarios are adjusted to high and low regional variations found in the country.

Scenarios

1. Baseline: Assumes current trends will continue in the future for all variables. Two additional assumptions with respect to future evolution of car ownership restrictions: *i)* the seven cities[10] with a restriction on car ownership in 2010 are assumed to keep the policy in place for the next 40 years (with a constant number of licences issued yearly); *ii)* cities will impose such a restriction if the population reaches at least 2.5 million inhabitants and at least the ratio of cars to road area that the seven cities with car ownership restrictions had in 2010.[11]

2. Private transport-oriented: Applies policy trends that intensify the shift to private mode use; *high sprawl*, *low* expansion of *public transport* and *low fuel prices*; this scenario is combined with a scenario of rapid expansion of road infrastructure (*high roads*); no expansion of car ownership restriction policies is assumed; only cities that enforced restrictions on car ownership restriction by 2010 will maintain them until the end of the projected period.

3. Public transport-oriented: Assumes the alignment of policy trends that increase the role of public transport in urban mobility; *low sprawl*, *high public transport* expansion and *high fuel prices*; policy is modelled according to a scenario in which urban road infrastructure lags behind urban population growth (*low roads*); assumes a stronger willingness to reduce car ownership through expansion of stricter car ownership restrictions in China (assumptions on expansion of car ownership restrictions are the same as in the *Baseline* case, but the number of licences issued is adjusted to population growth, to compensate for the plateauing of population growth in Chinese cities).

Results

Long-term urban transport planning and decisions for the alignment of policies towards promoting private transport or public transport-oriented urbanisation will translate into significant differences in the modal composition of urban mobility. Under a scenario in which urban policies promote private transport use, and in particular car use, by permitting sprawl, letting public transport expansion lag behind population growth, heavily investing in urban road infrastructure expansion and maintaining low fuel prices, public transport accounts for only 9% of urban mobility in China by 2050.

By contrast, policies that contain sprawl, set higher fuel prices and prioritise expansion of public transport infrastructure over urban road infrastructure can significantly slow the shift from public to private mobility. The set of policies modelled in the urbanisation scenarios oriented to private transport increase mobility levels relative to baseline mobility. An important driver is the increase in travel per private vehicle as a result of low oil prices. Additional mobility is more carbon-intensive in each of the three cases and generates significantly higher CO_2 emissions than the respective baseline scenarios. Under this policy framework, CO_2 emissions related to urban transport in China grow 19% more than in the baseline scenario.

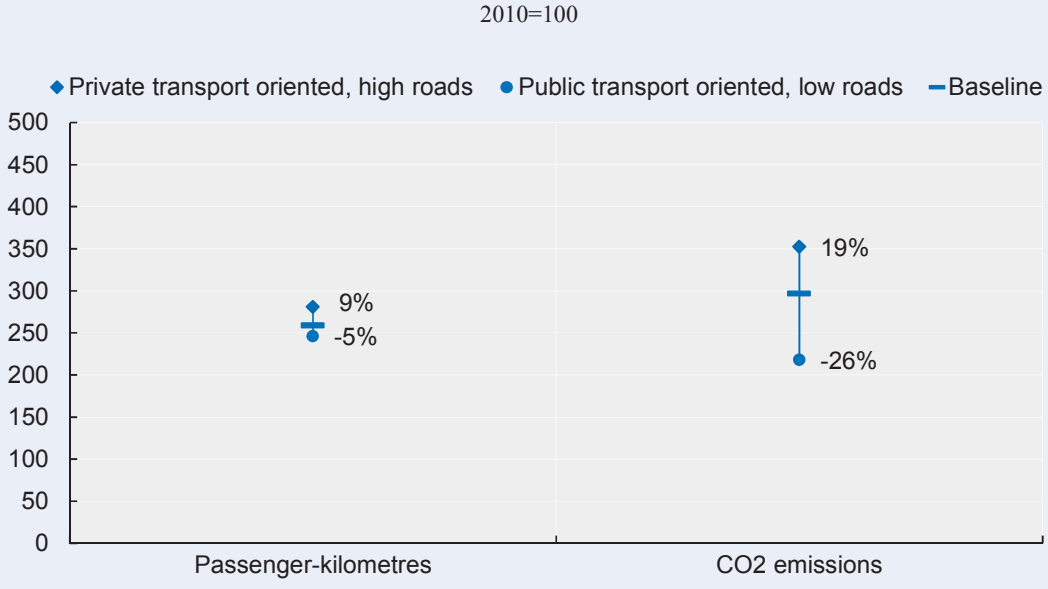
Box 1.5. **Alternative transport scenarios and their impact on Chinese cities** *(cont.)*

The shift to public transport-oriented urbanisation has certain mobility costs, as significant expansion of public transport, with major extensions of mass-transit systems, will have to be carried out before the public transport systems can absorb the mobility displaced by higher costs for private mobility. Mobility under the *public transport-oriented* scenario with *low road* expansion infrastructure and expansion of stringent car ownership restrictions would catch up with baseline levels towards the end of the period, with a gap of only around 5% of growth in passenger-kilometres. Overall, alignment of policies toward public transport-oriented urbanisation reduces the carbon intensity of urban mobility. This cuts transport related CO_2 emission growth by 26% (Figure 1.26).

In a baseline scenario, total emissions of NO_X and $PM_{2.5}$ decrease by 16% and 17% during the 2010-2050 period in Chinese cities. The main drivers for this reduction are the shift from two-wheeled vehicles to car travel, the high penetration of electric two-wheel vehicles (since two-wheel travel occupies a significant share of total motorised travel), and important reductions in NO_X and $PM_{2.5}$ bus emissions. Despite the lower overall levels of $PM_{2.5}$, increasing the exposure of the urban population to such concentrations by 2050 translates into a 300% increase in premature deaths compared to 2010.

Under baseline technological evolution of the fleet and emission standard adoption, the private transport-oriented urbanisation scenarios, without expanding car ownership restrictions in Chinese cities, would also result in higher-than- baseline growth in pollution and health-related impacts. Alternatively, long-term policy alignment towards public transport-oriented urbanisation and the expansion of stringent car ownership restrictions in middle and large cities could help further reduce growth of NOX and $PM_{2.5}$ concentrations in urban centres, and therefore reduce growth in associated premature mortality.

Figure 1.26. **Growth in mobility and CO_2 emissions in alternative scenarios for China's cities**



Source: OECD/ITF (2015), *ITF Transport Outlook 2015*, OECD Publishing, Paris/ITF, Paris, http://dx.doi.org/10.1787/9789282107782-en.

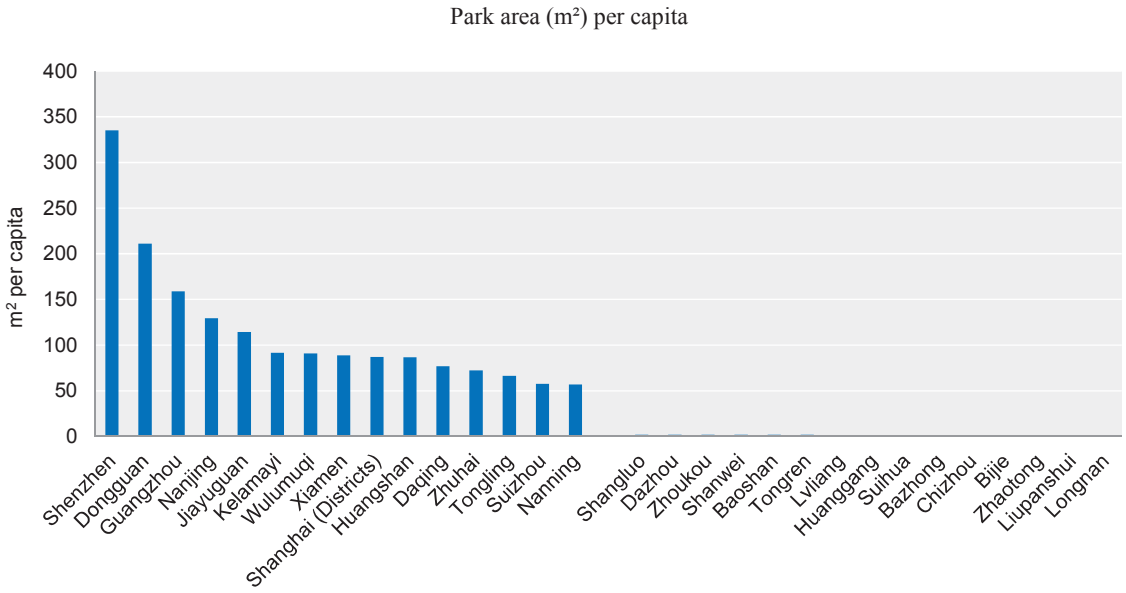
Given urban China's bleak performance in terms of air pollution, it is no surprise that life satisfaction has not improved much in China over the recent decades. Easterlin et al. (2012) draw attention to China's inadequate progress in life satisfaction estimates during a period of rapid economic growth and rising living standards.

Nevertheless, there is some scope for optimism, given recent policy changes. During the 12th Five-Year Plan (2011-15), low carbon development has followed a more localised approach. Under the combined pressure of urbanisation and energy-intensity targets set the by central governments, many cities have led initiatives exploring their own low-carbon development strategies (Climate Group, 2010). While in the past, growth criteria predominated heavily in assessments of local leaders' performance for the purpose of determining promotions, in the last decade, environmental sustainability and social stability criteria have also been included. Explicit targets are set to reduce COD (Chemical Oxygen Demand) and SO_2 pollutants and decrease energy consumption per unit of GDP. Empirical work by Zheng et al. (2013) suggests that the chances of a local official being promoted depend to some extent on the environmental performance of the city. They also find that public concern about environmental issues is positively associated with income and education, Internet usage and environmental degradation. They conclude that the concerns both of the central government and of residents on environmental issues will lead to improvement in the environmental quality of Chinese cities and to an earlier turning point in the EKC.

Administrative jurisdictions that do not correspond to functional criteria – economic or geographic – might offset some environmental policy efforts. Zheng and Kahn (2013) review evidence that pollution sources are often located across administrative boundaries. Careful planning and co-ordination across administrative boundaries is needed to internalise any external effects of economic activities and policies. Alternative scales need to be used for policy analysis and implementation, such as functional economic city definitions, like the FUAs presented earlier in this chapter, as well as geographic entities, like river basins.

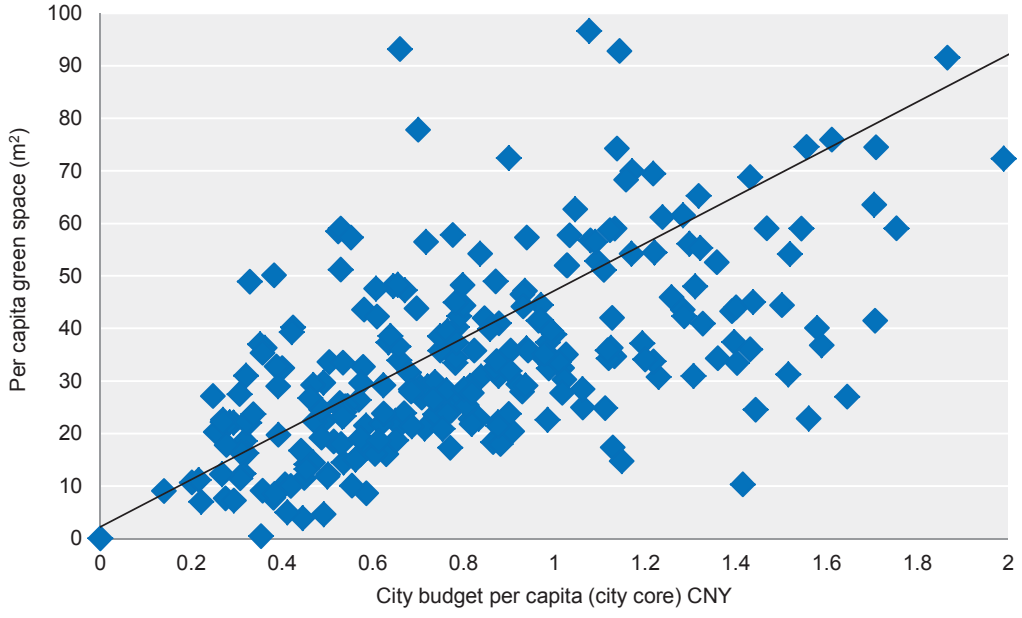
Large disparities are observed in access to urban green space for Chinese urban residents. Among the 235 prefecture-level cities (PLCs), urban green space per capita ranges from 0.09 square metres (Longnan City in Gangsu Province) to 335.13 square metres (Shenzhen city in Guangdong province). Provincial capital cities and major cities such as Shenzhen, Guangzhou, Nanjing and Shanghai rank high in green space accessibility. Significantly, the three cities with the largest quantity of green space per inhabitant are all in Guangdong province: Shenzhen, Donguan and Guangzhou (Figure 1.27). The availability of urban green space is positively correlated with both local government expenditure per capita and per capita GDP (Figures 1.28 and 1.29). In this respect, China is typical of more developed economies: as cities develop, air quality tends to deteriorate until higher incomes and deteriorating air quality prompt a shift in focus towards mitigating local environmental externalities, particularly air pollution (Zheng and Kahn, 2013). The focus is typically on local pollutants in the first instance; concern about global challenges tends to take longer to become a central focus of policy.

Figure 1.27. **Top and bottom 15 PLCs in access to green area per capita**



Source: Authors' calculations based on NBS data.

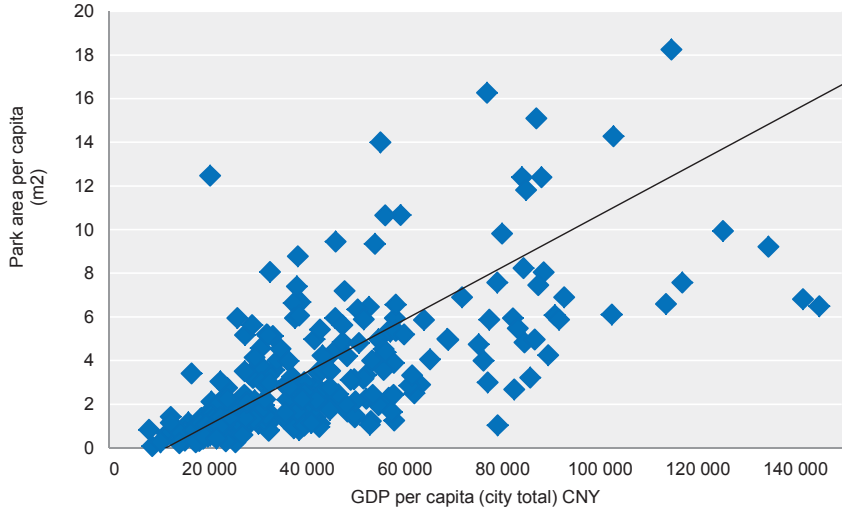
Figure 1.28. **Correlation between green space and city budget per capita in city core**



Note: The fitted line is: $y = 44.97x + 2.2071$, $R^2 = 0.3185$.

Source: Authors' calculations based on NBS data.

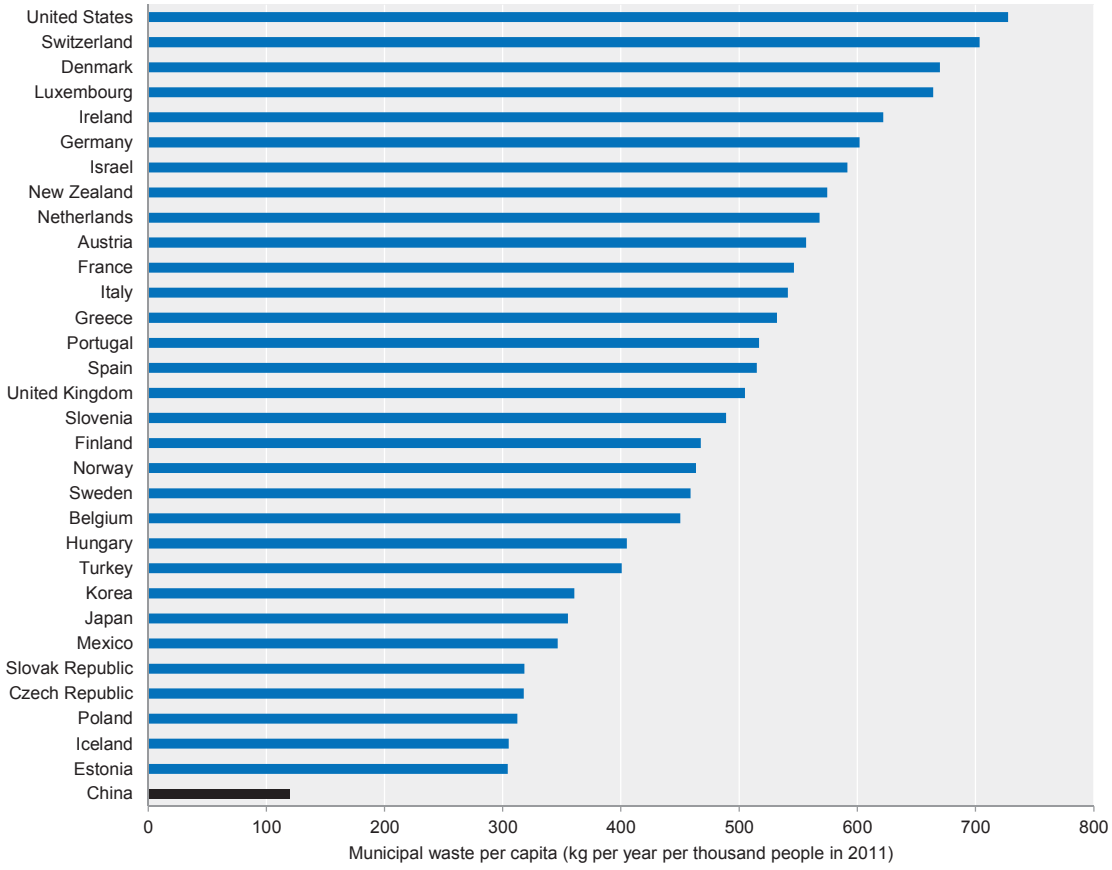
Figure 1.29. **Green area per capita and GDP per capita**



Note: The fitted line is: y = 0.0001x - 1.3853, R^2 = 0.3063.

Source: Authors' calculations based on NBS data.

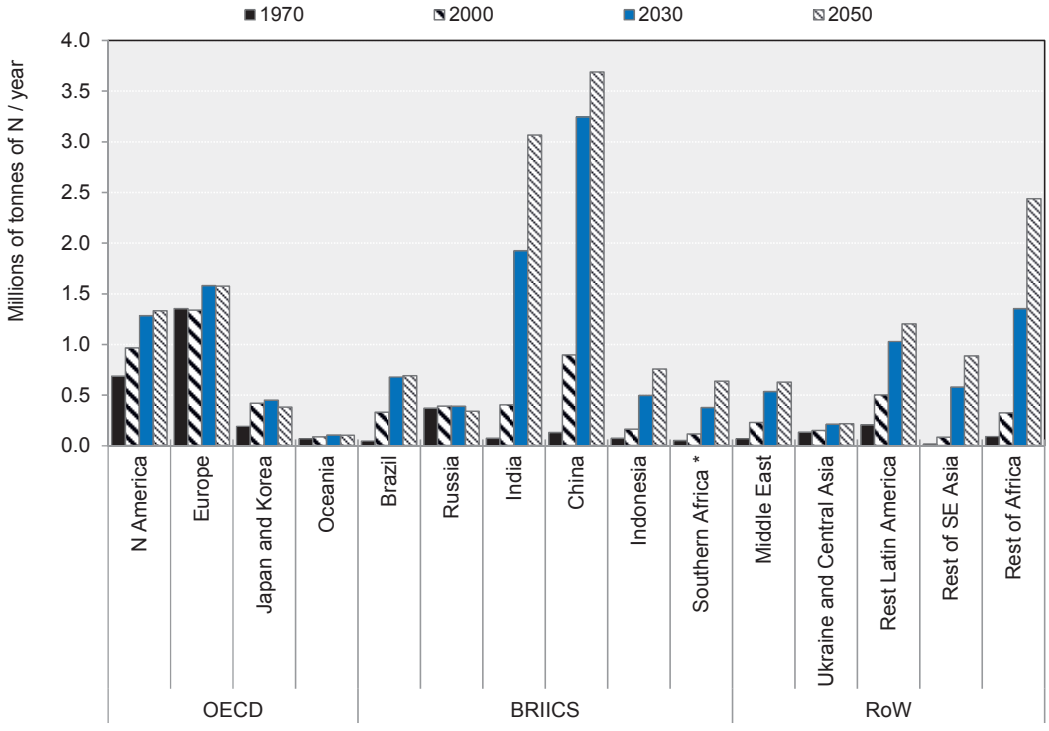
Figure 1.30. **Municipal waste in OECD countries and China, 2011**



Source: OECD (2014), *OECD Environment Statistics*, (database), http://dx.doi.org/10.1787/env-data-enhttp://dx.doi.org/10.1787/data-00285-en (accessed 8 September 2014); OECD (2014), *OECD Demography and Population* (database), http://dx.doi.org/10.1787/5f958f71-en (accessed 15 November 2014); NBS (2012), *China Environment Yearbook 2011,* China Statistics Press, Beijing.

China appears to have a low rate of municipal waste generation per capita compared to the OECD countries. In 2011, China generated 119.8 kilogrammes per capita of municipal waste, several times lower than the figures for OECD countries such as the United States (727.46 kg/per capita), Switzerland (303.32 kg/per capita) or Denmark (669.95 kg/per capita) (see Figure 1.30). In part, this very low figure may be an underestimate, reflecting the fact that rural areas in China do not have specific solid-waste treatment facilities, so the estimate of waste generated is almost certainly on the low side. Per capita municipal waste is expected to rise further as urban residents' disposable income keeps increasing, and thus their consumption preferences resemble more and more those of the advanced economies of the OECD countries. Indeed, increasing levels of urbanisation present significant water challenges. The *OECD Environmental Outlook to 2050* (2012) shows a shifting trend from the OECD countries towards China and India with regard to the nitrogen released untreated from sewerage to the environment. Partly this is due to developing urban sewerage faster than (tertiary) wastewater treatment (Figure 1.31). Water abstraction by industry is also projected to increase, as well as water pollution that is exacerbated by water scarcity, with over 40% of inland rivers that make up China's seven main river systems deemed to be unsuitable for human use. Although wastewater discharges from industry fell during 2005-10, water pollution from urban residents increased. GDP per capita growth is associated with a rise in domestic wastewater discharges (e.g. Shanghai's domestic wastewater discharges per capita (92t) were more than three times higher than Chongqing's (29t) for 2010) (OECD, 2013c).

Figure 1.31. **Nitrogen from untreated urban wastewater in the world**



Source: OECD (2013), *Water Security for Better Lives*, OECD Studies on Water, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264202405-en.

Conclusion

China is undergoing an unprecedented period of urbanisation, with the growth rate of its urban population as high as 4.2% per annum. Its cities have been historically defined in administrative terms and thus make it difficult to draw meaningful comparisons with other cities in China or abroad. A functional economic approach is probably a preferable method for examining cities and apply policies, as it captures urban labour markets in a more meaningful way. A new definition of functional urban areas (FUAs) for China is presented that approximates the original OECD/EU definition. The urban and economic trends presented show the dynamism and the potential of Chinese cities of all sizes. China has high levels of interpersonal and interregional inequality, although in the recent years, this trend has been declining. Particularly important is the urban-rural gap; the official figures show urban incomes to be three times higher than rural. Such high rates of urban transformation in China entail increased environmental pressures that result in poor air quality, congestion, as well as waste and water challenges. Appropriate planning at the right scale, effective policy action and better co-ordination across levels of government can ensure a smart, sustainable and inclusive path for China's urbanisation. These issues are the centre of attention in the chapters that follow.

Notes

1. See Zhang and Cai, 2012 for an overview of the most important changes.
2. For a more extensive discussion of the *hukou* system and how it has affected China's urbanisation processes, see Chapter 2.
3. As this Review was being completed, the Chinese authorities announced changes to the way residency (but not *hukou* status) would be calculated for this floating population: in future, they will be counted as permanent urban residents, regardless of *hukou*, after six months of living in an urban area. This will affect assessments of city size based on both administrative definitions and the OECD method for calculating functional urban areas.
4. The analysis does not include the small FUAs of population between 50 000 and 200 000 inhabitants, since data limitations would not allow comprehensive coverage of this category for China.
5. Matters are further complicated by the fact that the definition for an area to be classified as "urban" has shifted over time, and reflects both the changing nature of China's population and policy priorities.
6. The FUAs with populations above 1.5 million have a total of 643 million inhabitants, although the statutory cities include 312 million. The functional definition yields a figure 330 million inhabitants higher, calculated by reclassifying counties and districts that used to be part of smaller statutory cities. In total, 190 million inhabitants are reclassified from statutory cities of 0.5 million-1.5 million and 30 million from statutory cities of size 0.2 million-0.5 million. A final 110 million come mostly from the reclassification of counties that are not classified as statutory cities (and about 4 million from reclassification of counties that were part of statutory cities with a population of less than 0.2 million).
7. Preliminary estimates for 2014, released in January 2015, put the gap at just 2.75 times, owing to faster growth in rural incomes; however, the speed of convergence that this implies when compared to the data for 2012 is hardly credible and suggests that some revision of estimates for past years will be forthcoming.
8. This average corresponds to the mean value of $PM_{2.5}$ for the 1 600 cities included in the WHO $PM_{2.5}$ database 2014.
9. The *OECD Environmental Outlook to 2050* (OECD, 2012) projected that the number of premature deaths from exposure to particulate matter would more than double, reaching 3.6 million a year globally, with most deaths occurring in China and India.
10. Beijing, Guangzhou, Guiyang, Hangzhou, Shanghai, Shijiazhuang and Tianjin.
11. The number of licences issued each year is determined by applying a constant coefficient relative to the car-road area ratio, extracted from econometric analysis of permits and congestion in a sample of seven cities.

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Annex 1.A1. Constructing China's functional urban areas

Defining functional urban areas: The OECD method

This Review has attempted to address the issues arising as a result of the gap between administrative definitions of urban areas and actual settlement/activity patterns by adapting the OECD method for defining "functional urban areas" (FUAs) to China. This method, constructed in collaboration with the European Commission's Directorate-General for Regional and Urban Policy, is set out in detail in OECD (2012). The central elements of the three-step approach can be summarised as follows:

Defining urban cores through gridded population data. Urban cores are constituted by aggregations of contiguous municipalities that have more than 50% of their population living in high-density clusters. The latter are made of contiguous 1 square kilometre grid cells with a population density of at least 1 500 inhabitants per square kilometre (1 000 inhabitants per square kilometre in the US and Canada) and a total population of at least 50 000 people (100 000 in Japan, Korea, Mexico).

Connecting noncontiguous cores belonging to the same functional area on the basis of commuting data. Two urban cores are considered integrated, and thus part of the same metropolitan system, if more than 15% of the working population of any of the cores commutes to work in the other core (taking polycentricity into account).

Identifying the urban hinterlands. The "worker catchment area" of the urban labour markets, outside the cores is composed of those municipalities which send to the cores 15% or more of their employed residents. Municipalities surrounded by a single functional area are included and non-contiguous municipalities are dropped.

This common FUA definition allows for meaningful comparisons within and across countries (comparing like with like) and also makes it possible to identify levels of mono- or polycentricity of FUAs, as well as the extent of concentration.

The OECD classes FUAs according to size, proposing four categories:

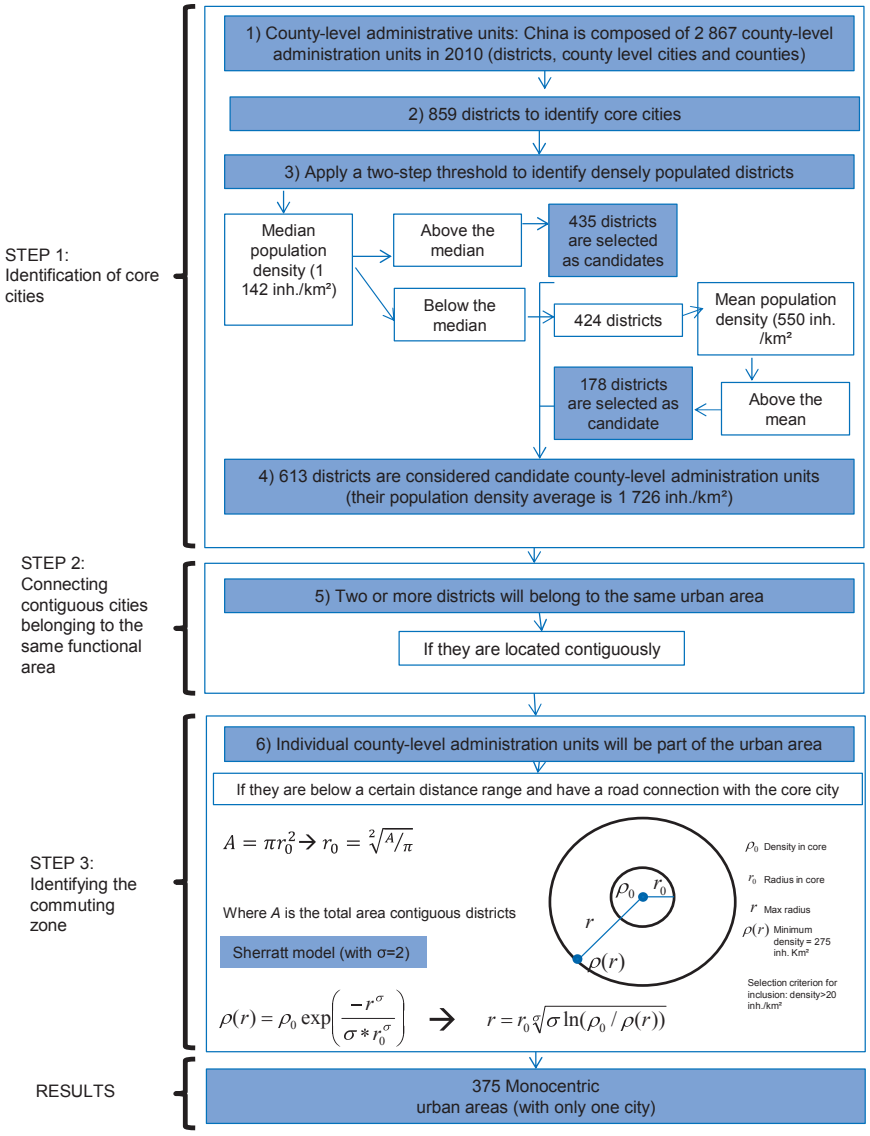
- small urban areas, with a population between 50 000 and 200 000 people;
- medium-sized urban areas, with a population between 200 000 and 500 000;
- metropolitan areas, with a population between 500 000 and 1.5 million; and
- large metropolitan areas, with a population of 1.5 million or more.

OECD (2012) draws attention to the obstacles to applying this method to China, above all the lack of commuting data for the country, and explores ways of overcoming this problem. The adapted method used for the present Review is described below.

Adapting the OECD method to China

The smallest spatial entity for which information is available is the county or district, which is used as the geographical building block to construct urban cores and hinterlands. An approach that is conceptually similar to the OECD method is followed, aggregating districts/counties to urban cores if they have a density above 550 inhabitants/km^2 and are contiguous. For the identification of the hinterland, the rate with which density declines (*density gradient*) as the distance from the urban core increases is used as a proxy to estimate a meaningful commuting radius around the urban core. Information on proximity to railways or highways, as well as on geomorphological characteristics (lakes, mountains, coast, etc.), is used to adjust the estimated commuting zones and decide whether or not to include a neighbouring county in the hinterland of an urban core.

Figure 1.A1.1. **Estimating functional urban areas in China**



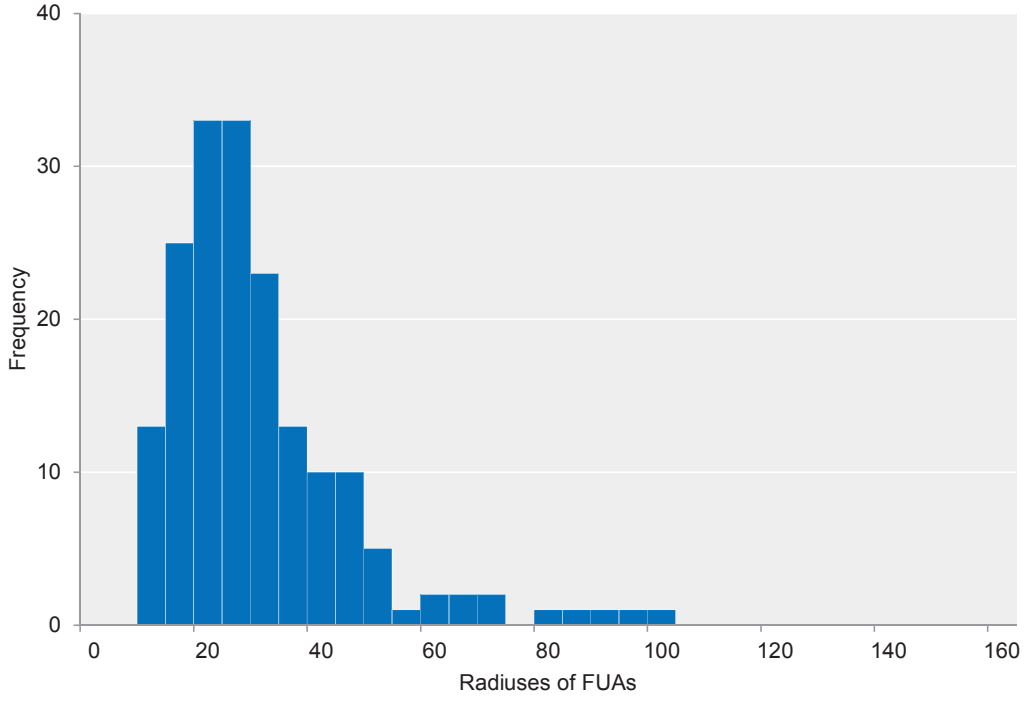
Source: Authors' calculations based on NBS data and Institute of Population and Labour Economics.

This approach has the great advantage of presenting Chinese cities as functional economies rather than administrative units, and, as will be seen, it presents a "new" picture of urban China. Nevertheless, its limitations should be borne in mind when interpreting the results. The method is only an approximation of the labour catchment area, as it is not based on actual commuting patterns. Furthermore, the geographical building block for the construction of the FUAs (the county/district) can be coarse for this exercise, and its size varies substantially. This is less of an issue for the districts, since they are quite dense and cover mostly urban areas; it can be more of an issue for the counties, since some of them are large and uneven in their interior, including both rural and urban areas.

Estimating the commuting radiuses

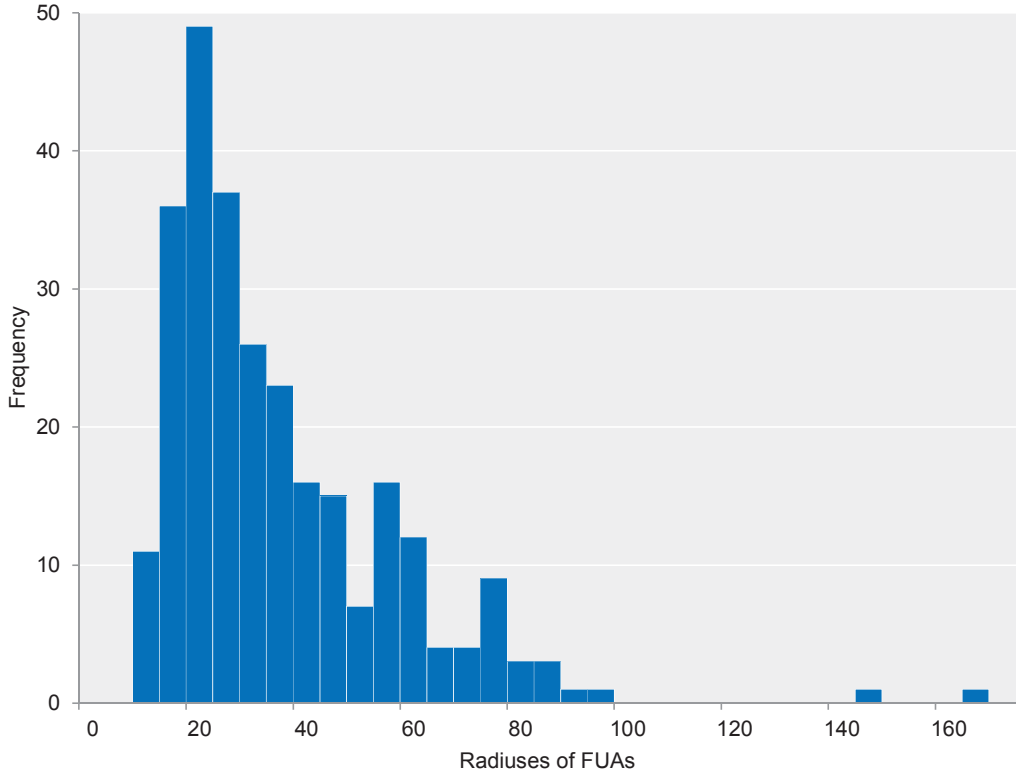
Although a different method has been applied for China in order to approximate the commuting zone of each FUA (due to the lack of commuting data), the commuting radiuses for Chinese and OECD FUAs exhibit quite similar distributions (OECD, 2013d). The distributions are both positively skewed, with the median for China being 26 kilometres and the average 30 kilometres, while for OECD is 29 kilometres and 35 kilometres respectively.

Figure 1.A1.2. **Distribution of radiuses of FUAs for China, 2010**



Source: Authors' calculations based on NBS data.

Figure 1.A1.3. **Distribution of radiuses of OECD FUAs, 2010**



Note: A proxy of the radius for each FUA has been calculated by estimating the radius of a circular area similar to the total FUA area. By using the formula (Total FUA Area)= $\pi * r^2$, an estimate of the radius r can be calculated.

Source: Authors' calculations based on data from the OECD (2013), "Metropolitan areas", *OECD Regional Statistics* (database), http://dx.doi.org/10.1787/data-00531-en (accessed on 20 October 2014).

Researchers used different models in their effort to mathematically capture the urban density gradient: negative exponential (Clark, 1951), normal (Sherratt, 1960), inverse power (Smeed, 1963), gamma (Aynvarg, 1969), quadratic negative exponential (Newling, 1969). A large empirical literature exists testing the models against data for various cities, in order to see which gives the best fit (see reviews from Zielinski, 1979, 1980; Smith, 1997). The same empirical literature also aims to identify the city-specific parameters used in the model. For example, the simple negative exponential Clark model may be expressed as follows:

$D(r) = A \cdot e^{-\lambda \cdot r}$ where D(r) is the density at distance r from the city centre.

There are two parameters to be estimated A and λ. The case is simple for A, as it is just the density at the city centre; *i.e.* for $r=0$, we get $A=D(0)$. However, the parameter λ needs to be estimated for each city (or country), and this mainly empirical exercise has been going since Clark's original contribution in 1961.

The theoretical interpretation of the parameter λ becomes more apparent if one takes the first derivative. Following Batty and Kim (1992), this yields:

$$D(r) = D(0) \cdot e^{-\lambda * r}$$

$$\frac{dD(r)}{dr} = -\lambda \cdot D(0) \cdot e^{-\lambda * r} = -\lambda \cdot D(r)$$

$$\frac{dD(r)}{D(r)} = -\lambda \cdot dr$$

Therefore, λ denotes the urban density gradient and represents the percentage change in population density for a marginal increase in the radius, at radius *r* (i.e. from *r* to *r*+*dr*). Empirically, it has been suggested that larger cities have smaller λ, as the density falls with a slower pace compared to the smaller cities (Ishikawa, 1980). Also, the more decentralised and suburbanised a city is, the lower would be λ (Holden and Parr, 2013).

Investigating the urban density gradient for Chinese cities and experimenting with various alternatives, it appeared that a suitable λ that fits the data well is one that follows a Gaussian distribution as proposed by Sherratt (1960), where the radius of the urban core is explicitly factored in (as in Chen, 2010). The more general Clark model can be transformed to the fitted Sherratt model by applying: $\lambda=1/(2*r_0^{\sigma})$, where $\sigma=2$. This specification has the advantage of fitting with the previously mentioned stylised facts of Ishikawa (1980) and Holden and Parr (2013).

The result is the following:

Clark model:

$$D(r) = D(0) \cdot e^{-\lambda * r^{\sigma}}$$

Sherratt model:

$$D(r) = D(0) \cdot e^{-\frac{r^{\sigma}}{\sigma * r_0^{\sigma}}}$$

In order to find the radius *r* that denotes the limit of the hinterland, we solve for r and replace D(r) with a chosen density threshold for the hinterland. Following experimentation, this has been chosen to be 275, half of the density threshold for the urban core, which was 550, as a best approximation to the data (D_{min}=275).

$$r = \sqrt[\sigma]{\frac{1}{\lambda} \ln\left(\frac{D_0}{D_{\min}}\right)}$$

Chapter 2

Managing urbanisation in China: Migration, land and planning

This chapter looks at the major elements of Chinese urbanisation policies. It begins with an exploration of migrant integration, looking at current institutions and policies as they affect both economic efficiency and social equity, and proposing steps to facilitate smoother absorption of rural migrants in Chinese cities. This is followed by an examination of land policy, which considers the causes and consequences of the segmentation of land markets between urban and rural sectors, as well as a possible pathway towards unification of the land market. A major section focuses on the way Chinese cities are built, exploring urban planning and public transport from the perspectives of economic efficiency, social equity and environmental sustainability. Overall, the chapter emphasises the links between these three domains and it explores the potential benefits of addressing them in tandem.

Introduction

Cities are largely about people, land and flows. Urbanisation itself is to a great extent defined in terms of the density of settlement and the shift of economic activity away from agriculture – two of the most fundamental dimensions of the relationship between human beings and the land they occupy. Flows, in turn, are critical, because the benefits of urbanisation – and the environmental and other costs it imposes – depend to a great extent on the organisation of flows of people, goods and resources in the dense environment of the city. Ensuring the efficiency of these flows is a major challenge, arising precisely from the density of the urban environment. While the density of opportunities for contact and exchange creates tremendous potential for the employment of diverse talents and great fertility for innovation, the actions of households and firms typically have larger positive or negative spillover effects in cities than in less dense places. That is why cities require so much planning, even in societies where economic activity is driven mainly by the market.

This chapter thus looks at the major elements of urbanisation and how they relate to one another. It presents first a brief overview of China's urbanisation model, which underscores the need for change. Then it looks at people – in particular, at the challenge of managing the historically unprecedented wave of rural-urban migration that China continues to experience. The discussion then turns to land, with a focus on land conversion practices and their impact on both urban and rural China. Finally, it turns to the question of urban planning and transport, looking at the way flows in Chinese cities are organised. Its overriding messages are, first, that a wide range of policy changes are needed to adapt to the current phase of Chinese urbanisation and, secondly, that these changes are both coherent with one another and well aligned with the Chinese authorities' own agenda, not just for cities but for economic growth and development overall. As will be seen, the authorities in China are increasingly focused on developing an integrated approach to urban development that pursues urban sustainability in all its dimensions – economic, environmental and social.[1]

Towards a new model of urbanisation

Urbanisation and economic development have been closely connected since the dawn of the industrial age. Over a period of several millennia, large cities formed – and sometimes disappeared – in various parts of the globe without triggering the kind of productivity take-off that began in the United Kingdom in the 18th century and spread across much of the globe in the nineteenth and twentieth. Since then, urbanisation and development have gone hand in hand in much of the globe. However, as Chapter 1 makes clear, urbanisation and development do not always go hand in hand: countries do not grow rich without urbanising, but they can urbanise without growing rich (Figure 1.11 in Chapter 1). So far, China's development has indeed benefited greatly from the urbanisation process: there is strong evidence that Chinese cities generate significant agglomeration economies – larger, indeed, than most economists find in developed countries' cities (Combes, Démurger and Li, 2013). Urbanisation has not merely accompanied growth but helped to sustain it. In many ways, China is following in the footsteps of successful urbanisers: urbanisation, industrialisation and rapid productivity growth have gone together since the period of reforms and opening up began at the end of the 1970s. This contrasts with the experience of some other late-urbanising economies in

South Asia and Africa, where the emergence of very large conurbations has not been associated with industrialisation or strong, sustained productivity growth.

Yet the success of China's urbanisation process over recent decades has come at a price, and it is by no means certain to continue. Chinese policy makers are increasingly aware of the need for a new approach to urbanisation to match the broader shift in the country's growth model towards a greater reliance on domestic consumption, in place of the previous focus on investment and external demand. Growth and urbanisation over the last few decades have both been underpinned by four factors: cheap labour, cheap land, the under-pricing of environmental externalities and robust export demand (Tie, 2013). These are not a basis for sustained – or sustainable – growth in future:

- The era of cheap labour is drawing rapidly to a close. While large-scale rural-urban migration is projected to continue for some time, China's working-age population will soon peak and then begin to decline rapidly. Some argue that this decline has already begun and, indeed, preliminary official data show that the working-age population fell by 0.4% in 2014.2 This exceptionally rapid demographic transition, along with evidence of rapidly rising wages for low-skilled workers and episodic labour shortages in some places, suggests that China could move very rapidly from an economy characterised by an abundance of low-cost labour to one in which labour supply is becoming a constraint on growth (Fang and Wang, 2010; Das and N'Diaye, 2013, Du, 2014). An analysis of input-output tables for 2007-10 conducted by the Development Reform Council found that labour-intensive activities already accounted for a declining share of both output and exports.
- As will be seen in this chapter, the under-pricing of land has led to over-investment in industry, distorted and inefficient land-use patterns and environmentally problematic spatial expansion of cities. Land is now increasingly seen as a constraint on the growth of some major cities, especially in the south and east of the country, and better land use will be a sine qua non of successful urbanisation in the decades to come. Land reform is thus among of the government's top reform priorities.
- The environmental pressures associated with urbanisation are increasing. In 2013, the authorities estimated that 58% of Chinese cities had PM2.5 concentrations five times the WHO standard, though PM2.5 levels were falling in many places. Fresh water resources per capita are around one-fourth of the world average, and 42% of the water in the seven biggest river systems is not potable. Increasingly, environmental quality is a source of social discontent, as the impact of pollution is felt directly by the population in terms of health and quality of life (Miller, 2013). The costs to the economy are substantial even in the very short term – as, for example, when high air pollution leads to the temporary closure of motorways. OECD (2011b) estimates premature deaths owing to PM10 concentrations in China at over 350 000 per year and raises the prospect that, on current trends, this figure could exceed 1.2 million by 2030.
- Although the developed world's recovery from the shock of the global crisis continues, few now anticipate that external demand will continue to grow strongly enough to drive Chinese growth as rapidly as in the past (OECD, 2013a; Tie, 2013). More importantly, even a stronger recovery of global demand would not change things very much, since past growth depended on rapid increases in export market share as well as strong demand growth. China now accounts for a very

large share of global exports and is the world's second-largest economy: its ability to generate fast growth by simply increasing export market share further is thus limited. Domestic demand will of necessity become a more important factor than in the past.

The Chinese authorities are well aware of these challenges and have devoted increasing attention to the problems of addressing not just the speed of urbanisation but its quality. Urbanisation has been an important focus of the 12th Five-Year Plan (2011-15), and a National Urbanisation Plan for 2014-20 was adopted by the State Council in March 2014.The emphasis on what is called "people-centred urbanisation" finds expression in the increased priority attached to equity, environmental concerns and other quality-of-life issues in urban policy. It also reflects an awareness of the fact that the agglomeration benefits of urbanisation stem not just from increasing densities or the shift of resources and labour out of agrarian activities: they arise from the formation of well-functioning cities able to reap the benefits of agglomeration. As noted in Chapter 1, these are linked not merely to density but to the ability of agents to transact and interact easily with large numbers of other people. Poorly planned, dysfunctional cities can deliver urbanisation and density without agglomeration. Many of the policies addressed in this chapter thus aim at ensuring that the benefits of agglomeration are maximised – and its costs mitigated – as cities grow.

Rapid urbanisation entails not only large-scale rural-urban migration and the consequent massive investment in infrastructure, but also the replacement of traditional institutional and social structures. This is in most cases a fairly traumatic process, involving tremendous and often painful social and economic dislocation. China is no exception. While the country has done far better than many other developing and middle-income countries in preventing the emergence of vast informal slums around its major cities, its rapid urban growth has been accompanied by rising inequality on four important dimensions:

- *Individual*: the inter-personal Gini coefficient for China has risen from about 0.28 to around 0.41 in 30 years (some estimates put it as high as 0.6). Such an increase in inequality is not unusual in a fast-growing country on a convergence trajectory, but it has become an increasing concern for the authorities in recent years.
- *Regional*: the inter-regional Gini in 2010 was around 0.3, above any OECD country except Mexico and Chile, and comparable to Brazil, Russia and other emerging middle-income countries. Geographically, this is largely about the growing gap between largely coastal vs. inland China (or East-Centre-West).
- *Rural-urban*: estimates of the rural-urban income gap vary, but it appears to exceed threefold on average.
- *Sociological*: migrant workers arriving in many Chinese cities suffer systematic discrimination in access to services on account of their lack of urban residence registration (*hukou*).

To some extent, the first three of these phenomena are to be expected. The early stages of the urbanisation process are often associated with a rising urban-rural income gap, which peaks and then declines and may eventually disappear as the labour surplus in rural areas disappears and the rural sector modernises. This is broadly consistent with the hypothesis underlying the so-called Williamson Curve (Box 2.1). China's own demographic transition is likely to accelerate this process, and, indeed, there is some evidence that urban-rural income differentials in many places are decreasing.

Box 2.1. **The Williamson curve and geographic disparities in income**

Rising inter-regional and urban-rural income disparities in China reflect in part an observed regularity discussed in the economic geographic literature since the 1960s – the so-called "Williamson Curve". Williamson (1965) extended the Kuznets hypothesis, which describes the relationship between income inequality and development, to the explanation of regional disparities. Kuznets found that income inequality tended to increase with income at low-income levels and to decrease at higher levels of income (Kuznets, 1955). One possible explanation for this is that, in the early stages of development, investment in physical capital is the main driver of growth. Growth and inequality thus go hand in hand, because concentration of resources in the hands of those who save and invest the most is good for growth. In more developed economies, by contrast, capital deepening is less important, and growth depends more on human capital accumulation and other factors that contribute to the growth of total factor productivity. In such a situation, inequality can impede growth, because the poor find it hard to invest in human capital, given imperfect credit markets.

Williamson found a similar pattern at the regional level: national development created increasing regional disparities in the early stages of development, but later on, development led to regional convergence, resulting in an inverted U-shaped curve. The primary explanation for Williamson's finding is that, in a catching-up country, a few regions typically drive growth, and capital and skilled workers are increasingly drawn to them. Rapidly rising productivity causes growth to accelerate still further in these regions, leading to increasing regional disparities. Given the importance of agglomeration economies and the fact that rising investment goes with increasing concentration, there is an obvious link with urbanisation here: fast-urbanising regions will tend to pull away from others. At later stages, higher factor costs and/or agglomeration *dis*economies emerge in the leading regions, prompting investment capital to shift to places where the potential returns to capital deepening are higher (i.e. those with lower capital per worker). Knowledge spillovers and a shift from a growth model driven by capital deepening to one more dependent on human capital may also play a role in this reallocation of productive factors.

Source: Williamson, J. G. (1965), "Regional Inequality and the Process of National Development: A Description of the Patterns", *Economic and Cultural Change,* Vol. 13, pp. 1–84; Kuznets, S. (1955), "Economic Growth and Income Inequality", *American Economic Review*, Vol. 45, No. 1, pp. 1-28.

"Urbanisation with Chinese characteristics"

China's modern urbanisation started late but has proceeded rapidly

The rapid urbanisation of China observed over the last decades is wholly without precedent in terms of scale and has few historical precedents in terms of speed. In just 60 years, the urbanisation rate in China rose from 10% to over 50%, a process that took around 150 years in much of Europe and somewhat more than a century in North America (UNDESA, 2012). Almost all of this increase, moreover, has occurred since about 1980 (Chapter 1). However, the speed with which the urbanisation rate has risen should not be conflated with the speed of growth of the urban population, which has been substantially slower – a fact that has probably helped make the process somewhat more manageable. China experienced urban population growth of about 3.5–4.0% per year from the end of the 1980s until the end of the last decade, well below the 5-6% experienced by many developing countries during periods of rapid growth (Henderson, 2009). Such very rapid growth of the urban population typically occurs in places where urban and rural fertility are still fairly high by international standards. By contrast, the growth of China's urban population has been driven mainly by migration and, to a lesser extent, by the redesignation of previously rural places as urban. The natural growth of the urban population has been checked by the "one-child policy" in force since 1979 and has

accounted for only about one-tenth of the rise in the total urban population (Koen et al., 2013).[3]

A number of factors have contributed to the speed of change. For much of the twentieth century, urbanisation in China was held back by war and, after 1949, by the new Communist regime's suspicion of the city as a place of "bourgeois consumption" and by the internal upheavals of the 1950s to 1970s. The urbanisation process of recent decades thus involves a degree of "catch-up urbanisation". The main drivers since 1980 have been economic: the explosion of productivity in the rural sector following the adoption of the household responsibility system (Box 2.2) at the end of the 1970s led to the release of surplus labour from agriculture and the take-off of an export-oriented industrial sector. Initially, the shift of labour out of agriculture led to the rise of township and village enterprises (TVEs), which generated one-third of industrial output by the late 1990s, a level of nonurban industrialisation not seen anywhere else in the world except, perhaps, Vietnam (Friedmann, 2005). As barriers to movement were relaxed and the potential benefits of agglomeration became more apparent, continued industrialisation came to drive the very rapid growth of cities.

Box 2.2. **The "household responsibility system" and Chinese urbanisation**

In the late 1970s, the authorities began to experiment with what came to be known as the "household responsibility system" (HRS). The main features of the HRS were that the individual household became the basic production unit, replacing the production team; farmland was subdivided into household plots under collective ownership. Households could make operating decisions, albeit within the limits set by contractual agreements, and could freely dispose of output produced over and above national and collective quotas. In 1983, the state set the land lease contract period for farmers at 15 years; a decade later, this was extended to 30 years. By the end of 1983, around 94.2% of households in the countryside operated under the HRS. The rapid increase in productivity that ensued meant that the farm sector could no longer absorb the huge rural labour force, and farmers were released from the land. This constituted an essential "push factor" for rural-urban migration. Thus, while Chinese urbanisation is often understood as a "globalisation story", driven by an export-oriented growth model, the initial impetus was in fact largely endogenous (Friedmann, 2005).

Source: Friedmann, J. (2005), *China's Urban Transition*, University of Minnesota Press, Minneapolis.

Yet China's urbanisation process reflects important historical continuities

While China's modern urbanisation has started comparatively late, China is an ancient urban civilisation – its older cities are among the oldest in the world,[4] and historical continuities continue to shape this late urbanisation process (Friedmann, 2006). Perhaps the most important of these continuities concern urban governance. Cities in China constitute a part of the national administrative hierarchy. Since imperial times, they have been defined primarily in administrative terms rather than in terms of urban functions. They are governed not as political entities – let alone as self-governing units with active civic involvement – but as administrative centres. As administrative units, their powers and resources are defined in large measure by their place in the administrative hierarchy rather than by their size or economic role. Thus, four cities – Beijing, Shanghai, Tianjin and Chongqing – fall under the direct supervision of the national government (i.e. they have a status equivalent to that of provinces). Almost 300

others have the status of "prefectural-level city", ranking below a province but above a county; still further down the hierarchy are "county-level cities" and so on (see Chapter 3 for more detail). Chinese mayors and other key urban officials are, in effect, part of the national administration, appointed (directly or indirectly, depending on the city's status) by the central government. The authorities increasingly want to mobilise societal actors to participate in urban governance (National Plan, 2014); their involvement has hitherto been very limited.

Bottom-up, largely informal approaches to governance nevertheless prevail at the lowest levels. Urban neighbourhoods in pre-revolutionary China were traditionally regulated by local communities on the basis of what Friedmann (2006, pp. 445) calls a "mixture of custom, neighbourliness and intrusive surveillance", which had its in roots the so-called *baojia* system, a community-based system of law enforcement and civil control dating from the eleventh century. The structure of the system changed over time, but certain basic elements persisted under imperial, republican, Japanese and Communist Party rule. Individual neighbourhoods have traditionally enjoyed a high degree of autonomy, with acknowledged neighbourhood leaders who sometimes performed official duties even though they were not formal officials (Stapleton, 2000; Wang, 2003). With the lowest level of urban government today being the district, which can encompass populations in the tens or even hundreds of thousands,[5] neighbourhoods continue to play an important role in urban governance, including neighbourhood committees and residents' committees, which play a role in the provision of basic welfare and the maintenance of public order. Increasingly, they finance themselves through fees for services and the operation of small/medium businesses. Associations of new property owners in the high-rise apartment buildings of the major cities are also coming to play a role (Zhang, 2004). Thus, centralisation of administration is – and has long been – balanced to some degree by a strong element of localism at the lowest levels. However, one should not exaggerate the degree of autonomy here: these local bodies co-operate closely with the lower levels of state administration and are mainly engaged in implementing the policies of local governments.

The sociological dimension of urbanisation in China is particularly important

Chinese urbanisation is also distinguished by a particular administrative-sociological dimension that is not found in most countries. China's system of household registration (*hukou*), which defines individuals as either urban or rural dwellers, effectively treats rural dwellers as a separate social estate, subject to entitlements and obligations that differ from those of urban dwellers. As will be seen in the sections that follow, this distinction is particularly salient as regards access to education, health care, pensions, social protection systems and other key services, as well as land rights. The urbanisation of a rural dweller thus involves more than just a change of residence from countryside to city or a move from agricultural to urban employment. Both separation from the village and integration into the city are costlier and more complicated under the *hukou* system, and many of the migrant workers who constitute the bulk of China's industrial workforce are caught midway in the transition from "peasants" to "urban workers". Thus, Chinese urbanisation policies have focused increasingly on facilitating the integration (sometimes called the "citizenisation") of migrants in the cities. This means that, even more than in most countries, urban policy cannot be understood in isolation from policies affecting rural areas. It is therefore significant, and beneficial, that the National Urbanisation Plan for 2014-20 addresses rural policy at considerable length.

Box 2.3. *Hukou* reform before 2000

The state first began to relax the restrictions of the *hukou* system in the late 1970s. A 1977 regulation on *hukou* conversion opened up a few possibilities to convert agricultural *hukou* to non-agricultural *hukou*, but the quota was limited (around 1.5%-2.0% of the local non-agricultural population). By 1990, more than 53 million rural residents had changed to non-agricultural *hukou*. The main avenues to *hukou* conversion were education and military service. Students passing the national entrance examination for colleges and universities and young farmers joining the People's Liberation Army could convert their agricultural *hukou* to non-agricultural "collective" *hukou* (the *hukou* units were not cities but specific colleges, universities or military bases). However, there were strict quotas for student enrolment and military recruitment. Another way to change *hukou* status was by making an "outstanding contribution." Individuals making what were considered by the state as special contributions to the country's development were awarded non-agricultural *hukou*. These included technicians, researchers, experts on agriculture and forestry, border defence police and government officials whose administrative titles were above the county level. In the 1990s, marriage and trade became increasingly popular methods for farmers to obtain non-agricultural *hukou*. If an agricultural *hukou* holder married an urban *hukou* holder, she or he might have the opportunity to convert to *hukou* status through a series of complicated procedures. In 1998, the reform of children's *hukou* status mandated that children could choose the father or the mother's *hukou* status. Hence, the rate of rural-urban marriages sharply rose during those years; in Beijing, the rural-urban marriage rate doubled from 11% in 1998 to 22% in 1999.

Source: Sun, L. (2012), *Making a Claim or Not: Migrant Workers' Coping Strategies under Policy Intervention in China*, doctoral dissertation, University of Bielefeld, Germany.

Migration

Internal migration is reshaping China

Altogether, over the period from 1980 to 2010, China's urban population rose by around 474 million, of whom roughly 345 million were new arrivals in the cities. Just over one-fifth of these were "official" migrants – i.e., individuals obtaining urban *hukou*. The balance consisted of "unofficial" migrants – urban dwellers with rural *hukou*. As a rule, discussions of migration and migrants' rights and situation concern this latter category. Whether they are seasonal labourers spending a few months a year in the city or long-term urban dwellers, they are *de facto* internal migrants in terms of their position on the labour market and with respect to the authorities. In 2010, there were an estimated 740 million internal migrants across the world (IOM, 2011, pp. 73); almost one-third of these – 242 million according to the NBS estimates at the time – were in China. By 2014, this figure had reached 274 million, roughly 62% of whom were employed outside their towns of origin (so-called "out-migrated" workers), with the remainder employed as "local migrants" in the towns nearest their homes. Moreover, on some estimates, there were still as many as 200 million more farmers than were needed working in agriculture. While other estimates point to substantially lower figures for surplus labour in agriculture, there is still considerable scope for further migration from rural areas to cities or peri-urban areas.[6]

Policy towards migration has evolved through a number of distinct phases:

- *Prohibition* (1949-1983). For decades after the foundation of the People's Republic, farmers were effectively tied to the land. After the creation of people's communes as the basis for collectivising agriculture in 1958, the *hukou* system was used to control movement between the countryside and the cities, as well as across urban and rural locations, creating an "invisible wall" between two classes of citizens (Chan, 1994).[7] As a result, there were just 3 million migrants in Chinese cities at the end of 1983. Prohibition policies were still being tightened as late as 1981.
- *Permissiveness* (1984-1991. The success of the household responsibility system led to a large shift of labour out of agriculture. The nonfarm rural economy took off, as the rapid development of township and village enterprises (TVEs) in the 1980s and early 1990s absorbed much of the excess rural labour. By 1991, the sector employed 96.1 million employees, equivalent to 22.3% of the labour force.8 This period also saw the authorities open up four cities and one province in the southeast of China, which were designated Special Economic Zones (SEZs): the cities of Shenzhen, Zhuhai, Shantou and Xiamen, as well as the province of Hainan. These began to attract rural migrants, mostly from nearby rural areas. Yet rural-urban migration remained limited and was largely intra- rather than inter-provincial.
- *Liberalisation* (1992-2001). A second wave of reform and opening up across the country beginning in 1992 led to an influx of foreign investment, which together drew around 90 million rural migrants to the cities by 2001. This period saw no specific measures aimed at encouraging or discouraging rural-urban migration, but the effect of the reforms was to increase dramatically the opportunities available to migrants in the major cities. With this activity (and foreign investment, in particular) concentrated on the coast, migration from lagging interior provinces to coastal cities increased rapidly.
- *Facilitation* (2002-). Since 2002, economic policy has increasingly focused on the importance of private enterprise and its long-term development, a process both supported and, to some extent, driven by rural-urban migration. A growing range of policies was adopted with the explicit aim of facilitating such migration. This represents a radical break with the approaches of the previous half-century. It is also relatively unusual in an international context: United Nations (2010) found China to be one of just 10 countries in the world pursuing explicit policies to increase rural-urban migration; by contrast, 116 countries were working to slow the pace of urbanisation, (45 reported no intervention one way or another).

Facilitation remains the focus of policy, though the authorities are concerned to channel an increasing proportion of migrants to small and medium-sized cities to reduce pressure on the largest ones (see below). Table 2.1 provides an overview of the main policy initiatives adopted with a view to facilitating migration over the last dozen years. Each January, the Central Committee of the Communist Party of China (CPC) and the State Council issue a broad policy statement on agriculture, rural development and policies affecting farmers, known as "the No. 1 central document". With the exception of 2011 (when the statement focused on water conservation), the No. 1 central document for every year from 2004 through 2014 focused on migrant workers. Yet the tenor of these has changed over time. During 2004-8, the emphasis was on securing migrants' labour

rights in the city and overcoming discrimination with respect to access to education and urban services; while significant progress has been made in this connection, there is much more to do, as will be seen. In 2009-12, the focus was on the nonfarm rural economy and, in particular, on helping returning migrants with start-ups in their places of origin, in an effort to foster the positive spillovers from urban growth into lagging areas. Then, in 2013 and 2014, the focus shifted back to the integration of migrants in the cities, not least via *hukou* reform and the introduction of new residence permits that would eventually reduce the significance of *hukou*.

Table 2.1. **Policies regarding migrant workers in the facilitation phase**

Effective	Policies	Targeting issue
September 2003	Circular on Suggestions on Further Improving the Education of Children of Migrant Workers	Education of migrants' children
September 2003	Skills Training Program for Migrant Workers	Rising human capital
June 2004	Circular on Migrant Workers Participating in Work-Related Injury Insurance	Work injuries
September 2004	Circular on Managing Wage Payment to Migrant Workers in the Construction Sector	Wage protection
December 2004	Circular on Paying High Attention to Migrant Workers' Cultural Lives	Cultural life
November 2005	Circular on Co-operative Implementation of National HIV/AIDS Education Targeting Migrant Workers	HIV/AIDS prevention
March 2006	Circular on further improving working and living conditions of migrant workers in the construction sector	Working and living conditions
March 2006	Some Resolutions on How to Solve the Problems of Migrant Workers	Protecting the rights of migrant workers
January 2007	Measures for Convenience and Right Protection of Floating Population and Migrant Workers with Respect to Family Planning	Family planning
December 2008	Circular on Realistically Carrying Out Current Policies on Migrant Workers	Returned migrants starting business
March 2009	Suggestions on Helping Migrant Workers Solving Their Housing Difficulties	Housing

Source: OECD, compiled from successive annual policy documents.

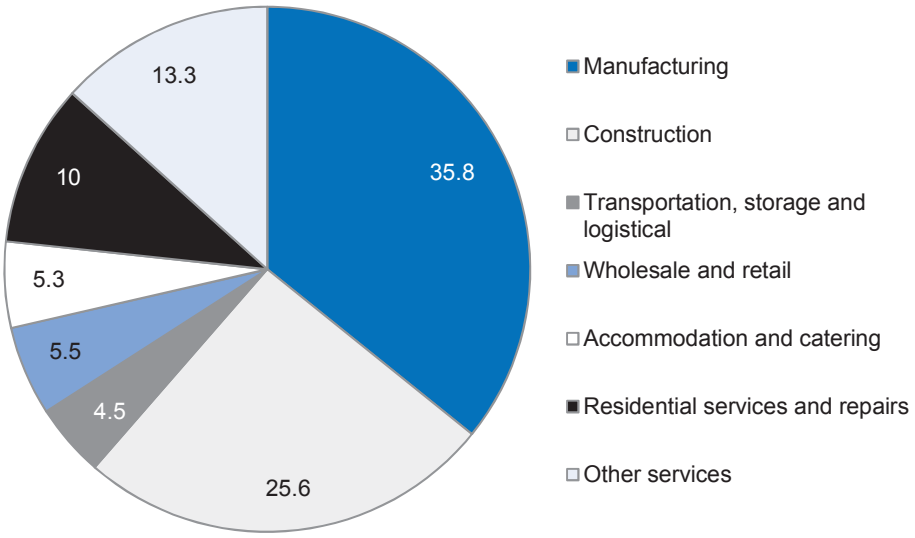
Migrants are essential to the economic dynamism of urban China

As noted above, more than 60% of Chinese migrants are "out-migrants", with the largest flows coming from Sichuan, Anhui, Chongqing and Henan, in western and central China. In 2012, almost 65% of migrants were employed in eastern areas, chiefly the high-income coastal provinces, 18% in central China and the rest in the country's western regions. Xing and Zhang (2013) confirm that, on the whole, migrants prefer to go to very large cities, especially the emerging megacities. While the higher cost of living may offset higher wages in such places, they also offer migrants better opportunities for learning and up-skilling, a wider range of possible labour market opportunities and better consumption opportunities. The presence of large numbers of migrants already established in such places also makes it easier for new arrivals to settle in, often relying on networks from their home regions.

The scale of the flows into the richest provinces and cities is difficult to exaggerate: in 2010, migrants constituted more than 28.5% of the population of Guangdong. Nation-wide, the majority of migrants are employed in either manufacturing or construction, but significant numbers are also employed in various service sectors (Figure 2.1); in addition, around 16.5% of migrants (44.4 million workers) were self-employed in 2013, the largest share of them (39.6%) in wholesale and retail trade.. On average, monthly incomes are

highest for those in transport, storage and logistics (CNY 3 133 in 2013) and lowest in hotels and catering (CNY 2366). Migrant wages have been rising rapidly in recent years, nearly doubling in nominal terms over the 2008-13 period, as against a rise of just under 14% in the consumer price index.

Figure 2.1. **Migrant employment by sector, 2013**



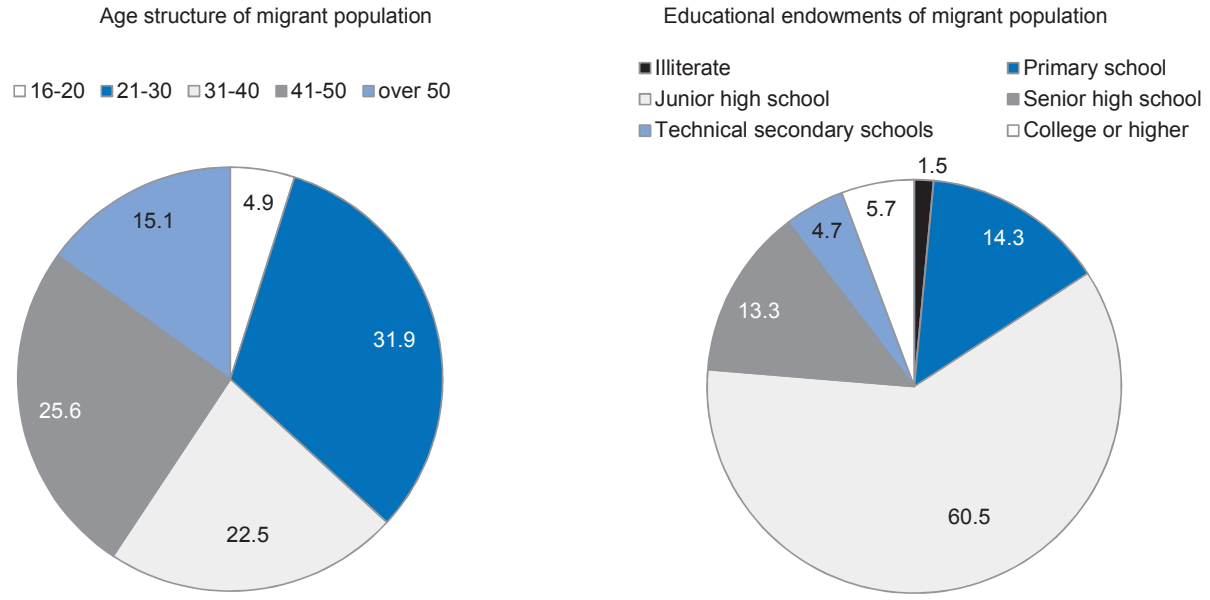
Source: OECD calculations based on data from NBS.

The push factors driving migration include rising agricultural productivity, market failures in the nonfarm rural economy (imperfect or missing insurance, credit markets) and the diversification of household income, particularly risks in farm production[9] (Shi, Heerink and Qu, 2007). The pull factors include higher incomes, as well as better access to services, amenities and other consumption opportunities. There is much debate about the real size of the urban-rural income gap. The official data suggest that the average income of urban households in 2012 was almost three times as high as that of rural households,[10] but the statistical authorities have long been aware that household surveys find it hard to capture and allocate the income and consumption of migrants (see Koen et al., 2013 for details).[11] In any case, to the extent that it is migrant remittances that reduce the urban-rural income gap, the incentives to migrate are increased. Certainly, the wage differentials between town and country are impressive: the average monthly wage for migrant workers in Chinese cities in 2012 was CNY 2 290, around triple the level in the countryside, where roughly two-thirds of households are still engaged in subsistence agriculture, with little surplus to market. Inter-regional income disparities are also a factor (Chapter 1).[12] The attraction of urban lifestyles is important and is seen by many as a major reason why many young rural men opt for migration at the end of their nine years of compulsory schooling. Many also now lack farming skills, and a small but growing number of rural children are growing up as migrants, being raised in cities with migrant parents.

Most migrants are young men. Almost 60% were between 16 and 40 in 2012, with those in the 21-30 age range making up over half this total (Figure 2.2). Internal migrants

in China are also endowed with exceptionally high levels of human capital by comparison with migrants in most emerging economies. Over 60% have completed nine years of compulsory education (i.e. complete lower secondary) and only 1.5% lack a completed primary education. In India, by contrast, around half of rural sector workers lack a full primary education and only a quarter have at least a complete secondary education; in Brazil, the median level of education in the rural sector was four years in 2009 (Henderson, 2009). This not only means that Chinese migrants arrive in the city with higher skill levels, but also that they are better prepared to take advantage of opportunities for further up-skilling. Moreover, the educational levels of new migrants are rising over time: the share of migrants aged 21-30 with a senior high school education or better in 2012 was 36.4%, as against 23.7% for all migrants.

Figure 2.2. **Age and education structures of migrant population, 2012**



Source: OECD calculations based on data from NBS.

Rising migrant skill levels are in part the product of consistent efforts by both migrants and the authorities to raise migrants' skills. Since 2003, the government has set up training programmes in the areas that send workers to provide the professional skills likely to be required of new arrivals in the city; these programmes focus on sectors where demand for migrant labour is high, including construction, manufacturing, housekeeping and hospitality (hotels and restaurants). The benefits appear to be palpable: on the basis of interviews with 2 318 migrant workers, Zhang and Wang (2010) find that migrants who participated in training programmes secured wages 21% higher on average than similar migrants who did not. The average cost of such training courses has been estimated at CNY 700 per person for 2012, and the costs are shared among central and local governments and the trainees; central government contributions tend to be higher in poorer areas.[13] Nevertheless, these programmes are hardest to sustain where demand is greatest, since local governments in many of the least developed regions lack resources and the farmers themselves in such places also struggle to pay.

The impact of migration on receiving areas is difficult to exaggerate. By 2010, migrant workers accounted for over half of nonfarm employment, and they now account for around 90% of employment in construction, 80% in coal mining, 60% in textiles and 50% in other manufacturing sectors. It is estimated that already in 2000, migrant workers generated more than 30% of the GDP of Guangdong, Shanghai and Beijing (Sun, 2004). Their low wage is regarded as an important source of national economic accumulation (Bai and Li, 2008). Large cities experience service-sector labour shortages during the Chinese New Year, when migrants tend to return home. Chang and Brada (2006) find that migrants are, on balance, good for urban dwellers' living standards in other ways: they compete with unskilled urban residents in the labour market, but only to a limited degree; often they are complementary to urban residents, as they are typically concentrated in jobs for which employers cannot recruit enough urban residents. Migration also results in the creation of new jobs in the service sector.[14] Nevertheless, urban residents blame them for social problems: social disorder, traffic congestion, strain on public infrastructure, public health problems and high housing prices (Chang and Brada, 2006; Wei, 2007). Such complaints are heard particularly in the largest cities, since they are the biggest magnets for migrant labour, and underlie some of the efforts made to encourage migrants to move to second- and third-tier cities.

The impact on sending areas is arguably even more complex. The economic benefits generated by migrant remittances and by the skills and entrepreneurship of returning migrants are enormous. Moreover, the evidence suggests that there are also positive spillovers to rural areas from the increased activity in high-income places. Koen et al. (2013) find evidence that urban growth has finally started to *narrow* urban-rural income differentials, at least within particular regions, if not across the country as a whole. In an analysis of 160 prefectures with dense core cities of at least 30 000 inhabitants, they find a reduction in the gap between GDP per capita in the urban districts and GDP per capita in less dense places. However, these benefits must be set against the considerable social dislocation that such large-scale out-migration generates, as well as its impact on agricultural production (Box 2.4).

Box 2.4. **The impact of rural-urban migration on sending areas**

Economic impacts

Migrant remittances are an increasingly important resource for rural economies. They stimulate rural households' consumption, which supports growth in the sending areas and reduces interregional disparities to some extent. However, out-migration, though driven in part by rising productivity in agriculture, is reckoned to have a *negative* effect on agricultural production, as many sending areas face labour shortages in the busiest seasons of the crop year. In some places, this exodus has reduced the local agricultural labour force so much and so fast that large tracts of arable land have been abandoned (Gao and Zhuang, 2004). Such labour shortages could best be addressed via improvements in agricultural productivity but these, in turn, may require progress on land consolidation, which remains a barrier to more efficient farming (see below). Returning migrants also play an important role in changing the countryside, as they bring new knowledge and ideas about lifestyle issues such as health and consumption, as well as new skills and savings habits. Many returnees create businesses in their hometowns, stimulating development and creating employment (Murphy, 2002; Huang and Pieke, 2003).

Box 2.4. **The impact of rural-urban migration on sending areas** *(cont.)*

Impacts on families

Remittances represent the most obvious and direct financial impact on migrant workers' families. Migrant workers save most of their income and send it to their families at the place of origin. It is estimated that in 2005, remittances made up 20%-50% of household income in sending areas (Cheng and Zhong, 2005). Such funds provide for three main household needs: children's education, family medical expenses and improved housing. Family separation is the second major impact. Nationally, only about 20% of migrants move with their families. Since two-thirds of migrant workers are men (mostly younger men), their out-migration leaves villages dominated by women, children and the elderly (Bai and Li, 2008).[15]

Left-behind children

Since government subsidies for children's education are linked to their *hukou*, migrant workers' children normally cannot enjoy these educational subsidies in the receiving cities of their migrant parents. In many cases, high tuition has been charged for access to urban schools, which migrant households generally cannot afford.

Most migrant workers therefore choose to leave their children in their hometowns. According to the Sixth National Population Census, the number of "left-behind children" had reached 60 million in 2010, accounting for 38% of all rural children and 22% of all children in China. Such children are particularly concentrated in the main sending regions of China – around 44% were concentrated in just five provinces (Sichuan, Henan, Anhui, Guangdong and Hunan. Over half of all children in Chongqing, Sichuan, Anhui, Jiangsu, Jiangxi and Hunan Provinces grow up with one or both parents away from home, as well as more than 40% in Hubei, Guangxi, Guangdong and Guizhou. In almost 47% of all cases, both parents out-migrate. Most of these children (around one-third of the total) live with grandparents, while 10.7% live with other people and around 2 million (3.4%) live on their own.

Such living arrangements appear to have significant negative effects on child welfare. Using data from the 2006 China Health and Nutrition Survey, Lee (2011) found that left-behind children are worse off in educational outcomes compared to similar children whose parents did not migrate. Left-behind children are also more likely to suffer from depression, anxiety and loneliness. Their quality of life and level of happiness are also lower than that of ordinary children (Fan and Sang, 2005). The sexual abuse of left-behind girls in rural areas has also been recognised as a growing problem. In Huazhou city of Guangdong province, 94% of sexual assault cases involved left-behind children (Chinanews, 2012). It is not clear whether and to what extent the undoubted benefits for child welfare that stem from higher incomes can or do offset these effects.

Left-behind women

In 2010, around 47 million women in rural China were living separately from husbands who had gone to the city as migrant workers. Studies suggest that these women are left to face high labour intensity – on average, most "left-behind" women need to handle 0.24 hectares of farm land manually and work an average of 8.5 hours per day during the farming season, as well as handling household chores, care of children and, in many cases, care of the elderly. They also experience mental health problems and sexual repression (a problem often aggravated by the fact that the subject is taboo in many rural areas). All this leads to lower levels of happiness than are found among women in urban China (Wu and Ye, 2010).

Since 2010, the All-China Women's Federation has been involved in a programme called "homes for women", which aims to help women organise entertainment activities, give them psychological guidance and provide legal knowledge. One of the programme's national campaigns is to promote aid groups for such women. They not only help each other working the fields and performing domestic chores, but also keep in touch, frequently contacting each other, to benefit their mental health. In Chongqing, 51 000 left-behind women's mutual aid groups had been founded by 2013, in which an estimated 1 million left-behind women participate (Xinhuanet, 2013).

Box 2.4. **The impact of rural-urban migration on sending areas** *(cont.)*

Left-behind elderly

In 2010, there were an estimated 58 million rural Chinese over the age of 60 with at least one adult child who had out-migrated. Family-based care and support for the elderly remains the norm in China, but the out-migration of adult children is weakening and challenging this traditional practice. Yet the formal elderly care system in China is still lacking, especially in the countryside. According to the data from the Chinese Longitudinal Healthy Longevity Survey, the impacts of migration on left-behind elderly include the following:

- The residential arrangement is changed. Many left-behind elderly (48.5%) who used to live with an adult child now live on their own or live with grandchildren in their care.
- Both the left-behind elderly's work and family burdens increase dramatically after out-migration.
- Their financial situation improves due to remittances from the migrant adult child.

The mental health of these elderly is negatively affected, though higher income may help them to remain in better physical health.

Source: Gao, Z. and X. Zhuang (2004), "The Backward Floating of Rural Migrants from Sichuan Province", *Workers Daily*, 16 November; Murphy, R. (2002), *How Migrant Labour is Changing Rural China*, Cambridge University Press, Cambridge, UK; Huang, P. and F. Pieke (2003), "China Migration Country Study", working paper presented at the Conference on Migration, Development and Pro-Poor Policy Choices in Asia; Cheng, E. and X. Zhong (2005), *Domestic Money Transfer Services for Migrant Workers in China*, Consultative Group to Assist the Poor (CGAP), Washington, DC; Fan, F. and B. Sang (2005), "Absence of Parental Upbringing and Liushou Children's Personality, Academic Achievements As Well As Behavior Problems" (in Chinese), *Psychological Science*, Vol. 28, pp. 855–859; Lee, M.H. (2011), "Migration and Children's Welfare in China: The Schooling and Health of Children Left Behind", *The Journal of Developing Areas*, Vol. 44, No. 2, pp. 165-82; Bai, N. and J. Li (2008), "Migrant Workers in China: A General Survey", *Social Science in China*, Vol. 29, No. 3, pp. 85-103; Chinanews (2012), "Guangdong Provincial Women's Federation Survey Highlights the Phenomenon of Sexual Crimes against Girls", 25 April, http://www.chinanews.com/fz/2012/04-25/3845894.shtml; Wu, H. and J. Ye (2010), "Analysis on the Psychological Impacts of Husbands' Migration on the Women Left at Home in Rural China", *Journal of Zhejiang University (Humanities and Social Sciences),* Vol. 40. No. 3, pp. 138-147; Xinhuanet (2013), "Chongqing has established 51 000 rural left-behind women support groups", http://www.cq.xinhuanet.com/2013-11/06/c_118033808.htm.

Migrants are disadvantaged with respect to social protection and access to basic services

Despite many policy changes in recent years that have facilitated migration and helped improve migrants' life chances in the cities, challenges remain with respect to migrant inclusion and equity. In general, migrant workers from other provinces get worse services than local migrants, and urban citizens get much better services still. Underlying this difference is the link between *hukou* status and access to social protection and social services: city-dwellers with rural *hukou* are still deemed to participate in the social provision institutions of rural China, which are far less developed than their urban counterparts (Box 2.5) and which assume a continuing connection to the land and to the rural collective as the basis for social security. In

addition, migrants face disadvantages in access to services like education, which are typically financed apart from systems of social protection but for which the allocation of central resources still reflects the differences among holders of urban and rural *hukou*. The resources available for local governments to address migrants' needs are in any case rather strained in large cities, due to different fiscal rules (Chapter 3). In essence, central subsidies to support the provision of essential services are channelled to subnational governments on the basis of registered population – so receiving cities do not receive central government funds to cover the cost of extending such services to migrants.

Box 2.5. **Social security and social services in rural China**

The adoption of the household responsibility system also had an impact on the provision of social security and social services in rural China. The traditional pillars of social security in rural China are land and family. Until recently, therefore, the framework for social security in rural areas was limited to:

- the so-called "five guarantees" (food, clothing, housing, medical care and burial expenses) for people unable to work and those with no income (as well as compulsory education for minors),
- health insurance (Rural Co-operative Medical System, RCMS), and
- social relief for poverty caused by natural disasters.

These systems were administered by the people's communes and were based on mutual security and self-help. Thus, social security in rural areas was based on member-based organisations and private households. As economic reforms shifted the focus of production and exchange from collectives to households, they had the unintended effect of weakening social security functions in rural areas (Uchimura, 2005). For instance, the Rural Co-operative Medical System scheme was weakened in most communities after the 1980s; by 2005, only about 10% of the rural population had access to subsidised medical care, down from 90% in 1978 (Liu, 2004; Gao et al., 2012).

Over the last decade, the government has been working to strengthen social security in rural areas. One very important step has been the creation of health care insurance for people outside the scope of the urban employee scheme. The New Rural Co-operative Health Programme is a health insurance system targeted at rural residents. This voluntary scheme is funded by both farmers' contributions (20%) and subsidies from central and local governments (80%). In 2004, the government implemented the program of "two exemptions and one subsidy", which affords poor households exemptions from both tuition and study materials fees, as well as subsidies for boarding fees, for six years' elementary schooling and three years' secondary schooling. About 2.8% of all rural families benefit from this programme, which Li et al. (2012) find has contributed to a significant increase in school enrolment rates among rural children. In 2007, the "Rural Minimum Living Standard Security System" was implemented nationally (Li and Sicular, 2014), offering income support for those falling below the local poverty line. The number of rural MLSS recipients reached 54 million in 2013.

Nevertheless, rural social security still lags far behind the reforms in urban areas. The pension insurance system instituted in the early 1990s in rural areas was on a voluntary basis, and was aimed at establishing a mechanism of self-help security and savings accumulation. This has been changing as a result of the strengthening of the rural pension system in the last few years, but rural households still need to take more responsibility for their social security than urban ones. Cai et al. (2012) find that the rural elderly, in particular, still depend on

Box 2.5. **Social security and social services in rural China** *(cont.)*

family members for income support and that this dependence rises with age, as older rural dwellers, who often work well past retirement age, withdraw from the labour force. Considerable differences also remain with respect to health care services for urban and rural citizens. There has been an overall reduction in the urban-rural gap in the use of inpatient services, but these gains have been uneven: rural residents with chronic disease can now more readily access inpatient treatment, but they typically face higher hospital co-payments and are therefore far more likely to drop out of treatment than their urban counterparts. For migrants, in any case, there remains the link between *hukou* and eligibility, which means they may have to travel to their home regions to seek treatment.

Source: Uchimura, H. (2005), "Impact of Changes in Social Institutions on Income Inequality in China", *OECD Development Centre Working Papers*, No. 243, OECD Publishing, Paris, http://dx.doi.org/10.1787/736168032763; Liu, Y. (2004), "Development of the Rural Health Insurance System in China", *Health Policy and Planning,* Vol. 19, No. 3, May, pp. 159-165; Gao, Y., B. Su and F. Gao (2012), "New Rural Pension System of China: Is it Possible? An Exploratory Study of Feidong County, Anhui Province", *Journal of Cambridge Studies*, Vol. 7, No. 2, pp. 122-32; Li, X., X. Wang and L. Li (2012), "Inclusive Growth and Poverty Reduction in an Emerging Middle-Income Country: The People's Republic of China", http://cid.kdi.re.kr/upload/20120306_5.pdf; Li, S. and T. Sicular (2014), "The Distribution of Household Income in China: Inequality, Poverty and Policies", *The China Quarterly*, No. 217, pp 1-41, doi:10.1017/S0305741014000290; Cai F. et al. (2012), *The Elderly and Old-age Support in Rural China: Challenges and Prospects*, The World Bank, Washington, DC, 19 March; Lu, J. (2011), "China's Endowment Insurance", Chinese Academy of Social Sciences, Presentation to 20th Pacific Economic Co-operation Council General Meeting, Washington DC, 29 September; Sun, L. (2012), *Making a Claim or Not: Migrant Workers' Coping Strategies under Policy Intervention in China*, doctoral dissertation, University of Bielefeld, Germany; Pension Watch (2013), "Pension Coverage in China and the Expansion of the New Rural Social Pension", *Pension Watch Briefing*, No. 11, HelpAge International, London; OECD (2015), *All on Board: Making Inclusive Growth Happen in China*, OECD Publishing, Paris (forthcoming).

While it is in principle possible to change *hukou* in certain situations, it is often difficult, particularly for rural-to-urban migrants, even if they remain in the city for very long periods. In general, the barriers to acquiring urban *hukou* rise with city size (OECD, 2013a). For small and medium cities, (formal) employment stability and adequate housing are often sufficient, though this depends on the willingness of the employer to give workers labour contracts and pay social insurance premiums (Sun and Liu, 2014). In larger cities, migrants may encounter education, residency and/or tax payment requirements. In most places, it is now far easier to convert local *hukou* (i.e. from rural to urban within a given province), but this is of little value to the great majority of migrant workers, who have changed provinces. It is thus unsurprising that *hukou* reforms to date have had limited impact and are most likely to address the needs of urban-urban moves by individuals with high levels of human capital.

The reluctance of local governments to offer migrants urban *hukou*, which would bring with it access to key services and amenities on an equal footing, reflects a number of factors:

- Local governments already struggle with extensive spending responsibilities and limited resources. This has led to increasing reliance on fees and user charges, land leases (discussed below), surcharges on taxes, earmarked levies for specific purposes, such as education, revenues from commercial or business undertakings by public enterprises or agencies, and borrowing via bodies controlled by local government.[16]

- The cost of service provision is generally higher in the cities. At the very least, it must reflect the differences in pay between public-sector workers in fields like education and health care in the cities and their peers in rural areas, as well, in many cases, as the higher cost of building new schools, clinics and other facilities in large cities.
- Since many migrants work in the informal economy and live in informal settlements, they pay little in the way of local taxes, a fact that further reinforces the reluctance of local governments to provide services to them or their families.
- In some instances, officials fear that reducing the barriers to migrants' access to education or affordable housing programmes will simply trigger more and faster rural-to-urban migration, which risks putting an additional strain on public budgets and which is likely in any case to be unpopular with local urban dwellers. Some have also expressed the fear that greater provision of public funds for pensions and social insurances for migrants will crowd out private provision – for example, family support to the elderly might simply be cut as public support rises.

The authorities are working to correct this, but there is still much to do

Since 2002, the government has adopted a number of measures aimed at closing the gap between migrant workers and urban *hukou*-holders as regards access to social security and access to services in cities. These measures have, moreover, been undertaken in the context of broader changes aimed not only at migrants but at all rural dwellers, extending coverage of various forms of social protection (particularly contributory social schemes) to cover the rural population. The extension of the minimum subsistence allowance to the countryside, the introduction of a new rural medical insurance scheme and the expansion of the pension system for nonurban citizens (Box 2.5) have all been important steps towards the creation of an equitable social security system covering all citizens. Nonetheless, reforms in a number of key areas are far from complete.

Since 2003, the government has actively encouraged local governments to enable migrant children to be educated in their place of residence at least until they complete their nine years of compulsory primary and lower-secondary education. Overall participation in education to age 15 now appears to be above 90%. However, there are great differences in the quality of schools open to migrant children in many places, including some of the biggest cities: spending per pupil tends to be lower, class sizes larger and teachers less qualified. This finds reflection in substantially poorer educational performance by migrant children (Chen and Feng, 2012). In Beijing, Lai et al. (2012), find the performance of children in migrant schools to be worse than that of children in rural schools, after controlling for a range of other variables. Moreover, as late as 2011-12, there were still reports of schools for migrant children being closed when land was urbanised and redeveloped, without any provision for enrolling the affected children in local state schools (Koen et al., 2013).

Access to higher-secondary and tertiary education is still a challenge: fees for many higher-secondary schools are extremely high relative to migrant wages, and discrimination in university admissions is pervasive. Migrant children seeking access to tertiary education have traditionally been required to sit the entrance examinations where their *hukou* was registered rather than where they lived. Since 2012, the Ministry of Education has sought to change this, but the new regime still has only limited effect. In the first place, migrant children may only take examinations in places where they are not registered locally if at least one parent has a stable, formal-sector job and pays social

security contributions (see below). This effectively excludes many migrant children, as most migrants do not have labour contracts or social insurance. According to the National Bureau of Statistics, only 41.3% of migrants had signed labour contracts in 2013 and only 14.3% had open-ended contracts; just over one-quarter had fixed-term contracts. Secondly, local authorities can adapt the rules to local conditions; this creates especially perverse incentives in the places with better universities, since the minimum marks for admission are typically lower for locally registered students than for those with out-of-town *hukou*. Fujian province is an exception here: it allows migrant children who have been in lower or upper secondary school there to take the entrance exam. This policy is precisely intended to attract migrants to help ease local labour shortages. Across most of the country, though, discrimination against migrant children is pervasive when it comes to university admissions. Koen et al. (2013) show that the country's leading universities, in Beijing and Shanghai, give huge advantages in admissions to local students. A further problem is that recent changes to improve migrant children's access to education have largely tended to push them towards vocational schools, which were free for 90% of students in 2012, without improving access to fee-paying academic schools; this disadvantages them regardless of where they are permitted to sit entrance exams for higher education.

As noted above, only a minority of migrant children are affected by such problems: the vast majority remain in regions of origin, where educational opportunities are more limited and educational quality lower. Yet whether migrant children are left behind or raised in the city, there is a very real risk that China will lose one of its great urbanisation advantages – the fact that rural-to-urban migrants are characterised by relatively high levels of education. Historically, rural-urban migration has led to sharp increases in the educational attainments of the *next* generation, as migrants' children benefit from the greater opportunities available in the cities. The danger for China is that the human-capital advantage of the migrant generation will be lost, because their children will not reap the kind of educational benefits that they would otherwise have done as first-generation urban dwellers. This would be particularly bad for growth at a time when the demographic transition meant that labour-force growth had turned negative and that growth thus depended ever more on raising productivity. Moreover, the cost of improving educational opportunities for migrant children, though significant, is clearly manageable: OECD (2015a) estimates it about 0.1% of GDP,[17] while the long-term costs of failing to act could be substantial. As China transitions away from its past reliance on plentiful cheap labour, the urgency of developing the human capital and potential of migrant children, who constitute a huge proportion of the next generation, can only increase.

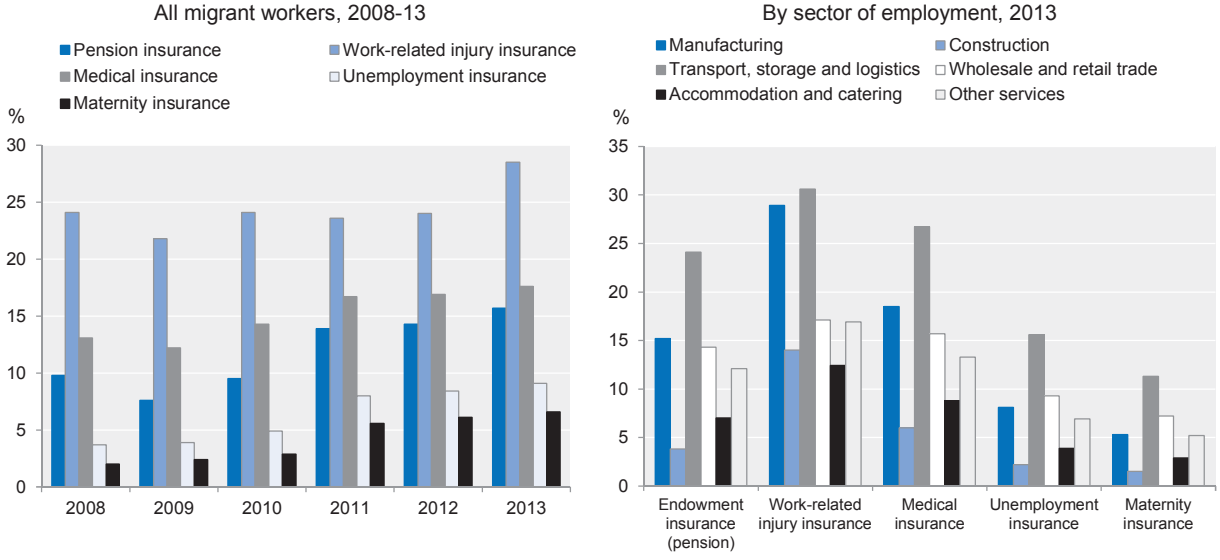
Rural migrants are still second-class urban residents in many other respects, as well:

- The National Bureau of Statistics estimates that, in 2012, 56% of migrant workers had no labour contract with their employers, despite the fact that this is a requirement of Chinese law. In the manufacturing sector, a slight majority (51%) had signed labour contracts, but only one-quarter had in construction. Lack of legal knowledge means that many migrants do not know that such contracts exist, and many more do not realise that they are essential if workers need to seek legal redress against their employers, as well as to qualify for various social insurances (Sun, 2012).
- When it comes to various social insurances, the coverage of migrant workers, though rising in recent years, still ranges from negligible to low (Figure 2.3). Work-related injury insurance and medical insurance are the most common overall,

with almost one-quarter of migrants participating in 2012, but this figure must be set against estimates by the Chinese Academy of Social Sciences suggesting that up to 80% of those affected by occupational illnesses are migrants.

- The fact that migrants must often return home to seek medical attention contributes to poorer health outcomes, as many cannot afford the journey or put it off as long as possible, thus seeking treatment much later than would have been desirable.
- Migrants are ineligible for the minimum subsistence benefit in cities (CNY 252 per month in 2013) even if they have been urban residents for some time (OECD, 2015a). They must return home to collect the much lower rural benefit (CNY 111 in 2013).
- The growing range of affordable housing initiatives undertaken by the government in recent years is largely restricted to local residents with urban *hukou*, even though it is migrants who face the most acute housing challenges.

Figure 2.3. **Coverage of various social insurances for migrant workers**

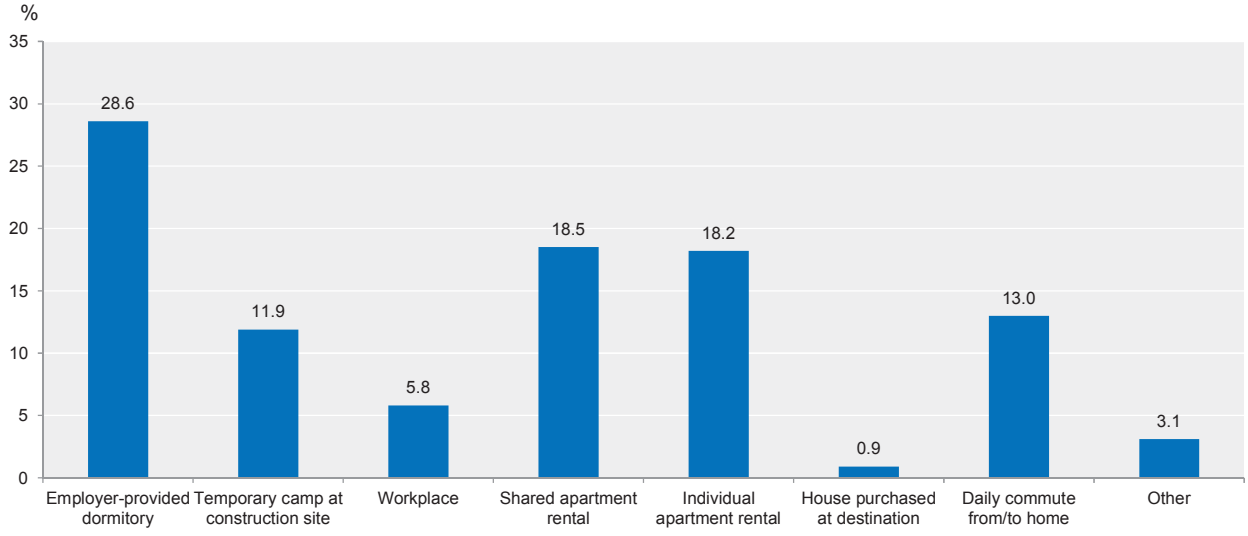


Source: OECD calculations based on data from NBS.

The problem of social insurances is in part rooted in the current system of labour taxation. As Brys et al. (2013) show, China's social security contributions weigh rather heavily on wage income: the so-called "tax wedge" – the difference between the employer's labour costs and the employee's net take-home pay – was about 35.4% in 2010, comparable to the OECD average but rather high for a country with China's income level and less generous social security system. Moreover, these contributions fall particularly heavily on low wage earners, since there is a minimum social security contribution to be paid regardless of a worker's actual income. The system is thus very regressive below a certain wage threshold and is thus likely to discourage many workers and employers from formalising the employment relationship. An alternative approach would be to set reduced contributions for low-income workers or, at the least, to levy them only as a proportion of actual income.

Lack of access to affordable housing programmes or social housing limits migrants' housing options severely. In 2013, almost one-third of migrant workers lived in dormitories arranged by their employers (Figure 2.4). Another third rented (alone or with others), mainly in cheap neighbourhoods in urban villages or on the urban fringe, which tend to be densely populated with poor infrastructure and limited public services (see below). Concentration of migrant housing in marginal places adds to the impediments to social integration in the city, which are often reinforced by migrants' tendency to stick with other migrants from their home regions (Luo, 2012). This is a pattern observed in international migration in many countries: new migrants are drawn to places where there are established migrants from their places of origin, as a result of network effects and information spillovers (OECD, 2011a). Since individual migration predominates, migrants rely mainly on telephones for contact with home, which they visit on average once a year, most often around the Chinese New Year.

Figure 2.4. **Accommodation of migrant workers, 2013**



Source: NBS (2014), *China Statistical Yearbook 2014,* China Statistics Press, Beijing.

The issue of migrants' pension insurance (known as "endowment insurance" in China) poses a particular problem, because the urban and rural systems have traditionally been separate (Liu and Sun, 2014). In 2009, a pilot project for new rural social endowment insurance was undertaken up and down the country (Box 12); it combines payments by the individual, the government and the collective, and by 2011, it covered 400 million rural residents (Lu, 2011). The following year, a new Social Insurance Law of China introduced changes into the social pension insurance system for urban residents. Both reforms brought about important improvements, but they preserved the separation of the two systems, which are not well integrated. Indeed, the fragmentation of systems goes beyond the urban-rural divide: in 2013, there were 13 provincial-level pension systems and more than a thousand county-level ones; they differ, moreover, in both contribution rates and bases.[18] This makes portability a critical issue, as many migrants do not stay in one place long enough to accumulate the 15 years of contributions required to qualify for a pension. Those whose incomes are low or unstable and who change jobs frequently are at greatest risk of failing to accumulate sufficient pension rights, particularly if they move between jobs in the urban and rural sectors.

In most areas (including Shenzhen City, Beijing municipality and Zhejiang province), it is now established that migrant workers should participate on equal terms in the basic pension system that applies to urban employees, though in practice, this depends on their having formal labour contracts. According to Article 16 of the 2010 Social Insurance Law, individuals participating in basic pension insurance qualify for a basic monthly pension if they have 15 years' contributions accumulated by the time they reach retirement age. If they have fewer than 15 years of contributions, they may either continue working until they have accumulated the necessary contribution history, or they can switch to the new social pension schemes, in which case their pension benefit (an average of CNY 81 per month in 2013) will be far below what they could expect from the basic scheme. However, most migrant workers have not worked in cities for as long as 15 years. After the migrant workers return home, they have to take part in the system of Basic Endowment Insurance for Urban Employees if they wish to continue to acquire pension rights. This means securing a job in a local urban enterprise in their place of origin, which is not easy (a lack of employment opportunities at home prompts many migrants to go to the cities).

For returned migrant workers who have participated in the New Rural Social Endowment Insurance, their premia from urban employment can in principle be transferred by the Social Security Authority to the New Rural Social Endowment Insurance in their hometown. They can then collect benefits under the rules and regulations of the rural system. However, there is a large gap between the two systems, which works to the disadvantage of migrants who have contributed as urban workers but collect as rural dwellers. Furthermore, the trans-provincial transfer of social security contributions is still a cumbersome process. It is not yet automated – registered mail has to be used for communication when going through the formalities – and the system for transfer between the urban and rural schemes still requires further standardisation and overall improvements to the policy. This involves considerable effort and delay, even if migrants are successful in switching between systems without losing their contributions (Gao, Su and Gao, 2012; Pension Watch, 2013). One potential result is a form of regressive subsidy in which migrants help bear the cost of urban workers' pensions: contributions made by workers who are never able to claim benefits help cover funding gaps in the system as a whole. Moreover, the redistributive character of those systems means that portability, even when possible, can come at a high cost: only the accumulated individual contributions can be refunded, not the pooled contributions (Fang and Wang, 2010). As a result, when a migrant worker changes his workplace, he often has to surrender most or all of his pension contributions. Gao, Su and Gao (2012) also document instances of local officials imposing *ad hoc* requirements linked to things like family planning.[19] Considerations such as these create strong incentives for migrant workers to opt not to join the pension scheme at all, in the event that they have a choice.

Expanding unemployment protection faces a different set of obstacles. The programme requires a minimum contribution period of one year and a period before drawing benefits of one to two years. Fang and Wang (2010) and Zhang et al. (2009) find that the employment characteristics of migrants are not inconsistent with such criteria: the vast majority of migrants – close to 90% in some surveys – change jobs or cities of employment less than once a year, and the longer they stay in a given city, the less often they change jobs. However, the contributions are sometimes high for low-paid migrants. Fang and Wang (2010) argue that they could and should be lowered in view of the large surpluses accumulated in the system (five times annual expenditure in 2008). Additionally, since migrants typically accept lower reservation wages and less desirable jobs than urban dwellers, they also take less time to find new jobs when they are unemployed, which may

reduce their inclination to pay unemployment insurance premia. Their lack of enthusiasm has in many cases been reinforced by the attitudes of officials, who have been reluctant to enforce legal requirements for employers to sign labour contracts with workers and include them in various social security programmes. According to Fang and Wang (2010), officials have feared that unemployed migrants can easily return to the rural sector and that strengthening social protection would lead to increased migration. However, they note that, as labour markets in some places have grown tighter, local officials have worked to offer better protection for increasingly scarce workers, at times adjusting contribution rates to various social security programmes.

The Chinese authorities are well aware of the challenges that migrant workers – and, indeed, all rural dwellers – still confront as regards access to social protection and social services. There has indeed been substantial progress in a number of areas over recent years, particularly education, health care and pensions. But much remains to be done. While social benefits available to rural dwellers are steadily expanding, the differences in benefits between urban and rural residents are substantial. Sun (2012) describes this as progress towards "universal coverage but differentiated social citizenship."

The segmentation of the labour market leads to both inequity and inefficiency

The evidence strongly suggests that the *hukou* system and the labour-market segregation to which it gives rise are bad for consumption growth, equity and labour market efficiency:

- A number of studies have shown that the discriminations confronting rural migrants in the cities dampen consumption – a significant concern as China seeks to rebalance its growth model away from excessive reliance on exports and investment. Dreger, Wang and Zhang (2014) find that, controlling for income and other characteristics, the rural *hukou* of an urban resident reduces the average propensity to consume by about 10 percentage points. Other studies point to similar conclusions: migrants save more than non-migrants with similar characteristics, which is to be expected given their more precarious labour-market situation.[20]
- Labour market duality contributes to greater inequality. Démurger et al. (2009) find that in 2002, urban *hukou*-holders earned 30% more than long-term migrants with similar characteristics. It is not clear what has happened since, but *hukou* remains a significant source of inequality. Data from the National Bureau of Statistics suggest that the ratio of migrant wages to those of urban *hukou*-holders fell from 76 to 65% over the decade to 2010, albeit against the backdrop of rising wages overall (Lu and Wan, 2014). This may reflect an increasing tendency for migrants to work informally: Yan (2011) concludes that the proportion of migrants in informal employment has been rising.21 Finally, Zuo (2013) decomposes earnings differentials between formal and informal sector employees and finds that employee characteristics account for just one-third of the differential: the remainder appears to reflect the effects of labour-market segmentation.
- Like many other forms of discrimination, such as gender or racial barriers, *hukou* segregation reduces the efficiency of labour markets. Liu (2005) finds that *hukou* is a major factor contributing to urban-rural inequality and that – from a labour market perspective – it reduces the returns to education and experience for a large part of the workforce, thus reducing their incentives to improve their skills. Zhang (2010) concludes that migrants have fewer jobs available to them and tend to be less mobile on the labour market: although widely perceived to have very high

occupational mobility, they spend longer in their jobs than permanent urban dwellers, because they are less able to seize new opportunities as they arise.

The authorities have set ambitious targets for improving migrants' situation

As is clear from the foregoing, the Chinese authorities are well aware of the problems facing migrant workers and committed to improving their access to social security, education and other services. A number of steps have been taken and others are planned. In July 2014, the State Council released details of planned *hukou* reforms to be undertaken in fulfilment of the commitments made at the Third Plenum of the 18th Central Committee (CC) of the Communist Party of China in November 2013 and the National Urbanisation Plan for 2014-20 approved by the State Council in March 2014 (Box 2.6). The Urbanisation Plan envisages the settlement of a further 100 million rural dwellers in urban areas by 2020, raising the urbanisation rate from 53.7% at end-2013 to 60% in 2020. The prospect of further urbanisation on such a scale has made the question of migrants' status urgent, since if present trends are left unchanged, migrants could constitute the majority of the urban population by 2030. Migrants already account for more than one-third of the urban population, with particular concentrations in big eastern cities like Guangdong, where they are now estimated to be the majority of the population (Lu and Wan, 2014).

Box 2.6. **National Plan on New Urbanisation (2014-2020): Turning migrants into urban citizens**

Chapters 6-8 of the new urbanisation plan focus on the settlement and integration of rural migrants to Chinese cities. The key principles set out in the plan include the following:

1. limiting the range of criteria that can be applied to rural migrants seeking urban residence registration;
2. ensuring equal access to education for migrant children for (at least) the period of compulsory education and gradual reduction of barriers to intermediate vocational training and tertiary education;
3. enhanced public services connected to occupational skills enhancement, job creation and entrepreneurship, not least via greater investment in vocational training and greater incentives for companies to provide training;
4. dramatically expanded coverage of social insurances, including pensions and medical insurance;
5. diversification of the sources of housing supply, in part by expanding social housing and requiring developers to provide more affordable housing;
6. the establishment of cost-sharing mechanisms that allocate the costs of converting rural migrants into full urban citizens among levels of government, business and individuals;
7. the adoption of measures to improve the social standing and integration of migrants and their families, in particular via deliberate efforts to increase their participation in party bodies, people's congresses, trade unions and other institutions engaged in policy making and social management.

Source: National Plan (2014), "National Plan on New Urbanisation (2014-2020)", Central Committee of the Communist Party of China and State Council, March.

While the ultimate aim of the reform is to eliminate the distinction between urban and rural *hukou* and create a national household registration system for all citizens, this will be a gradual process. Initially, most of these new urban dwellers are to be encouraged to settle in small cities/towns (corresponding to third- and fourth-tier cities), where all restrictions on migration will be lifted. This will be followed by lifting restrictions on migration to cities with 500 000 to 1 million inhabitants, and later still, to those with 1 million-3 million residents. Restrictions in respect of larger cities, however, will remain stringent, and in some cases could even be tightened (a policy sometimes referred to as "raising the doorsill"). Point systems in such cities will remain in place or may be created where they do not yet exist. These will facilitate the acquisition of local *hukou* by long-time residents, educated people, people with skills and overseas returnees. The minimum length of stay and of social security contributions may be determined at city level, but cities are to be prohibited from imposing financial criteria or conditioning *hukou* on property ownership. In the case of large cities (of 3 million-5 million), the required term for social security contributions in order to apply for *hukou* cannot exceed five years; by implication, it can be even larger for cities above 5 million. Larger cities will also be allowed to use a points-based system to create "a tiered process for settlement".

In essence, the reform will, in the first phases at least, make it far easier for migrants to go to places where few wish to go. Migrants continue to prefer larger cities, despite the higher cost of living and the barriers to integration there: consumption, education and labour market opportunities are all important attractors, as are big-city advantages in terms of infrastructure and amenities. Yet it will remain virtually impossible for a rural migrant to obtain a residence permit in a very large or mega-sized city; at present, that is where roughly half of all migrants live. In particular, the issue of job creation in small and medium-sized cities remains to be addressed. Moreover, the plans allow for larger cities to define for themselves the criteria that migrants must meet in order to apply for *hukou*. Even if the authorities remain convinced of the need to restrict migration to the larger cities, this provision should be reconsidered: given the externalities involved in migration decisions, it is not appropriate to decentralise control over such policies to subnational governments.

There remains the question of the land rights of rural dwellers who convert to urban *hukou*. According to the plans announced, it is envisaged that rights to collective land will not be withdrawn from departed migrants who obtain urban *hukou*. This will create a large mass of people with both urban *hukou* and rural land-use rights. It is not clear how this will be reconciled with the original principles of collective ownership of land in rural areas. It also remains to be seen whether those who convert to urban *hukou* will then be subject to more stringent application of the one-child policy. Full reform of the *hukou* system will thus have to proceed in tandem with the reform of land-use rights in the countryside (see below) and changes in family-planning policies.

Steps to eliminate the disparities in access to services linked to *hukou* status may have a more immediate impact than measures to facilitate change of *hukou* itself. Thus, the government is committed to ensuring that migrants benefit from insurance coverage and access to public services under the same conditions as urban residents. Social welfare benefits are also to be extended to migrant workers: the urbanisation plan sets targets of 90% and 98%, respectively, for the coverage rates of the basic pension and basic medical insurance by 2020, and access to social housing is projected to nearly

double to at least 23%. Migrant children are to be enabled not only to enrol in city schools where they reside but also to sit for high school entrance exams. Migrant children will be exempt from tuition fees at vocational secondary high schools, and preschool enrolment is encouraged. Under the plan, migrants will be obtain residency identification in the city they work and live after six months and can move their home residence registration to the city once the conditions set by the city are met. Some provinces have already moved quite far in allowing all workers to join the unemployment, maternity and other social insurance systems; all local authorities should be encouraged to move in this direction.

If enacted, these changes will gradually transform the *hukou* system into nothing more than a residence registry. Ultimately, this is likely to be a more promising path to reform than making it easier to change *hukou* status: the underlying problem remains the huge gap between rural and urban citizens' access to essential public services, and breaking the link between *hukou* status and access to education, health care and social protection will benefit all rural dwellers, not just migrants. In any case, in an economy in which people are increasingly mobile, providing pensions and social protection on the basis of one's place of origin looks ever more problematic in terms of both equity and efficiency. Such changes would need to be allied to improved portability of benefits, with a view to ultimately unifying the urban and rural systems of social protection and pension provision. The key is to phase out disparities in access to education, health care, public housing and social security. Moreover, an approach that reduces the link between *hukou* and citizens' rights should be able to circumvent the opposition of local governments, which have sometimes acted to *increase* the significance of local *hukou*, despite central policies aimed at relaxing the system.

Details of the intergovernmental fiscal reforms and tax reforms that will be needed to finance these changes have not yet been announced. They are likely to involve a combination of elements including new sources of revenue for local governments, such as a property tax, changes to the allocation of intergovernmental grants and shifts in expenditure responsibilities. In particular, the degree of decentralisation of social protection systems should be reconsidered. Some options for financing such reform are considered in Chapter 3. The changes outlined in the new urbanisation plan have implications for reforms in other spheres as well. For example, the Ministry of Education and the National Health and Family Planning Commission (formed in 2013 from a merger between the Ministry of Health and the Family Planning Commission) have announced that planning for local facilities within their domains will be based on the actual number of residents in a place (including migrants), rather than the registered population. In addition, the Ministry of Finance is to move gradually to using actual rather than registered population when allocating central transfers to local governments.

Another aspect of reform that merits reconsideration is the underlying rationale for the desire to relax access to small and medium cities while "raising the doorsill" for the largest cities, which may well prove inefficient from a purely economic perspective. The issues of city size and policies affecting the system of cities will be addressed at greater length below, but this Review broadly follows OECD (2013a) in favouring a policy of size-neutrality. The current stance risks trying to direct migrants to places they do not want to go, while tightening labour markets and undercutting growth in the most dynamic cities. Moreover, to the extent that the attractions of the largest cities are linked to the better opportunities available to their residence, this risks entrenching inequalities further. Focusing on employment and social security contributions (e.g. unbroken years of residence and formal-sector work) would be one way to reduce

discrimination in such places, while ensuring that migrants are drawn by the pursuit of employment rather than access to services or amenities and encouraging them to opt for formal employment.

Land use and urban development

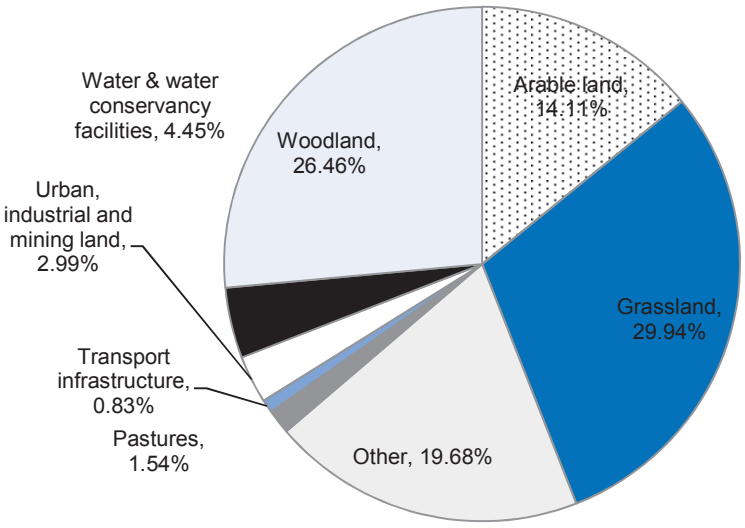
Urbanisation is generating increasing pressure on land use

The rapid expansion of China's cities has created growing pressure on land resources. According to the Ministry of Land and Resources (MLR), the urban built area increased sixfold between 1980 and 2012, rising from 7 438 to 45 566 square kilometres, while the urban population rose roughly 3.7 times. According to the MLR, the urban land area in China rose by 8 170 square kilometres over the decade to 2000. It increased by a further 27 800 square kilometres over 2000-13, as the pace of urban expansion nearly trebled. This growth was concentrated in the major cities: during 2000-10, the built-up area in municipal districts above the prefectural level grew almost twice as fast as that of towns at county level and below.

In international terms, the spread of Chinese cities is not in fact so dramatic. The Lincoln Institute of Land Policy estimates that, worldwide, the rate of spatial expansion of cities outpaces population growth by about 2 percentage points; in China's case, this differential was about 1.9 percentage points over 1990-2010, though it rose to 2.2 percentage points for 2000-10. Such differentials hardly point to dramatic sprawl, especially since China's cities were and are very dense by global standards, and the biggest declines in population density have occurred in the places that had the highest densities to begin with (OECD, 2013a). As will be seen, the big problems with the spread of China's urban areas stem from two other factors: the limited availability of land in many of the places where the pressure for spatial expansion is strongest and the extremely inefficient allocation of much of the land that is being converted for urban development.

One should not exaggerate the urban pressure on land even in a country as densely populated as China (Figure 2.5). According to the MLR, cities in China occupied only about 3% of all land, and only about one-quarter of this is built on. Around 14% is arable, with a further 28%-29% given over to pasture, forest and other agricultural land. While precise comparisons are difficult owing to differences in method and definition (even Chinese sources are hard to compare, owing to different categorisations and methods), it is worth noting that cities in England, the densest and most urbanised part of the United Kingdom, occupied about 9% of all land in the late 2000s; of this, about 42%-45% was unbuilt green space, including private gardens (GOS, 2010). For the United States, large urban and built-up areas accounted for about 4.3% of all land in 1997 (close to 5% if Alaska is excluded).[22] However, if these numbers put the spatial spread of Chinese cities into perspective, they should not be taken to imply that there is plentiful land for urban growth. While over half of China's land is unused, much of it is effectively unusable – deserts and mountains, in particular.

Figure 2.5. **Land use in China, end 2009**



Source: Unpublished data provided by the Ministry of Land and Resources, 2013.

At the same time, some parts of the country, particularly close to the coast, are very densely populated, and the land closest to the major cities is often prime farmland. This is not accidental – it reflects the facts that cities the world over have historically grown up fastest in places with satisfactory food supplies near at hand; large-scale, long-distance trade in perishable foodstuffs is a relatively recent development. Thus, the largest share of newly urban land has been converted from high-quality arable land: during 2006-11, the latest period for which data are available, arable land accounted for 42.4% of land requisitioned for urban purposes. In five provinces of southeastern China, almost 1.2 million hectares of paddy fields were expropriated, even though these areas were seriously short of back-up resources of arable land (Chinanews, 2013). In Shanghai, Tianjin and Beijing, the unused land that could be reclaimed was almost exhausted, and some cities in eastern provinces have nearly used up their total quotas for construction land for the period to 2020. Overall, the reduction in arable land has been concentrated in eastern and central China, where urbanisation has proceeded most rapidly; by contrast, there was an increase in arable land in inland provinces such as Tibet, Qinghai, Xinjiang, Inner Mongolia and Heilongjiang (He, Huang and Wang, 2012).

Land policies should not overemphasise urban containment

Chinese cities are going to spread out. The authorities need to plan for this expansion and help them grow sustainably and in a controlled manner, rather than to trying to prevent it. The major drivers of urban spatial expansion are fairly well known (Angel et al, 2011). Historically, the area of cities has increased when incomes have risen, population has increased and transport costs have fallen. They have also spread out as structural change reduced the value of agricultural rents on the urban periphery. These factors are all at work in Chinese cities. Moreover, as noted above, Chinese cities are already far denser on average than cities in OECD countries. It is therefore extremely unlikely that China's cities will prove to be an exception to the patterns just

described. They are going to spread out as they grow. The risk, of course, is that uncontrolled spatial expansion will lead to urban sprawl, with undesirable economic, social and especially environmental consequences. The aim of policy should be to ensure that the spatial growth of cities is not excessive and to ensure that land use in growing cities is consistent with economic, social and environmental goals.

Fortunately, policy can do much to affect the extent of urban spatial expansion and the form that growing cities take. Most obviously, this concerns things like transport-oriented development and approaches to land-use planning that favour density. Auto-oriented development strongly favours sprawl. It also means avoiding policies that encourage sprawl. These are very common in many countries: for example, property taxes, zoning, regulatory frameworks and planning regimes have often been found to favour greenfield over infill development, even where other policies exist that are meant to curtail urban sprawl (OECD, 2014a). Social policies can also help mitigate uncontrolled urban expansion. There is some evidence that higher income inequality contributes to urban expansion, because segregated housing markets (where rich and poor do not obtain housing in the same markets) can encourage the poor to improve their housing situation by consuming cheap land on the urban periphery. Often, these settlements are informal and located on land where development is in fact undesirable from an environmental perspective.

Containing urban development should not be overemphasised. An *a priori* commitment to tight containment policies in a fast-growing urban environment will probably lead planners to underestimate land and infrastructure needs; it may also drive up house prices. Containment in such circumstances is ultimately likely to fail, resulting in unplanned or poorly planned development beyond urban growth boundaries. Failed containment policies can often result in worse outcomes than managed growth. Moreover, if urban containment policies are perceived as too tight to be credible, they also will fuel land speculation. Policies involving *generous but credible* urban growth boundaries can reduce these risks, by identifying where there is scope for expansion (and planning ahead for the infrastructure and amenities it will require) but also where expansion should be restricted for environmental or other reasons. Selective protection of nonurban land is more credible and more likely to succeed in such places than very tight growth boundaries. Such policies offer markets greater certainty about the future and enable policy makers to prepare for urban growth while avoiding uncontrolled sprawl. The discussion that follows is therefore based on the view that urban expansion should be accommodated and managed rather than resisted.

The conversion of farmland has raised food-security concerns

The pressure for farmland conversion brings the demands of urbanisation into conflict with the government's food-security policies. The Chinese government has long insisted on the need to retain at least 120 million hectares (1.8 billion *mu*) of arable land across the country for reasons of food security – the so-called "red line". This is estimated to be the level required to ensure 95% self-sufficiency in basic food-security crops – wheat, rice and maize. The red line is already very close to the roughly 122 million hectares of land under cultivation estimated by the MLR in the late 2000s. However, recent revisions to land-use data suggest that there is more margin for manoeuvre than appeared to be the case a few years ago. At the end of 2013, the MLR announced a figure of 135.4 million hectares, equivalent to 112.8% of the red-line minimum. The additional 15.4 million hectares is equivalent to about 1.6% of China's

surface area, or just over half its existing urban area at the end of 2009. The figure was made public only after considerable delay, and some officials suggest that this was precisely because there was a fear that the revelation of the higher figure would lead to a frenzy of farmland conversion.

In fact, even the larger figure for arable land leaves little room for urban growth at the expense of cropland in those places where urban expansion is proceeding most quickly, because, as noted above, these are places where cities are surrounded by highly productive farmland. One solution is to increase cultivation in places where there is less pressure for land conversion. However, this option raises concerns about land quality: it appears that prime farmland is sometimes being developed while marginal lands are brought into production. Certainly, the quality of cultivated land is deteriorating (OECD/FAO, 2013), though this owes less to urbanisation-related land conversion than to other factors. According to current estimates of cultivated land resources, 70% are in low-yield farmland, and there is a declining trend in soil quality. Land degradation has affected more than 40% of total arable land area, driven by serious water/land erosion and soil salinisation/acidification. Wind erosion and desertification are increasing, while climate change appears to be contributing to reduced rainfall, depletion of surface runoff and groundwater levels in some places. In city suburbs, farmland suffers pollution from sewage, garbage and other pollutants, while farmland near mines or factories suffers pollution from slag and harmful mining drainage, and/or industrial emissions and sewage. Indeed, environmental degradation thus represents by far the most important pressure on arable land resources: according to the MLR, around 63% of the reduction in arable land arises as a result of the withdrawal of land from production for ecological restoration. The conversion of farmland for urban construction accounts for a further 23%, with the balance being linked to structural change in agriculture and natural disasters.

In order to administer the "red line", the central government sets an annual quota for the amount of expropriated arable land at the national and provincial levels. Within provinces, the quota is established at various sub-provincial levels. For example, between 2006 and 2010, the national quota for increasing construction land was 1.95 million hectares; 1 million of this could be converted from arable land. Table 2.2 shows the quota at the provincial level. Based on the Annual Plan for the Land Use, the governments of each level must implement the quota strictly. In addition, local authorities must ensure that at least 85% of arable land is preserved for growing crops. The nationally set quotas are determined in line with the policy of favouring the growth of small and medium-sized cities. If the planned farmland conversion quota is exceeded, the authorities may generate extra quotas by, for example, converting some rural construction land back to arable land, but such efforts to return land to cultivation often result in lower-quality land replacing better land. At the provincial level, various methods are used for allocating the quotas, reflecting such factors as assessed infrastructure needs, the existing city size, the GDP of city-level secondary and tertiary sectors and predicted city growth (Wang, Tao and Tong, 2009).

Table 2.2. **Quotas for the conversion of arable land, 2006-10**

Province	Total increase in construction land (1 000 hectares)	Converted from arable land (1 000 hectares)
Beijing	27.3	13.3
Tianjin	32.0	14.7
Hebei	73.3	46.7
Shanxi	53.3	36.0
Neimenggu	83.3	22.7
Liaoning	74.7	32.7
Jilin	46.7	26.7
Heilongjiang	64.7	32.0
Shanghai	26.0	16.0
Jiangsu	97.3	60.0
Zhengjiang	86.7	53.3
Anhui	75.3	50.7
Fujian	64.7	28.7
Jiangxi	61.3	32.0
Shandong	112.0	63.3
Helan	104.0	63.3
Hubei	71.3	44.7
Hunan	70.0	33.3
Guangdong	113.3	36.7
Guangxi	95.3	40.0
Hainan	26.7	9.3
Chongqing	53.3	27.3
Sichuan	93.3	48.0
Guizhou	61.3	32.0
Yunnan	59.3	36.0
Tibet	10.7	2.0
Shaanxi	53.3	36.0
Gansu	40.7	18.7
Qinghai	26.7	6.7
Ningxia	24.7	10.7
Xinjiang	67.3	26.7
All China	1 949.8	1 000.2

Source: Ministry of Land and Resources.

One remarkable feature of this system is that it makes no reference to the prices of land-use rights, something that could and should be changed (OECD, 2015a). The difference between the value of land in agricultural and other uses varies considerably across the country, and information on such variations could and should be used in determining the allocation of land for development (Cheshire, Sheppard and Charles, 2005; Cheshire, 2007). This is particularly striking in the context of Chinese policy makers' concern with controlling the growth of the largest cities: if land prices played more of a role in land allocation decisions, industrial investors, in particular, would have strong incentives to use land far more efficiently; they would be likely to hold less idle land and also to relocate space-intensive production to places where land was cheaper – i.e., out to second- and third-tier cities.

Predicated as it is on a very high degree of self-sufficiency, the red line also represents a very different approach to food security from that normally taken by OECD countries. Underlying it is concern about a possible blockade or export embargo.[23] Koen et al. (2013) argue that this approach to food security is fundamentally mistaken and that it also

underestimates the short-term elasticity of food supply, even in countries that are heavily reliant on imports (e.g. the United Kingdom during World War II). More attention to raising yields, to the restoration of ecologically damaged land and to contingency planning for increased domestic production could all contribute to greater food security for China. Nevertheless, it seems clear that the red line will remain a basic tenet of policy for some time to come, unless there is a particularly sharp rise in agricultural yields. That being so, there are at least three changes to this regime that merit consideration:

- The minimum *food-security threshold* is based on the principle of 95% self-sufficiency in wheat, rice and maize, but in the case of maize, less than 10% of domestic production is devoted to primary human consumption: about 70% is for animal feed and a growing share (roughly 21% in 2012) is for biofuel and other industrial purposes. Partial exclusion of maize from the quota – equivalent, perhaps, to the nonfood portion of production and some proportion of feed grain – could create significant margin for manoeuvre, given that China has in recent years sown more than 24 million hectares per annum to maize.24
- There is as yet no *inter-provincial* trade in arable land quotas, so the central allocation of conversion quotas is a zero-sum game, the results of which cannot easily be adjusted to reflect economic realities in particular places. Quotas are already flexibly allocated within provinces; the authorities could consider allowing similar flexibility across provincial boundaries.
- More *flexible administration* of the land conversion quota should take into account land prices and, in particular, the need to reduce the upward pressure on housing prices at the fringes of very large cities.
- *Land consolidation* offers a further opportunity to increase the supply of good-quality arable land and to enhance the efficiency of production at the same time. The fragmentation of farming households' agricultural land holdings continues to impede efforts to increase mechanisation and realise economies of scale.25 Moreover, the departure of millions of migrants to the cities has left a great deal of farmland in China untended. Often, these abandoned plots are small and fragmented, making it difficult (and unattractive) for anyone else to take them over and cultivate them. However, experiments with policies to foster the consolidation of isolated garden plots and other land parcels in places like Zhejiang have yielded good results and merit further development (Tao, 2012). In 2013, the "No. 1 central document" issued by the State Council and the Party Central Committee emphasised the need to foster the emergence of larger-scale farms.
- Development of *markets for the transfer of rural land rights* could also contribute to much higher agricultural productivity. OECD (2015b) argues that poorly defined contract rights and incomplete markets for the operation rights to farmland constrain agricultural productivity gains, reinforcing the barriers to land consolidation. In addition, the limited tenure of contracts to farmland may weaken farmers' incentives to invest in sustainable farming practices.

Land markets are segmented along rural-urban lines

There is no private land ownership in China. Urban land is owned by the state; local governments can develop such land through companies they control or they may sell or otherwise allocate land-use rights (but not title) to other parties. By law, the state may allocate land-use rights for industrial purposes for 50 years and for most other urban purposes (commerce, culture, health care, etc.) for a period of 40 years. For residential

purposes, the land may be leased for up to 70 years, and for recreation and tourism the period is 40 years. Land-use rights may be withdrawn if the public interest requires it, for the renovation of old towns, in the event of the expiration of land-use agreements without renewal, in the event of the dissolution of the entity holding allocated land rights or in the event of termination of use of public infrastructure. Compensation is envisaged in the first two situations, corresponding to the number of remaining years on the grant contract and the extent to which land has been developed (ADB, 2007). In practice, compensation has generally been limited to structures, including residential houses and structures for business purposes, rather than compensating for the loss of the land-use rights themselves.

Rural land is collectively owned by village councils. Citizens with rural *hukou* (registration) have some claims on this land in view of their membership of rural collectives, but nothing like full ownership. Rural land, in turn, is divided into several categories of arable land, as well as classes of rural construction land, which includes land for housing, land for infrastructure and public services (schools, hospitals, etc.). Rural construction land can also include land for industry and mining, for transportation and water conservancy facilities, and for tourism. Varying degrees of regulation apply to each category. A recent survey by the Ministry of Land and Resources indicates that excluding land for communications and water conservancy facilities, there was approximately 250 000 square kilometres of construction land all over China in 2009, of which over 70 000 square kilometres was owned by the state and almost 180 000 square kilometres (72% of the total) was rural collective construction land (Liu, 2009). Redesignation of rural land from one category to another is, in principle, strictly regulated, as is the use of each category by the collective. In practice, however, a good deal of activity takes place that goes beyond what the law envisages. Legally, rural collectives can convert land to non-agricultural purposes as long as it is for their own use (housing, infrastructure, etc.). They are not supposed to act as property developers for a wider market.

This has given rise to a substantial "grey" housing market based on rural construction land

In practice, many rural collectives in close proximity to large cities do engage in property development on their own, violating height restrictions and other rules in order to build housing that can be offered for rent or sale to migrants or even local urban residents – in short, to tenants or buyers whose *hukou* is not registered in the corresponding rural collective. This is often referred to as "small property rights housing" (SPRH), owing to the legal risk associated with it. Due to the nature of the land, SPRH cannot be granted legal title (Box 2.7). Moreover, when farmers or village committees build SPRH units, they do not pay the local government for their land-use rights as a developer would, nor do they pay taxes and marketing expenses. Often, the original villagers have established companies that manage the development. Since the municipal government cannot control development in these areas (they are not legally urban areas), plot densities are often twice those allowed in urban areas. Public spaces are almost nonexistent and roads very narrow (in contrast to the wide boulevards in urban areas), thus increasing the effective plot ratio. Even so, local governments may benefit from SPRH development, because the availability of low-cost housing makes a location more attractive to the industrial investors that many local authorities seek to attract. This accounts for many local authorities' indulgence of SPRH – in addition to the political and social tensions that can result from demolishing houses once they are built and occupied. Confiscation and demolition are thus uncommon across the country, although they do occur and the risk is greater in some of the major cities. This risk, along with its uncertain

legal status, makes "small property rights housing" far cheaper than comparable housing on state-owned urban land.

Box 2.7. Construction permits and the legal position of SPRH

The Law on Urban Real Estate Administration requires a real estate developer in the housing market to obtain the so-called "five certificates":

- The **State-owned Land Use Certificate** confirms the developer's right to use the land and is issued by the local government.
- The **Construction Land Planning Permit** confirms that the competent urban planning department finds the position, height and plot ratio of the project to meet the requirements of urban planning.
- The **Planning Permit on Construction Works** is not only the legal document allowing the construction organisation to engage in construction but is also the main basis for housing registration.
- The **Working Permit on Construction Works** confirms that the entity or developer is qualified to engage in the construction work envisaged.
- The **Commercial Housing Selling (Pre-selling) Permit** confirms that the real estate department under the government at the city or county level allows the developer to sell commercial housing.

Simultaneously, the developer needs to submit another two documents when delivering housing to the purchaser, the Quality Guarantee for Commercial Housing and the Specification for Commercial Housing of the newly built residential housing. The real estate developer is obliged to offer the two documents to the purchaser. Generally, the five certificates or the two documents cannot be issued for a SPRH. It is common practice that the buyer and the seller only sign an informal contract based on mutual agreement, which is not protected by the law.

In July 2002, Li Yulan purchased a small property rights house from a villager in Songjia Village, Tongzhou District, Beijing for CNY 45 000. When the land was converted in 2007, in order to receive the expropriation compensation, the villager filed a lawsuit with the court against the purchaser with a request to invalidate the purchase contract. As per the first instance judgment of the People's Court of Tongzhou District, the housing purchase contract between Li Yulan and the villager was invalidated, and Li Yulan and her family were ordered to move out of the house. This judgment was based on Li Yulan's urban *hukou*, which did not allow her to purchase the house of a member of the rural collective economic organisation. After the purchase contract was declared invalid, Li Yulan filed a suit against the villager for CNY 480 000. On 20 March 2008, Li Yulan was awarded CNY 280 000.

There is particular ambiguity surrounding the status of housing built on such land between 1986 and 1998, when urban dwellers could, in certain circumstances, acquire housing on rural collective land.[26]

Demand for SPRH reflects the fact that it is typically around 50% to 60% cheaper than comparable "ordinary" housing, as well as the very limited provision of social housing in China. In general, buyers of SPRH are migrant workers in cities and urban low-income residents, who collectively represent a very large market. According to one estimate, total housing in China in 2009, amounted to 18.6 billion square metres, of which 6.6 billion square metres (35.5%) consisted of SPRH.[27] Most of this was located on the fringes of major cities like Beijing and Tianjin or in urban villages (e.g. SPRH in Guangzhou and Xian), where cities have effectively grown around rural settlements

without urbanising (i.e. converting) them. SPRH first originated in Guangdong, where the proportion of such housing is high. Cities in Guangdong were also the first to introduce local policies concerning the SPRH. In 2007, guidance issued by Foshan City required that leftover historical construction problems should be resolved in line with the "principle of respect for history and reality" – in effect, limiting the scope for *ex post* reversal of illegal development. It also stipulated that SPRH units that met planning and the safety standards should be legalised. In 2009, Shenzhen published a set of measures similar to those in Foshan.

Currently, there is no national policy explicitly addressing SPRH, but since 2007, the central government has published various documents concerning the issue. In that year, the General Office of the State Council formulated and issued the "Notice for Strict Implementation of Laws and Policies Concerning Rural Collective Construction Land". The notice confirms the prohibition on using collectively owned land by way of lease, contracting or other means for non-agricultural construction, and states that no organisation or individual should sign an agreement by itself or himself/herself with a rural collective economic organisation or farmer to convert agricultural land and unused land into construction land. No organisation or individual should illegally occupy or lease collectively owned land for real estate development, and urban residents are forbidden from purchasing residential plots, farmers' houses or "SPRH" in rural areas. In November 2013, the Ministry of Land and Resources released an emergency notice firmly curbing illegal construction and the sale of SPRH, warning that the construction, sale and purchase of SPRH are not protected by law.

There are, it must be said, important exceptions to this pattern. While most rental housing on collectively owned land is indeed illegal "small-property-rights housing", lacking good infrastructure or public services, experience in some of the Pearl River Delta cities, like Guangzhou, Shenzhen, Foshan and Dongguan, show how local farmers and village collectives in peri-urban areas can profit from urbanisation and provide more affordable housing options to migrants and urban residents alike. As a special economic zone, Shenzhen has been able to pioneer new approaches in this area. "Rural farmers" in Shenzhen were able to develop their construction land to provide accommodation for around 5 million people. Private homes concentrated in urban villages cover an area of 95 square kilometres, with a total construction area of about 100 million square metres (20 million within the SEZ). However, the area of these villages has nevertheless been contracting in Shenzhen since about 2005, as the government has sought to replace those located in high-value areas with higher-quality apartments, offices and shopping malls (Pu, 2012).

Land expropriation is central to urban growth – and highly controversial

Local governments can, under certain circumstances, expropriate (with compensation) rural collective land and convert it into state-owned urban land. In some cases, this can increase its value tenfold or more via administrative action. The Land Administration Law (LAL), though apparently strict, actually leaves considerable scope for local governments to requisition rural land for urban purposes. The LAL stipulates that local governments can requisition collective land for construction use according to city planning within the urban construction area defined by the urban master plan – which is substantially determined by the local government. Rural collectives' freedom to dispose of their land for nonpublic purposes is severely constrained within the area covered by such planning, which typically extends well beyond the city into the countryside around it.

The compensation paid to farmers who lose their land is typically very low, because it is based on the returns of continuing to use the land for its rural functions rather than the potential value of the land in the event of a change of use. Compensation varies, but the usual ceiling for farmland is 30 times the gross annual yield of the land in agricultural use.[28] This makes for a valuation that is very reasonable in relation to the value of the land as farmland, but the increase in value associated with the change of use and subsequent auction can be dramatic indeed. In the area around Beijing, the compensation formula yielded a maximum of CNY 119 per square metre in 2011, at which time the price of the developed land, when auctioned, amounted to around CNY 4 600 (OECD, 2013a, pp. 83). The gap between the market value of land rights and the compensation paid to farmers appears to vary widely, but a recent study by Du, Thill and Feng (2014) covering 2009-12 suggests that the land-value gap increases with the value of the land itself: average compensation in Beijing during this period was around 15% of market value, but about one-quarter of (primarily high-value) expropriation cases, it amounted to no more than 5%. Overall, research undertaken by the Development Research Centre of the State Council suggests that when land development takes place, only 20%-30% of the rise in land values is distributed to the township level, with no more than 5%-10% going as compensation to farmers; a further 20%-30% was retained by the county or prefectural government and an astonishing 40%-50% is captured by the developers.

Not surprisingly, such huge gaps between compensation to farmers and the value of the land have led to fierce resistance to expropriation in many places. Local protests over legally questionable land seizures are an almost daily occurrence, and a number of observers suggest that land requisitioning is the single most important trigger of social protest in China (Miller, 2013).

There are clearly problems with the idea of allowing rural collectives to realise these enormous rents – this would make some farmers fabulously rich overnight simply because of where they happened to live. However, such low compensation is hard to defend, particularly in view of the restrictions on rural collectives' ability to realise the potential of their land. The rents involved are not thereby dissipated; they are simply captured by local governments and/or developers rather than farmers.

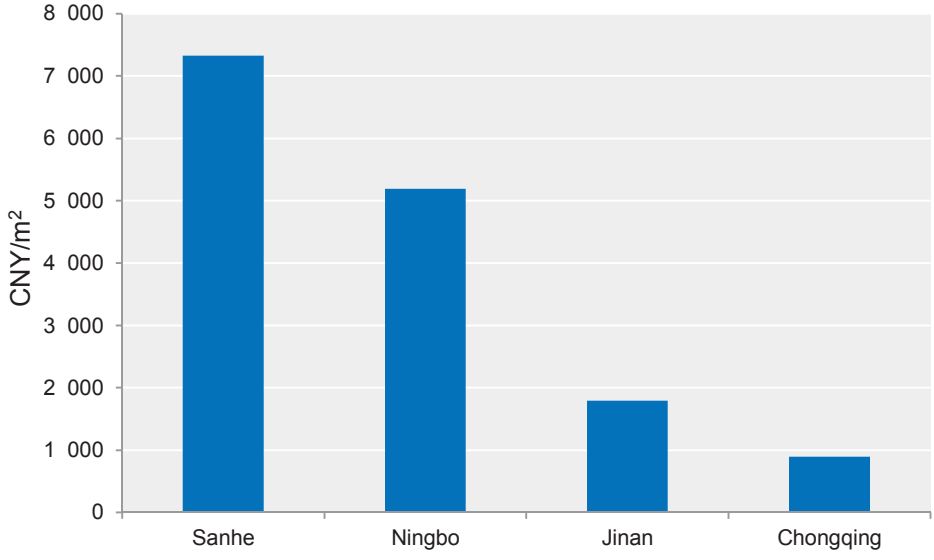
The treatment of rural housing land is particularly sensitive. Land for building housing and other facilities relating to living is allocated at no charge to members of rural collective organisations. The land is collectively owned, but farmers have use rights for an unlimited duration. Only one residential plot can be allocated to a household in its village, namely "one residential plot per household," with the area not exceeding the specified standard prescribed by provincial governments. Housing land cannot be inherited, but villagers can inherit the houses on it and continue to use the residential plot land, as stipulated by the property law. The purpose of the residential plot is to build rural housing and it cannot be pledged or used for investment, not can use rights be transferred to anyone who does not hold a rural *hukou*. Rural housing plots are also meant to fulfil some of the functions of social security, offsetting the exclusion of most rural dwellers from state-financed social protection schemes.

In practice, the proportion of rural housing land left unused or empty has been large, creating serious waste, especially in western China. A survey conducted by the Ministry of Land and Resources (2011), found that unused residential plots represented 42.9% of total rural housing land. Rural-urban migration, in particular, has contributed to high housing vacancy rates for rural residential plots, albeit with significant seasonal variations. Old houses exist for many years in disrepair, most of them damaged and

dangerous, with no one living in them (Jiang, Li and Zhang, 2011). The state long stipulated that no circulation of housing land be permitted, because rural housing land was a welfare guarantee. However, with rapid urbanisation, the asset accretion function of residential plot land gradually became obvious, especially at the urban fringe, contributing to the rise of so-called "small-property-rights housing" discussed above. According to a survey carried out in 1 083 villages by the Ministry of Land and Resources in 2007, residential plot land transactions were carried out in 62% of these villages.

By contrast, in regions where cities are growing very fast, there is often pressure to expropriate rural housing land. Although there are regulations to protect arable land, no comparable protection exists for farmers' residential plot land or other collective construction land. National legislation includes no compensation standards for residential plot land expropriation and house demolition. Article 47 of the Land Administration Law stipulates that the compensation standards for attachments and existing crops on the land are to be specified by a province/autonomous region/municipality. However, the compensation mentioned was not for residential plot land but for the *attachments* on the land, i.e. the built structures. Therefore, during expropriation, most local governments compensate rural dwellers for housing but not for residential plot land. In some places, farmers have claimed that the authorities have compelled them to convert their ancestral homes or that the compensation promised them has not been paid; these complaints were sufficiently serious and widespread to prompt intervention from the State Council, which called on local governments to monitor land conversion schemes more carefully and to punish actions that violated farmers' rights (State Council, 2010). The compensation paid is set by the provincial authorities and varies significantly from place to place. As can be seen in Figure 2.6, compensation in Sanhe, near Beijing, was seven times that of Chongqing in 2009.

Figure 2.6. **Compensation for rural housing expropriation in four cities, 2009**



Source: Wang, L, H. Wang and R. Tao (2012), "Study on the Compensation to Expropriated Rural Residential Properties in China", *Economic, Theory and Business Management*, Vol.7, pp. 104-12.

Box 2.8. **Compensation for rural housing land in Guangzhou**

In Guangzhou, there are three compensation methods for the expropriation of residential plots: monetary compensation, relocation housing and a new resident plot. First, compensation to the household can take the form of money, including compensation for both residential plot land use rights and demolished housing. The standard is set by the Guangzhou municipal land resources and housing administrative bureau and periodically published after approval by the municipal government. Secondly, relocation housing may be provided to farmers, particularly when a large number of rural households are involved (e.g. entire neighbourhoods). If the surface area of the demolished rural house is less than 25 square metres/person, the area of the relocation apartment should be 25 square metres/person. If the area of the demolished rural house is more than 40 square metres/person, the area of the relocation apartment should be 40 square metres/person. If the area of the demolished rural house is between 25 and 40 square metres/person, the area of the relocation apartment should be the same as that of the demolished house. One-person households are entitled to 50 square metres of replacement housing. If a married couple has not yet had a child, the size of the relocation apartment should be assessed on the basis of three persons. Thirdly, new residential plot land may be distributed to farmers. This method is associated with expropriation projects in remote areas.

Fiscal pressures on local governments have a huge impact on urban land markets

The functioning of China's land markets cannot be understood apart from the desire of local governments to increase their own income. They are the key players in this situation, and their incentives are shaped by fiscal pressures more than anything else. As noted above, local governments have very limited revenue sources of their own and very large expenditure responsibilities (see Chapter 3 for details). They have thus grown increasingly reliant on a proliferating range of fees, user charges and penalties in recent years (World Bank, 2005, 2014a). However, the sale of land-use rights has emerged as by far their most important source of off-budget income. The fiscal framework for local governments is addressed in detail in Chapter 3; for the purposes of this chapter, the focus will be exclusively on local government income from land and the ways in which local governments' revenue hunger affects the land market.

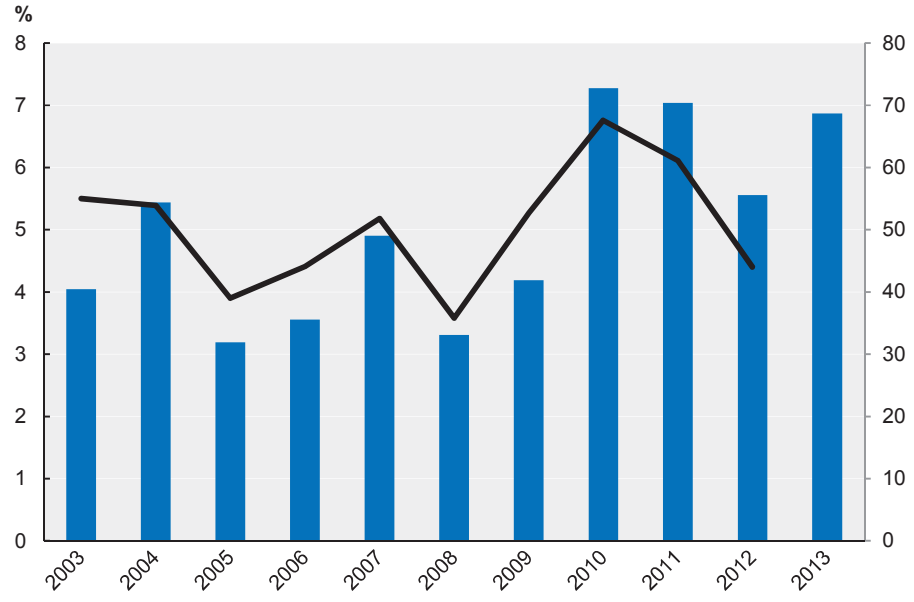
Revenues associated with the sale of land-use rights peaked at 7.3% of GDP in 2010 (Figure 2.7). That year, receipts from land leases accounted for an estimated 35% of comprehensive fiscal revenues for prefectural level cities, compared with just 30% from tax revenues (Wong, 2012).[29] In addition to income from leases, municipalities collect a plethora of taxes from land and associated activities – property taxes, deed taxes on property transactions, turnover taxes on construction and real estate companies, etc.[30] In 2013, nationwide land revenues brought CNY 4.12 trillion into the state's coffers, equivalent to more than 20% of all government revenues and to three-quarters of tax revenues accruing to SNGs (Wong, 2014). Typically, local authorities establish land banks, which are constituted as public service units (PSUs – a form of government agency). Their focus is generally land rather than city development. They acquire greenfield sites from village collectives and purchase existing structures for redevelopment in cities. Once either the land or the use-right has been acquired and the previous land users compensated, the PSU clears the land and installs basic urban infrastructure such as drainage, roads and utilities. Only then can a real estate promoter purchase the land-use right.

City governments collect the funds directly from developers and use the money for roads, schools and other municipal projects. This extra-budgetary income is excluded from

the revenue accounts compiled by the Ministry of Finance (Yunyan Man, 2011; Wong, 2014), and OECD (2013a) observes that the use of these funds is often opaque. In principle, a large portion of this income should be used to finance infrastructure, amenities and other public goods and services connected to urbanisation; in practice, this is far from always the case. The Ministry of Finance estimates that in 2011, nearly 80% of the gross revenue of local governments from land sales was spent either on compensating previous owners/users or on redevelopment costs. The redevelopment costs probably include the standard public facilities on the land, such as schools, clinics and the like, the sizes of which are set down by law. A further 8% of the total revenues were earmarked for specific purposes by legislation – notably for creating new farmland. The total surplus available for spending by the local authorities amounted to just 18% of the gross revenue from sales (1.3% of GDP) and represented 6.4% of total local government expenditure. However, the amount estimated for compensation and redevelopment in the ministry analysis seems on the high side in view of the very low levels of compensation paid to farmers (around 2.6% of the subsequent lease value in the case of areas around Beijing in 2011). If this figure is nevertheless accurate, it implies that a huge part of the revenue raised from leasing activities goes straight back into investment in infrastructure and other purposes that reduce the costs incurred by developers, who, as noted above, appear to be capturing a very large share of the land rent directly, as well.

Figure 2.7. **Gross revenue from sale of land-use rights in China**

As percentage of GDP (LHS, bar chart) and of local government revenues (RHS, line graph)



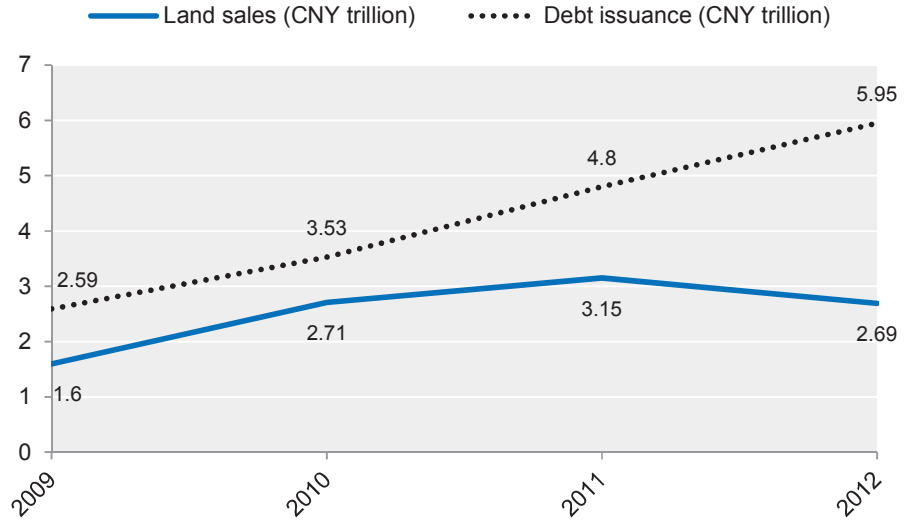
Source: Liu, Z. and Y. Wang (2014), *The Analysis on City, Land and Housing Issues in China, in Annual Report on the Development of China's New Urbanization* (2014), Social Sciences Academic Press; National Bureau of Statistics, and Ministry of Finance.

Though it is difficult to estimate the contribution of land revenues to municipal finance after deducting for land procurement and preparation costs and the cost of compensating households for resettlement, the importance of land far exceeds their contribution to net income, since it is also the main asset used by municipal governments as collateral for borrowing. Strictly speaking, the Budget Law prohibits municipalities

from borrowing without explicit permission from the State Council (Article 28), but many Chinese municipalities have found ways to borrow using municipal investment entities known as Urban Development Investment Corporations (UDICs). UDICs raise and bundle together bank loans and other financing, using a variety of municipal assets as equity and collateral. The popularity of taking on debt to fund local projects has been increasing in recent years, since the central government has maintained a relatively loose monetary policy. Today, all cities have established UDICs and they have come to play an increasing role in financing urbanisation. According to the 2011 audit conducted by the National Audit Office, at the end of 2010, there were 6 576 UDICs at the provincial, prefectural and county levels, covering virtually all administrative units at these three levels.

A number of observers have expressed concern that the current high dependency on land is risky and unsustainable (Wong, 2012; Tao, 2012; Miller, 2013). Land prices are notoriously volatile and land revenues are unsustainable as a pillar of local finance. With leases running 40 to 70 years, land is an exhaustible resource, and in the coastal regions cities, are already running out of land. Moreover, the interplay between land and Urban Development Investment Corporations has led to the overuse of both, and the expanding resource envelope has softened the budget constraint for municipal governments and encouraged wasteful investment. However, there is no clarity over the total amount of local debt. Liu Yuhui, director of the CASS Key Laboratory of Finance, estimated in 2013 that total local government debt had reached CNY 20 trillion (USD 3.3 trillion) by end-2012,[31] whereas the National Audit Office estimates were CNY 10.7 trillion in 2010 (Wong, 2012). This creates concerns over the real magnitude of the problem and the sustainability of debt levels. As Figure 2.8 shows, whereas debt levels continue to grow, income from land leases is decreasing as land becomes scarcer. This issue is treated in depth in Chapter 3.

Figure 2.8. **Local government urbanisation funding sources**



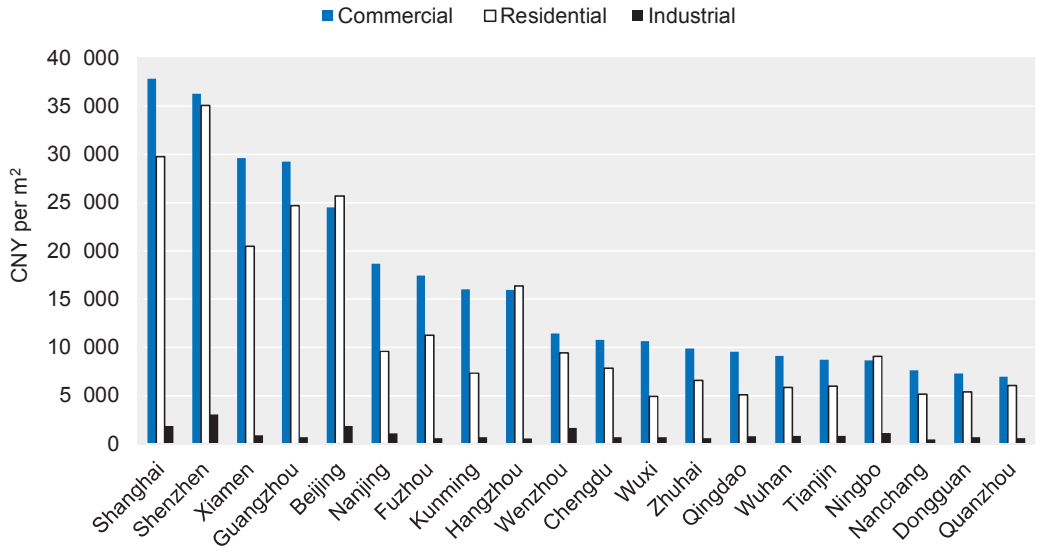
Note: Data covers 84 major cities and municipalities in China.

Source: Figure based on information from the Ministry of Land and Resources of China. Published by KPMG Global China Practice, China 360, "China's urbanization: funding the future", December 2013, www.kpmg.com/CN/en/IssuesAndInsights/ArticlesPublications/Newsletters/China-360/Documents/China-360-Issue14-201312-China-urbanization-funding-the-future-v1.pdf.

Local governments' fiscal strategies affect the allocation of land to different uses

Local governments' appetite for revenue from land operations has contributed greatly to the spatial growth of Chinese cities, but its impact on the *structure* of urban land markets is in large measure a product of the differential treatment of different categories of investors and different forms of land use. Briefly, local governments tend to make land available very cheaply to industrial developers and to charge far higher prices for land developed for nonindustrial (commercial or residential) purposes (Figure 2.9). This practice began in the 1990s, when Chinese cities began creating vast numbers of industrial parks and other special industrial zones. By 2003, there were 3 837 of them – more than one for every county-level administrative unit in China. Of these, only 232 had been approved by the central government and a further 1 019 by provincial governments; the remainder – some two-thirds of the total – were purely local initiatives, undertaken by various city, county, and township governments. By 2006, their number had exploded to 6 015 (Tao, 2012). When the central government sought to curtail such developments, local officials responded by changing their designations, but the fundamental reality of large-scale, low-cost transfer of land-use rights to industrial users continued.

Figure 2.9. **Land prices in major Chinese cities, 2014**



Source: Ministry of Land Resources data; accessed via CEIC (2014), *CEIC database*, www.landvalue.com.cn (accessed 20 October 2014), data are for January – September 2014.

There are several reasons for this bias towards industrial investors:

- Many Chinese officials associate industrialisation with economic success.
- There is a perception that industrial investors are more mobile than others – they can build their factories in any number of places. Local officials thus believe that favourable conditions are needed to attract them, and one way to compete for investor interest is to offer land and infrastructure on advantageous terms. Once they come, residential and commercial development will follow, as firms in the non-tradable sector move in to provide housing and consumption opportunities to the growing industrial workforce.

- The lack of recurrent taxes on immovable property means that, for residential development in particular, the subsequent flow of tax revenues is very small. Revenues from property taxes are comparable to those of many OECD countries, but they are mainly transaction-based; this focuses local governments' attention on land sales and also reduces turnover in the secondary housing market. The off-budget income from land leasing and associated fees thus represent the major source of income from such conversions (Tao et al., 2007; Tao, 2012). By contrast, industrial and commercial developments result in large post-development revenue streams.

The evidence suggests that even the mechanisms used for allocating land rights (negotiation or choice of auction type) reflect this differential treatment of different categories of investors (Tao et al., 2007; Cai, Henderson and Zhang, 2013). Competitive tenders are far more common in commercial and residential development; in 1999, only 15% of land leases for industrial purposes were subject to competitive bidding; by the mid-2000s, this share had risen somewhat but was still only around 25%-27% (Tao, 2012). Moreover, land conversion and development processes also appear to be characterised by widespread corruption: Cai, Henderson and Zhang (2013) find a significant relationship between the form of auction chosen, the sales prices and the value of the property. In essence, the hottest properties are more likely to be put to two-stage auctions, where there are more opportunities for officials to shape the outcome; it turns out that competition is weaker and sales prices are lower in such auctions. Even in the absence of corruption, these arrangements contribute to a "race to the bottom" among local governments competing for investment: in many cases, land is transferred to industrial investors at a net loss to local governments, once the costs of things like infrastructure and service provision are factored in. In some cases, zero-land-price deals were done (Tao et al., 2007; Tao, 2012).

Altogether, this approach on the part of local governments contributes to: wasteful use of prime urban land for industry, poor urban planning (see below) and abusive expropriation of rural collectives' land. It is in this context that one may speak of "urban sprawl" in a Chinese context. Most Chinese cities are rather dense in terms of population per square kilometre, but many combine very high levels of overall (and especially residential) density with extremely wasteful use of land for industrial development. In 2010, the MLR reported that 40% of urban land was occupied by industry. Yet data from both the Ministry of Housing and Urban and Rural Development (formerly the Ministry of Construction) and the National Bureau of Statistics suggest that industrial use accounts for only about a quarter of the actual built surface of Chinese cities. This is still a very large share by international standards, but it also points to the presence of a great deal of idle land. The MLR's concern has long been that much of the land allocated to industrial users remains idle, while urban development is pushed farther and farther out.

Tao (2013) emphasises the degree to which this approach leaves local governments exposed to changes in land prices. In many cases, borrowed funds are used to finance infrastructure investment that will attract industrial investors, often with land serving as collateral. As long as investment flows in and growth is strong, the resulting boom in property prices provides local governments with the revenues needed to service this debt. This leaves them highly dependent on continually rising prices for residential and housing land. Moreover, the stimulus package initiated after the onset of the global crisis in 2008 reinforced this pattern. By 2010, there were over 10 000 local industrial parks, of which 70% were organised below county level. In many counties, the results included liability/asset ratios in excess of 100%. Land prices are thus essential to local

governments' ability to pay off their loans, which, in turn, reinforces their incentives to restrict land supply and make the most of their monopoly power. Tao and others view this model as increasingly vulnerable: according data released by the National Bureau of Statistics and the MLR, land sales in China reached a record high in value terms in 2013,[32] but real estate enterprises became much more cautious in 2014, as the financing environment worsened and demand for housing in most places outside the largest cities began to soften. Housing prices, which had been rising in the great majority of cities in 2013 and early 2014, began to soften and then decline; by October, prices were falling in all but a handful of cities (Slok, 2014).

This approach has, it must be said, fuelled a tremendous and very rapid expansion of basic infrastructure, particularly since the anti-crisis stimulus package was adopted. During 2009-13, China reportedly built a new skyscraper (150 metres+) every five days,[33] more than 30 airports, metros in 25 cities, the three longest bridges in the world, more than 9 600 kilometres of high-speed railway lines, 42 000 kilometres of motorway and both commercial and residential property developments on a mind-boggling scale (Peston, 2014). However, the evidence suggests that much of this investment has been extremely inefficient: a 2014 study produced by the NDRC and the Academy of Macroeconomic Research estimates that up to USD 6.8 trillion of ineffective investment had been undertaken since 2009, a very large share of which consisted of local governments' industrial and infrastructure projects. Such policies have led to property bubbles in some cities and to the construction of "ghost towns" in others (Ren, Xiong and Yuan, 2012), particularly in smaller (Tier 3 and 4) cities, where prices have been falling due to oversupply.[34] The over-supply of cheap land to manufacturing leads to over-investment and inefficient use of land. At the same time, the excess liquidity generated by continuing large current-account surpluses finds its way into other segments of the property market, because Chinese investors have few available savings instruments, and this drives up prices in the under-supplied commercial and residential real estate markets. Finally, local governments' exercise of monopoly power on the (formal) urban housing market is one of the main factors underlying the concentration of migrant workers in employer-provided dormitories, "urban villages" and "small-property-rights housing", often with poor-quality construction, poor infrastructure and poor amenities.

Restrictive local government policies clash with rising demand for housing

Overall, the rapid growth China has experienced in recent decades has undoubtedly brought about a substantial improvement in the housing situation of hundreds of millions of people. Nationally, living space per capita has risen steadily along with GDP per capita, roughly tripling since 1978 according to the official data and reaching levels comparable to some OECD members. This probably overstates the degree of improvement, as the official data do not cover informal housing, and few surveys cover migrants (Koen et al., 2013). One study that did encompass informal urban populations found that migrants occupied about 30% as much floor-space as official residents (Zheng et al., 2009). Even so, there is no doubt about the overall increase in housing consumption. The quality of housing has also improved dramatically. Nevertheless, important challenges remain when it comes to ensuring the supply of adequate, affordable housing in Chinese cities. These challenges are directly linked to the separation of urban and rural land markets and to the labour-market segregation based on the *hukou* system.

Paradoxically, local policies that effectively restrict the supply of housing in growing cities have long coexisted with national policies that seek to respond to the demand for affordable housing.[35] These have included programmes requiring local governments to

supply land free to developers for the construction of new housing (subject to a maximum profit margin of 3%), housing developments subject to price caps and, since 2010, a major push to expand the supply of public rental housing (for details, see Koen et al., 2013). Some 24.9 million subsidised housing units were started in 2011-13, amounting to about 70% of the planning target for 2011-15 (36 million), and 15.8 million units were completed. The government planned to spend CNY 116 billion on subsidised homes in 2014 (EMIS, 2014). However, these measures have had limited impact, in no small measure because such programmes have mostly been reserved for holders of local urban *hukou*, while the biggest challenges with respect to affordable housing are faced by the country's 274 million migrant workers. Even within the urban population, affordable housing policies have in the past tended to serve mainly the middle of the income distribution: Koen et al. (2013) cite studies suggesting that the vast majority of urban dwellers benefiting from affordable housing efforts fell in the 5th to 7th deciles of the urban household income distribution (upper-middle income, in other words). Deng, Shen and Wang (2011) reach a similar conclusion, arguing that affordable housing programmes have increased inequality and urban poverty.

Designing affordable housing policies for China is no simple task. The price of commercial residential housing in urban China is rising year by year, although the government has introduced a series of polices to control this trend (Table 2.3). However, the authorities in many places fear that affordable housing initiatives aimed at the lower end of the income scale risk *subsidising* rural-to-urban migration – hence the reluctance to open up social housing, in particular, to migrants. Public housing is potentially the most expensive of the urban *hukou*-linked services. Given the scale of China's current urbanisation wave, it is not easy to strike a balance between policies that subsidise increased concentration and policies that effectively try to check migration by restricting housing supply. However, it seems clear that the most urgent steps involve addressing distortions that restrict supply and push up prices rather than placing the main emphasis on the creation of countervailing distortions in the form of subsidies of various kinds. Further relaxing constraints on the supply side of the housing market could also be growth-enhancing, insofar as the value of China's housing stock relative to GDP is still quite low, even for a middle-income country (OECD, 2013a), and a better-functioning market might allow for more investment while reducing the risk of speculative bubbles.

Table 2.3. **Policies affecting the housing market since 2010**

Issued time	Policy	Main measures
January 2010	Notice of the General Office of the State Council on Promoting the Stable and Sound Development of the Real Estate Market	To reset the strict policies on mortgages for second homes
April 2010	Notice of the State Council on Resolutely Curbing the Soaring of Housing Prices in Some Cities	To discourage unreasonable real estate speculation and raise the minimum down payment for second-home purchases
January 2011	Notice of the General Office of the State Council on Further Doing a Good Job in the Control of the Real Estate Market	To institute an extensive property purchasing limitation on migrant buyers, to second-home buyers in major cities
March 2013	Notice of the State Council on Monitoring Real Estate Market	To set a tax rate of 20% of the added value on second-hand housing; 10 million units of social housing to be built

Source: OECD, various sources.

Land reform is prominent on the policy agenda

In November 2013, the Third CC Plenum adopted a resolution containing a number of points that touched directly on land rights. Among other things, the Plenum called for:

- a unified market for construction land encompassing both urban and rural areas;
- a reduction in the scope of land expropriation and standardisation of expropriation procedures, with appropriate guarantees for the affected farmers;
- fairer distribution of the benefits of land reallocation among the state, the rural collective and the individual;
- developing the secondary market in land leasing, transfer and pledge; and
- improving the system for allocating and using rural housing land and facilitating the transfer of housing property rights.

The plenum explicitly called for endowing farmers with greater rights over their land, particularly their rights to use it to generate income, and for better protecting the rights of individual farmers within rural collectives. In early 2014, the government confirmed to the National People's Congress that rural reform was one of the crucial tasks for the near term and emphasised the need to strengthen farmers' rights over their land, and the March 2014 urbanisation strategy set out some key markers (Box 16). However, Chinese officials from different state institutions appeared to take a very different view of where such reforms might go and when. For example, widely differing views were expressed about the possibility of allowing farmers to use their land as collateral in some fashion, and officials from the Ministry of Agriculture and the MLR adopted a very cautious position toward any relaxation of the restrictions on informal housing. With respect to the collateral issue, the new strategy emphasises that "the right to mortgage, guarantee and transfer farmers' property will be advanced slowly and surely on a pilot basis" (National Plan, 2014, Chapter 24).

Box 2.9. **National Plan on New Urbanisation (2014-2020): Reforming China's land market**

Chapters 20 and 24 of the new urbanisation plan contain the key commitments with respect to land reform. These include:

- development of a unified market in construction land encompassing rural and urban areas, in such a way as to ensure that farmers capture a fair and equal share of the gains from rising land values;
- continued stringent protection of farmland in the interests of food security;
- tighter control over incremental construction in the largest cities and increasing land supply for construction in satellite cities;
- giving greater priority to increasing the supply of land for residential purposes, and the use of both regulatory and incentive mechanisms to generate more efficient use of industrial land, including incentives for redevelopment;
- strengthening the land rights of rural dwellers, including via determination, registration and certification of land rights, and the creation of possibilities for farmers to possess, use, profit from and transfer their land, as well as to mortgage it or otherwise use it as security; and
- reform of the system governing land expropriation, with a view to narrowing its scope and standardising procedures and improving the compensation mechanism, as well as dispute settlement systems.

Source: National Plan (2014), "National Plan on New Urbanization (2014-2020)", Central Committee of the Communist Party of China and State Council, March.

Land reform is undeniably complex, and there is probably a need for piloting reforms and experimentation along the way, especially given that it will need to unfold in tandem with reforms to the *hukou* system and rural dwellers' access to essential services and social protection. That said, the foregoing suggests a number of elements that should be encompassed in any reform package:

- Changes to the requisition system should ensure that rural dwellers whose land is "urbanised" by local governments should receive a far greater share of the development value of the land. There are already pilot programmes in a number of places to allow farmers a greater share of land values. In Shenzhen, for example, the authorities in 2013 adopted a policy allowing rural collective land to be sold by farmers at market value: the farmers can sell the land for cash, form a company to develop it or retain an interest in the development. The local government still captures a large share of the land rent – in the first sale, in late 2013, it took about 70% of the auction price, while the farmers retained 30%. In addition, the farmers will be granted ownership of 20% of the floor space developed.[36]
- Rural collectives should have greater freedom to use rural construction land for non-agricultural purposes, such as the construction of housing for rent or for sale, and to deal directly with developers in so doing, as well as to exploit other opportunities to profit from their land, to transfer it, to mortgage it, etc.
- The procedures by which local authorities allocate the rights to use state-owned land should be regularised and made both more market-oriented and more transparent. In particular, it is necessary to end their use of monopoly power on the land market to restrict the supply of land for nonindustrial purposes, while engaging in a "race to the bottom" competition for industrial investors. The rules should distinguish clearly between legitimate public and nonpublic purposes in respect of requisition. Local authorities should be obliged to lower the proportion of land zoned for industrial use and increase the supply of residential land.
- Data on land prices and, in particular, discontinuities in land prices should be explicitly incorporated in decisions concerning the conversion of land to urban uses.
- Regularisation of so-called "small-property-rights housing" could create conditions for improving conditions in such areas.
- A significant increase in the effective supply of land could be achieved by altering policies concerned with land use in existing urban areas. Tax and regulatory changes can be used to encourage the development of idle industrial land for nonindustrial purposes; at present, too much high-value land in urban areas is underused or not used at all. Floor-area ratios are often 0.3-0.4; raising them to 0.6-0.8 would release a large volume of urban construction land – as much as 6 600 square kilometres (Tao, 2012).
- The expenditures funded by local governments' allocation of land-use rights should also be made more transparent, including both compensation to rural collectives and the allocation of development costs.
- Greater flexibility can and should be introduced into the regulation of farmland conversion; if the annual quota is to be retained, then it would be desirable to make provision for trade in quotas among provinces and for a partial exclusion from the quota of nonfood crops (i.e. maize for industrial uses). Consolidation of farmland

should be encouraged in the context of broader efforts to strengthen rural dwellers' land rights.

Some specific proposals for implementing the broad principles outlined above could merit consideration. First, the authorities might look to models of land development that involve direct sharing of land between rural collectives and local governments. For example, the collective might surrender some portion of its land to the local government to be used for infrastructure (perhaps 25%-30%) and an additional portion (say, 20%-25%) could be auctioned by the local government to raise revenue to cover the costs of infrastructure provision. In return, the collective would retain the right to develop the remainder of the land in question on a commercial basis, dealing directly with private developers. Secondly, Su and Tao (2013) suggest that potential disruption to the housing market could be avoided by stipulating that housing built on such land could not be sold for some set period – it could be used only for rental purposes in the interim. The knowledge that such properties would come on the market in a few years' time might help cool speculation in the housing sector, but the delay could help prevent abrupt falls in housing prices in the short term. This could also do much to address the shortage of affordable, legal housing for migrants. Issues of local government finance will be treated in depth in the next chapter, but it is important to note at this stage that local finances could gain from many of these changes: a rental income or property tax on formalised SPRH could generate substantial revenues over time, as could the redevelopment of idle industrial land and more emphasis on better disposition of converted collective land. Putting an end to free or cut-price provision of land to industrial investors is critical.

Reforms to rural land rights should be accompanied by other institutional reforms

There is wide agreement on the need to strengthen rural dwellers' rights over their land, even if there is great diversity of opinion about how – and how fast – this should be done. However, any serious movement on this front will need to be accompanied by measures to strengthen and improve the governance of rural collectives. The transition from collective farming in Russia and Ukraine, among other places, demonstrated the ability of the leading officials of large agricultural collectives to exploit their positions for personal gain at the expense of their members (Wegren and Belenkiy, 1998; Giovarelli and Bledsoe, 2001; Wegren, 2010). A similar risk exists in China. Indeed, there have long been complaints in many places about village leaders' use of their position to profit from requisition processes; some compare them to the landlords of pre-revolutionary China, and some recent research points to the impact of land requisition pressures on village committee elections, including the intervention of outside actors with an interest in the outcome (Tao, 2012; Su, Tao and Wang, 2013). As noted above, land conversion is an area in which corruption appears to be widespread and deeply rooted. While the law does provide some legal mechanisms to prevent the abuse of power by village councils, these are often not understood or not accessible to the villagers, who may in any case be reluctant to enter into conflict with powerful local actors.

Among other things, there will need to be far clearer policy guidelines or regulations concerning the ways in which land shares are to be allocated in different situations, the rights of long-term migrants who have been in the city but retain membership of the collective, and so on. In addition to clearer assignment of plots to families within each collective, stronger regulation of how collectives are governed will be needed (perhaps by requiring them to adopt a company structure when dealing with commercial development) and a strengthening of the court system to back such changes up and ensure

that farmers' rights will be upheld. It is significant and positive in this context that the Third Plenum also called for strengthening the courts and, in particular, for measures that would reduce the ability of local officials to influence them. Since the key to abusive practices is in many cases collusion between the leaders of rural collectives' and local governments, this emphasis is to be welcomed.

Land reform can contribute to deconcentration of the urban system and more efficient specialisation

As noted in Chapter 1, there is considerable discussion about whether China is under-urbanised, given its level of income and development. Related to this is a debate about whether or not urban concentration in China is excessive and what, if anything, policy makers can or should do to shape the evolution of the urban hierarchy.[37] Since OECD (2015) and other analyses find that agglomeration economies are increasing in city size and the Zipf's law analysis in the previous chapter suggests that further concentration might be expected, this could be good news; OECD (2013a) argues that there is indeed scope for China to realise economic benefits from further growth in the largest cities. Yet, as seen in Chapter 1, Chinese policy makers, concerned about the environmental, economic and social costs of such agglomerations, would like to slow down the growth of the megacities and foster faster urban growth elsewhere.

What increasing urban concentration might imply for aggregate economic performance is an open question. Davis and Henderson (2003) point to empirical evidence suggesting that the economic effects of urban concentration depend on the level of development of a country and that urban concentration tends to follow a pattern similar in some ways to the regional development path described by the so-called "Williamson curve" (Box 8). They suggest that urban concentration is advantageous at lower levels of development, since it allows middle-income countries to economise on infrastructure and to enhance information spillovers and knowledge accumulation when the economy is still "information-deficient".[38] As development proceeds, deconcentration follows, owing to rising costs in the core and the spread of infrastructure and knowledge resources, as they become more abundant. Deconcentration follows at a later stage, as technology and resources improve and cities specialise to relieve congestion. Davis and Henderson (2003) also find that increasing democratisation and fiscal decentralisation facilitate urban deconcentration. Critically, so does investment in connective infrastructure (transport and telecommunications) for hinterland cities. This can be critical for deconcentration, but it may not be sufficient: failure to provide such infrastructure may impede it, but large investments in inter-city connectivity will not force deconcentration if other economic factors and/or policy distortions are promoting concentration.

So where does China fit in this picture? As noted above, OECD (2013a) argues against constraining the growth of China's megacities. By contrast, Chen and Partridge (2013) find that China's largest cities have a negative impact on the growth of smaller cities and rural communities around them (i.e. "backwash" effects prevail), while medium-sized and large cities have positive effects on growth in surrounding region (i.e. "spread" effects prevail). If one expects China's urban structure to conform to something like a Zipf's law pattern, then it would appear that the country's largest cities may yet grow further relative to the rest (Figures 1.3 and 1.4), though this begs the question of whether further concentration would be good for aggregate growth. Zipf's law notwithstanding, however, there are good reasons to suspect that some policies and institutions serve to restrain the growth of most cities, while fostering concentration in the largest.

Henderson (2009) argues that, despite efforts to steer migrants away from the largest cities (the policy known as "raising the doorsill"), financial and institutional arrangements still favour them, particularly the four directly controlled municipalities of Beijing, Shanghai, Tianjin and Chongqing. He (2013) finds that access to capital is easier in the biggest cities but that firms' productivity of capital there tends to be lower than for comparable firms elsewhere.[39] Larger cities have more powerful leaders and are well placed to secure more investment, more favourable policies, better infrastructure and more human capital. Most of China's higher educational institutions concentrated in the largest cities. Of course, one might expect concentration of knowledge-based capital in the biggest cities in any circumstances, but this effect is compounded other factors, including the dominance of state-owned banks, since political intervention in their operations likewise tends to favour state-owned enterprises and cities of higher political status. The bias of city leaders towards manufacturing described above in the context of competition for investment is also an issue: when it comes to offering incentives to industrial investors, higher-order cities are typically in a position to offer more attractive terms. In addition, controls on legal and financial services impede their development in the biggest cities, which might otherwise develop stronger specialisations in higher-value services. As noted above, the failure to give land prices a greater role in land allocation is part of this picture, as it reduces the incentives for producers in space-intensive industrial sectors to relocate to where land is cheaper (i.e. small and medium-sized cities).

As a result of these factors, Chinese cities appear to be relatively under-specialised for their size. He, Xue and Zhu (2014) come to a similar conclusion on the basis of data for Chinese regions. They argue that spatial variations in access to finance affect industrial specialisation. Using panel data covering 298 manufacturing cities in 30 regions during 1998-2010, they find that industries reliant on external financing tend to specialise in regions with more developed financial systems. However, banks and financial markets have relatively little impact on specialisation; informal, relationship-based financing and FDI emerge as more important determinants of specialisation. They attribute this finding to a combination of repressive financial policies and political intervention in the formal financial sector. This suggests more efficient specialisation could yield greater agglomeration economies, whatever the level of urbanisation and urban concentration.

So what should policy do? It is not clear that China's system is over-concentrated or that further concentration would be bad for growth. However, there are policies and institutions in place that would appear to be distorting the pattern of urbanisation and that may result in inefficient agglomeration in the megacities – not only in terms of their size but, perhaps more importantly, in terms of their specialisations. The underpricing of industrial land in the largest cities is a particularly important factor here. Given the mix of economic influences and distortions at work, policy interventions aimed at restricting the growth of large cities via stricter requirements for migrants should be reconsidered, especially as the authorities have had little success to date in changing migrant preferences. At the same time, the authorities could do much to stimulate the growth of small and medium cities via reform of the land market, as described above, and by continuing to upgrade their connectivity. This would create better conditions for households and firms to make efficient location decisions and would be far preferable to efforts to direct urban growth from the top down. In addition, financial-sector reform buttressed by a stronger legal system would help foster greater industrial specialisation across regions and cities, while fiscal reforms could give cities other than the "big four" greater resources with which to manage their destinies. In short, the policy of "size

neutrality" recommended in OECD (2013a) is still to be preferred, but it is important to recognise that achieving size neutrality may entail some alteration of policies that currently favour the largest cities and that are likely to contribute to less efficient agglomeration processes.

Building better cities

Chinese urban planning has a history that stretches back at least two millennia (Box 2.10) and, even today, urban planning is sometimes conducted at a very high level. In some of the country's wealthier regions and cities, recent years have seen increasing sophistication and innovation in planning – including multifunctional zoning, greater attention to environmental concerns and better preservation of local heritage and identity. According to many officials involved in urban planning, many cities have seen a marked change in attitude to green spaces, waterfronts and other natural assets, as quality-of-life issues have become more important relative to purely economic concerns. Sinapolis (2014) highlights a number of innovative and successful examples of recent urban planning in China in such cities as Shanghai, Beijing, Shenzhen, Hangzhou, Zhejiang and Ningbo, as well as the national programme for "smart cities" of the Ministry of Housing and Urban-Rural Development (MOHURD). Unfortunately, though, the strengths of China's urban planning tradition all too often fail to find reflection in "bricks and mortar": best practice in Chinese urban planning is impressive, but it is still far from "normal practice" in many cities. This largely reflects the fiscal and financial incentives discussed above, but it is also a product of weaknesses in the planning framework, which could be streamlined and strengthened.

Box 2.10. **Chinese traditions of urban planning**

China is a country in which urban planning has truly ancient roots. As early as the "Spring and Autumn period" (722-481 BCE), the ancient text known as *The Rites of Zhou* defined the structure of the ideal city as an enclosed square roughly 4.5 kilometres on each side, oriented to the directions of the compass, with three gates in each of its four walls; it should have nine streets running north-south and nine running east-west, spaced about one *li* (500 metres) apart. The palace, as the centre of power, was to sit at the centre of the grid. Even after more than two millennia, the spacing of key arteries (about 10 minutes' walk) and the concern with the arterial network of roads look strikingly modern.

This model informed the construction of a number of imperial cities, beginning with Chang'an, the capital of the Sui and Tang Empires. The outlines of this symmetric, square layout can be observed in the heart of a number of Chinese cities today, including Beijing – an eloquent reminder of the durability of urban land-use decisions. (Many western cities likewise reflect very early urbanisation decisions: the street grid of the Roman army camp built in about 28 BCE that eventually became the city of Turin, Italy, can still be seen in the centre of the city today.)

Subsequent dynasties followed suit, issuing uniform regulations for architecture and construction standards. Following the Revolution, both approaches and policy priorities changed radically, but the tendency to apply the same standards across the entire country persisted. During the first decades after the Revolution, the dominant approach was clearly functionalist, dominated by central planners' priorities as they organised cities on the basis of the need to allocate manufacturing bases more or less evenly across space. Functional segregation, the reliance on uniform grids and relatively large superblocks prevailed. These patterns continue to shape Chinese urban space today.

Source: Sinapolis (2014), *Villes chinoises: De la planification urbaine à l'urbanisme*, Agence Sinapolis, Beijing and Hong Kong, June.

The planning of Chinese cities reflects the confluence of a number of major planning systems, each of which reaches from central to local level. The National Development and Reform Commission (NDRC) is responsible for national and regional-level economic development planning, including key infrastructure, priority zone planning, the co-ordination of regional development and urban strategy. MOHURD (formerly the Ministry of Construction) and its provincial and local bodies oversee the system of urban planning, defining national policies and rules for urban planning, reviewing plans submitted for State Council approval and planning the national urban system. In parallel with this, the MLR and its local agencies prepare national plans for land use and resources, as well as land use master plans; in addition, they review local comprehensive land-use plans and are responsible for the land cadastre. In addition, the transport, railways and civil aviation ministries prepare comprehensive transport plans for their respective branches, and the Ministry of Water Resources is responsible for river-basin and flood-control plans.

One ongoing challenge is to integrate these systems. This is no simple task, not only on account of differing policy priorities and the need for different capacities at different scales, but also for the very simple reason that coverage varies across planning regimes: thus, Shi (2011) observes that for one Chinese city in 2008-09, the city master plan covered just over half the population encompassed in the economic development plan and an urban construction area only about 60% of that covered in the development plan. This is by no means a unique example. At national level, it makes sense for the NDRC to take the lead, inasmuch as its plans are meant to reflect strategic policy priorities for the entire country over a medium-term horizon; these should frame more specific urban interventions. At lower levels, though, the emphasis shifts to the physical side of urban development, where the provincial Departments of Housing and Urban-Rural Development, city/town construction commissions or urban planning bureaus tend to play a greater role. To a significant extent, it falls on the provincial level of government to co-ordinate these systems.

There is considerable scope to improve urban planning practices

When it comes to urban planning *per se*, local governments are required to formulate 20-year master-plans for the development of their jurisdictions, underpinned by five-year implementation plans. The master plans, in turn, must be approved by the superior level of administrative authority. Thus, the State Council itself must approve the plans for more than 100 cities; these include Beijing, Shanghai, Chongqing and Tianjin (the four municipalities reporting directly to it), as well as provincial capitals, cities with populations of more than a million and some other designated cities. Most significant cities falling outside this list have their plans approved at provincial level. However, these tend to be "broad-brush" descriptions of development objectives rather than operational documents. Moreover, planning cycles often lag behind the pace of actual development; this is a common problem in many countries, but it is particularly an issue in fast-growing cities in China (OECD, 2013a). The problem is not merely that it is hard to keep plans up to date with reality – it is also that the approvals process itself can take years.[40]

A further key problem is that master plans do not regulate the use of individual land plots, which is decided at a lower level. As a result, the disposition of individual land parcels is frequently determined in isolation from that of surrounding land plots. Such decisions on the ground often reflect individual investors' priorities above all, which frequently implies zoning practices based on functional segregation at relatively large scales, big blocks and large boulevards, a failure to ensure the coherence of new developments with their surroundings and a short-term focus on investment returns that

leads to under-provision of infrastructure and amenities (Sinapolis, 2014). This means, *inter alia*, that there is no systematic management of density: patches of very high density may be located adjacent to idle land or low-density development, particularly where industrial land has been made available to investors on overly generous terms. When it comes to "urban villages" – the development of collectively owned rural land in urban areas – zoning and planning are the responsibility of the townships, which often lack the means or incentives to plan effectively and which frequently fail to co-ordinate development with their neighbours. Often, competition between villages to develop collective land leads to "haphazard" patterns (Koen et al., 2013).

Although the discipline of urban planning has grown far more sophisticated in recent decades, day-to-day practice in most cities still reflects the kind of extreme functional segregation that was characteristic of Soviet urban planning and of the first post-revolution decades. As Curien (2014a) observes, large single-function blocks (residential, retail, industrial, administrative, etc.) are set side by side on large tracts of urban land. Urban functions are typically split into sectors; though leading Chinese urbanists are well aware of (and often advocate) multifunctional zoning, clear separation of functions continues to prevail in the cityscape. In part, this reflects the pressure of speed and the emphasis on growth – planning and construction are faster and cheaper in such a schema, and this is no small advantage at a time of explosive urban growth. However, Curien also shows the extent to which the official principles of urban planning continue to reflect such a functionalist approach, which is reckoned to be straightforward and efficient.[41]

Cheshire (2007) observes that the system of master planning relies very heavily on physical units as its primary drivers – on land, population projections and densities. Economic signals, such as the price of land, are pretty much excluded from the process, at least as regards formal criteria. It would, of course, be a mistake simply to rely on prices and let the market decide everything – the externalities associated with land-use decisions are what make planning necessary, especially in dense places. However, it would make sense for planners to take systematic account of the pricing differentials thrown up by the land market when making land-allocation decisions. This is important and relevant information, especially where there are price discontinuities associated with the transitions between designated uses. Such an approach could encourage more efficient land use, facilitate household and firm mobility and help make land-use decisions more transparent. Cheshire (2007) also argues that it could reduce interregional disparities, since regional prices for comparable real estate would converge over the long term. Within cities, it could be used to manage density at relatively low levels, allowing greater densities where pressure was highest: there is still a tendency to restrict floor-area ratios to relatively low levels, even in central urban areas. World Bank (2014a) underlines in particular the potential for integrating high- and low-rise development in small, mixed-use perimeter blocks.

There is more to be done, however, than simply pursuing increased densities, which might in any case overload infrastructure systems and have other undesirable consequences. If China is to build denser, more liveable cities, then a number of other planning practices should probably change:

- Internal connectivity could be improved, and cities could be made more pedestrian-friendly, by developing finer-grained road networks. World Bank (2014a) finds that the number of road intersections per square kilometre in Chinese cities is drastically lower than in Western cities, and the distance between intersections is anywhere from three to ten times greater. Breaking up these

superblocks would create more competition among small developers and also facilitate the formation of denser, more vibrant urban communities. This would also entail more flexible zoning, to allow for more mixed-use development. In a similar vein, Curien (2014a) emphasises the degree to which the massive grid of roads 50 metres to 60 metres wide (more similar to motorways than city streets) segments the urban space, while large square blocks with just one or two entrances further reduces internal connectivity.

- The "skeleton" for this density is probably best put in place by planning – and securing the rights of way for – an arterial road and infrastructure grid covering the entire area designated for development. This grid need not be built right away, but it is important to plan it and to secure the necessary rights of way at an early stage, before land prices have risen and development has proceeded in a way that locks in an inefficient form: in other words, it pays to establish the public space before private claimants bid the price up (OECD, 2014b).
- Density could then be managed at smaller scales than the super-block, allowing gradual densification to be co-ordinated with infrastructure development, e.g. by allowing higher densities closer to metro stations and other public transport interchanges, in line with the principles of transit-oriented development (Ang and Marchal, 2013).

Angel et al. (2011) highlights the costs associated with failure to create an efficient arterial road network and argues that the grid, which will carry intra-urban traffic, public transport and trunk infrastructure, should constitute a mesh of long, continuous roads that criss-cross the area and should be well connected to the existing road network. While developers can and will build smaller roads within the network, the major arteries should be spaced about a kilometre apart, so as to ensure reasonable walking distance to public transport, and they should be wide enough to allow for bus lanes, cycle lanes, etc., without becoming so large as to constitute a major barrier to pedestrian or vehicular traffic crossing them.

Any move away from reliance on super-blocks should proceed in tandem with steps to reduce the red tape involved in new development. Bureaucratic simplification would be desirable in any case – the World Bank (2014b) ranks China 185th in the world in terms of dealing with construction permits.[42] According to local experts, there are 25 procedures involved, and it takes roughly 270 days to complete all the formalities. This is significantly better than in the past (the estimate for 2012 was 311 days), but it is still roughly double the OECD average and only a handful of jurisdictions have longer, more complex processes. This state of affairs is not merely inefficient; it is also anti-competitive, since large, well-capitalised and well-connected firms are likely to be best able to cope with it. Moreover, it places a premium on economies of scale, since investors will want permits to cover as wide an area as possible (Koen et al., 2013). A move towards smaller subdivisions will thus raise costs in the absence of real progress in reducing this burden. Competition among developers would also be enhanced by allowing foreign firms into the market: at present, foreign construction-service providers (including architects, quantity surveyors, project managers and contractors) cannot use their international track records to apply for engineering and design qualifications in China. Moreover, foreign construction firms are only allowed to undertake projects financed by international institutions, Chinese-foreign projects in which foreign investment is greater than 50% and domestic projects that are so technically demanding that Chinese firms cannot take them on. Such barriers are particularly costly to China in

areas where some foreign firms may offer cutting-edge expertise, such as smart-grid development.

An approach to planning like that outlined above would still allow plenty of room for local experimentation and the interplay of market forces: it need not place any constraints on what developers can do inside a super-block defined by the arterial grid, and breaking up the super-blocks should increase both competition and the potential diversity of development options. As long as a range of private developers are at work, with good access to the market, bad development practices in any one place need not limit a city's overall development. As land becomes more valuable, poor development choices will eventually be torn down and redeveloped. The key, in that sense, is not to avoid mistakes – which are inevitable if there is to be innovation – but to avoid mistakes that would be prohibitively costly or impossible to correct. That is why getting the arterial grid right is so important. Changing it after an area is densely urbanised would require such enormous expenditure and co-ordination that it might well prove impossible except in the wake of some cataclysmic event. That, indeed, is why so many historic city centres are still laid out on lines set down hundreds or even thousands of years ago.

A final challenge, of course, will be to ensure that planning laws and regulations are applied in practice. Officials report that there is still a good deal of illegal construction that takes places with implicit or explicit official sanction, as local governments courting investors fail to uphold planning laws with respect to, e.g. ecologically sensitive areas, waterfronts or historical/cultural heritage. Curien (2014a) draws attention to Chinese official sources expressing concern about the growing gap between urban planning documents and actual construction. The explosive growth in the number of golf courses over the ten years following a State Council ban on their construction highlights the gap between policy and implementation (Box 2.11).

Box 2.11. **"Hiding" golf courses in urban China**

The closure and destruction of five golf courses in the spring of 2014 drew media attention to the widespread violations that had occurred since the State Council had banned the construction of new golf courses in 2004 (an exception was made for the southern resort island of Hainan). The ban was prompted by concerns about the use of scarce land for such a space-intensive recreational activity, about the water consumption associated with building and maintaining golf courses, and about the environmental impact of the use of pesticides and fertiliser.

Prior to the ban, only 10 of the 176 golf courses built had obtained land permits from the government. In the decade that followed, a further 639 courses were built by local governments, which often used them to promote tourism or luxury residential developments. Though golf courses are physically rather difficult to conceal, they were "hidden" in planning terms by being given other designations, such as "tourist resort", "sporting facility" or even "environmental preserve". The point is not that the golf course ban was necessarily the best way to address the externalities involved but that, given investor interest in such developments and the incentives of local governments, there were enormous pressures in place from the start to violate the ban and that local governments found it relatively easy to do so for many years.

Source: Shi, N (2011), "Changing Role of Central Government in City Planning", presentation to the Moscow Urban Forum, 8 December; Jim, C. and X. Shao (2014), "China drives home message that golf courses are not the fairway to heaven", Reuters, 29 June.

Longer-term planning remains a challenge

The NDRC is responsible for the Five-Year Plans (FYPs) that set out the central leadership's strategic objectives and priorities; though detailed production planning is no longer practised, the FYP lays down important guidelines for policy, public expenditure and investment, covering key infrastructure, priority zone plans and the co-ordination of regional development, as well as urban strategy and major urban policies. The current 12th FYP marks a turning point. China's previous emphasis on economic growth has given way to a greater prioritisation of other dimensions of prosperity and well-being. Moreover, it shifts the focus away from a powerful export- and investment-led growth dynamic towards a growth model relying more on support from China's 1.3 billion consumers. However, the targets are set for the five-year period of the duration of the Plan. Longer-term strategies exist, but these are typically more narrowly drawn: each region and government department defines its own long-term plans or strategies, but Jin and Bai (2011) find that almost all of them share some common problems: a lack of integration across social, economic and environmental policy domains and priorities, and a failure to address implementation and strategic management, as opposed to goals.

This implies a challenge for urban policy, which requires effective integration across sectoral policies if it is to succeed. There is a need for an integrated longer-term vision for urban development, spelling out how China wants its cities to grow and be organised spatially. The urbanisation plan to 2020, adopted in March 2014, looks over only a slightly longer time horizon than the FYP. There is no clearly articulated vision of how Chinese cities are expected (or desired) to evolve in the long-term and how all levels of government, citizens, the private sector and the party can work together to realise that vision. Such a vision and an accompanying strategy would be a fundamental benchmark for urban development policy and programming. It could also become a beacon for sub-national leading officials, who most of the time rely on central government for direction.

This is not to suggest that Chinese officials can simply map out the country's urban future; too much uncertainty prevails. Rather, the emphasis would need to be not on "the plan", as a specific document or set of measures drawn up at some point in time, but on the *process* of planning. Mechanisms for tracking, management, feedback and adjustment would be critical so that the vision and the underlying plan could evolve with the course of events. International evidence suggests that planning regimes that focus on periodic updating of designated spatial or development plans tend to be static and highly technocratic, with a limited number of actors engaged in a highly specialised, largely technocratic and top-down exercise. In many instances, the resulting plans are outdated before they are completed, let alone approved – especially in fast-growing, fast-urbanising places like China. By contrast, more dynamic approaches see planning primarily as a *co-ordination instrument*, involving a large number of public and private sector players and relying on flexible and continuously updated data, analysis and consultation. Any actual "plans" produced tend to be temporary and/or evolving documents and are seen as mere snapshots of a process evolving through time (OECD, 2001). Where high levels of uncertainty about the future persist, such approaches are vital, since strongly directive approaches to economic and spatial planning tend not to reduce uncertainty but create – at best – the illusion of having done so.[43] Urban development is the kind of long-term project that requires high-quality strategic planning.

Building a vision is not a solitary task; the central government cannot and should not take charge of everything. It is a collaborative effort involving a diverse set of actors, ranging from the central government to individual citizens. The process of building a

long-term vision for urban development in China needs to embrace the sub-national levels as an essential partner and not just as an administrative unit. The rationale is very clear: since sub-national governments are in charge of implementation, they possess information about local conditions that can be critical to the process and need to have a say in it. Strategic purpose should come from the centre, but better co-ordination, and a lot of action and experimentation are needed at the local level. Chinese sub-national governments are in fact often quite agile, as competition has made them more willing to take risks, to experiment and to adapt. They may even have lessons to share.

Governments need to look to citizens as a source of feedback, innovation and change

Civic participation is increasingly seen as critical to good local governance. The Urban and Rural Planning Law explicitly mentions that in the elaboration of a provincial urban hierarchical plan or the overall plan of a city or town, the authority in charge should solicit opinions from the public and experts by holding appraisal conferences or hearings or by other means. However, many officials suggest that these activities remain mostly informative. There are, to be sure, important exceptions to this rule: Shi (2011) highlights a number of cases where public participation resulted in changes to development plans, but this is far from the norm. There are no formal channels for citizens to take part in the discussions of urban plans or ways for them to provide feedback on the quality of service delivery. This is particularly important in view of the career structure of officials in local government: rather than being local politicians, as would be the case in OECD countries, they are part of a national hierarchy and they move from place to place fairly regularly. As a result, the dominant voices in decisions concerning new developments may be those of developers and local officials, none of whom will remain in the city over the long term, to live with the consequences of those decisions.

While national- and local-level urban plans are developed by certified experts and through a consultative process with the upper level of government, it is important that other stakeholders have a say in urban planning and in decisions concerning major new developments. Therefore it may be useful to strengthen mechanisms for ongoing dialogue and consultation with urban stakeholders, particularly residents, not only to evaluate the effectiveness of established policy – as envisaged in the Urban and Rural Planning Law – but also to help decision makers identify trends and shifts in urban preferences and values. In New Zealand, for example, the government put a document on how to build sustainable communities to its citizens. The aim was not just to assess an existing policy, but to provide government with ideas about future urban development (Box 19). Chile also provides a valuable experience on how to submit for discussion a national urban policy.

Box 2.12. **Consultation mechanisms for urban development**

In 2008, **New Zealand**'s Sustainable Development Unit put forth a discussion document– *Building Sustainable Urban Communities* – for citizen feedback. This document clearly and succinctly explained the concept and importance of sustainable urban communities for meeting New Zealand's sustainable development goals, and invited citizens to reflect and comment on a series of general and specific questions. These questions ranged from identifying barriers and implementation difficulties, to providing ideas, options and issues surrounding the role of government, improving co-ordination and integration, funding. Citizens were given the option to either send written responses to the Development Unit or to respond electronically. They were given a deadline for feedback and clearly told how their input would be used.

Box 2.12. **Consultation mechanisms for urban development** *(cont.)*

In January 2012, **Chile** began putting in place the process for developing its new National Urban Development Policy co-ordinated by the Ministry of Housing and Urbanism (MINVU). The first stage of the process focused on establishing a conceptual framework, identifying diagnostic elements and compiling relevant past experiences (e.g. from the urban policies of 1979 and 1985 and other more recent initiatives), and studying international practice cases from seven countries (Australia, Brazil, Colombia, Germany, South Africa, the United Kingdom and the state of Maryland in the United States). These various elements nourish a set of foundational publications for urban policy. Then, the Presidential Advisory Commission, subcommissions and the Interministerial roundtable were established with the aim of preparing a preliminary draft policy. After the commission approved the draft policy document, regional workshops to introduce the diagnostic elements and listen to the regional level's concerns with respect to urbanism were organised. As part of the elaboration process, the government organised a national-level discussion of the preliminary document in a series of workshops held throughout the country. Information gathered through these workshops was used to fine-tune the policy, which was then sent to the president to be implemented and promulgated.

Source: OECD (2013), *OECD Urban Policy Reviews, Chile 2013*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264191808-en.

For any strategic planning initiative to be effective, stewardship and co-ordination are critical. Regardless of the level at which this occurs, the organisation(s) responsible for stewardship and co-ordination must have the political legitimacy and executive authority, as well as the planning capacity, to ensure that the strategy is implemented. This can, and probably ought to be, a central-level initiative. For example, in order to ensure that its National Urban Policy aims are met, the Australian government has committed to help support improvements in strategic planning and share best practices among its capital cities (this will eventually extend to all cities with at least 100 000 residents). In addition, the Council of Australian Governments (COAG) agreed to reforms ensuring that cities are prepared to meet future challenges. To this effect, nine criteria were established to help guide cities in their strategic planning (Commonwealth of Australia, 2011). Significantly, these criteria focus on strategic plans (e.g. for infrastructure planning and economic development) rather than on statutory planning, which is more narrowly focused on development plans, zoning and approval processes and which are better managed at the local level.

The key message from OECD countries is that multilevel governance arrangements for strategic urban planning have to be contextualised to each country's specific administrative background. No single solution can apply to all. Decentralisation should not been seen as a policy goal in itself but as a process to improve governance outcomes. What matters in fact is not the degree of decentralisation, but the quality of multilevel co-operation arrangements.

Public transport is struggling to keep up with urbanisation

Urbanisation in China has coincided with an unprecedented increase in car ownership, especially in large cities, partly because public transport systems have failed to keep up. China has invested in new public transport on a truly staggering scale. The five years to end-2013 saw the construction of metros in 25 cities. In 2012, with 1 885 kilometres of metro and commuter rail in service, China had no less than

2 500 kilometres under construction. Nevertheless, despite this rapid expansion, metro systems have not been able keep up with the rapid growth of demand, and city transport authorities have responded to increasing mobility demands chiefly by building roads. OECD (2013a) documents the growing deficit in public transport provision. Lagging public transport and rising income levels have understandably led to massive increases in the use of private vehicles, with the associated negative externalities – above all, congestion and air pollution. According to the Ministry of Public Security, the number of registered motor vehicles in China reached 233 million by mid-2012, just over half of which were automobiles, and 17 cities had more than 1 million automobiles registered. The number of privately owned vehicles rose more than twentyfold over the period from 1990 to 2012, with the fastest growth recorded in the major cities.

There is certainly room for action on the demand side. Congestion charging is clearly an option that many large Chinese cities may need to consider. Such a charge represents the most straightforward way of internalising the externalities associated with private vehicle use. The international evidence suggests that well-designed congestion charges could improve air quality and reduce congestion, bringing immediate health and economic benefits. Rapid expansion of road capacity has aggravated air-quality problems and done little to reduce congestion overall, largely due to induced travel demand and rapid growth. Moreover, a congestion charge raises fewer distributional issues in China than in many developed countries. Most Chinese still rely on public transport, bicycles and walking; it is the better-off who drive, so the tolls would be collected from those who were richer and could be used to finance improvements in public transport. This would benefit the majority of commuters and, to the extent that it reduced traffic flows, those reliant on private vehicles as well.

Congestion charges might be accompanied by other policy instruments, such as low-emission zones (closed, for example, to large, diesel-powered trucks, buses and coaches, as well as other highly polluting vehicles), ride-sharing initiatives, parking fees and restrictions on vehicle registration. However, these alternative approaches are unlikely to be as effective as well-designed congestion charges, which offer the possibility of influencing where, when and how long/how far people drive. Restrictions on vehicle registration, moreover, raise concerns about market distortions, equity and corruption. Moreover, as Song (2012) points out, China's political-administrative structure means that it should be easier to implement congestion charges at the scale of the functional city, overcoming the local administrative barriers in planning and administration that bedevil large, politically fragmented metropolitan areas elsewhere. Inter-jurisdictional conflicts should be easily overcome where higher levels of government are committed to change.

There is also much to do on the supply side, although more efficient land use and better urban planning can and should do much to make it easier for public transport provision to keep pace with urban growth. In addition to congestion charges, China's growing cities need sustainable mobility solutions that are least-cost, can be expanded rapidly and are flexible enough to adapt to shifts in demand in rapidly changing urban environments. This suggests that bus rapid transit (BRT) systems may have much to offer, particularly on the urban periphery and where metro construction is still to take place. While the spatial requirements of BRT systems are similar to those of surface-rail-based transport modes, they are more cost-effective and flexible on other grounds. First, the right of way is generally far cheaper than an assemblage of rails, power supplies and signals. Secondly, bus routes can be more easily adapted as traffic patterns change – which is what one would expect in a rapidly expanding city. This is an advantage of BRT over metros, at least during phases of very dynamic growth. Thirdly, BRT can also use

local streets beyond the limits of its dedicated right of way, getting passengers close to their destinations even in fringe areas. Fourthly, the market for buses worldwide is far more competitive than that for rail cars, making it easier for cities to acquire fleets adapted to local needs. Finally, BRT can be put in place and expanded much faster than rail-based systems (especially metros), which struggle to keep up with rapid city growth. At the same time, urban planning has to take better account of public transport provision and the location of public facilities as cities grow.

Building better cities will also help China build cleaner cities

So far, this chapter has said little about environmental policy, although the environmental challenges facing Chinese cities are enormous and well known. While recent years have seen substantial progress in some areas, much remains to be done (OECD, 2013a). Indeed, they have already been the focus of a substantial body of OECD work (see especially, Kamal-Chaoui, Leeman and Rufei (2009); Hill, 2013; OECD, 2013c). This chapter will not seek to recapitulate all of that discussion, but a few key points are essential. First, however, a caveat is in order: most carbon emissions – and a large share of other pollutants – in Chinese cities come from industrial production. While the relocation of some industrial production may help address acute local environmental externalities (and also to create new opportunities elsewhere), displacement of activities is not generally the preferred solution, and it is no solution at all where global externalities like GHG emissions are concerned. This implies two things:

- Comparisons of the environmental performance of Chinese cities to OECD urban areas must take industrial structure into account. In many developed countries, falling greenhouse gas emissions and reductions in other environmental damage in recent decades have been driven in large measure by structural changes such as the shift from manufacturing to services. As a result, the carbon intensity of production in those countries has fallen, while the carbon intensity of consumption has in many cases risen, as they import an increasing share of the energy-intensive goods they consume (OECD, 2013d). In a real sense, urban residents in the developed world have "outsourced" a lot of their emissions.
- While greening industrial production is critical, the focus of urban policy should be on reducing the environmental impact of those activities and structures that are specifically "urban" and place-based: the built environment, intraurban transport systems and other urban infrastructure.

It follows from this that a great deal of what has been covered so far in this chapter directly affects the environmental performance of cities. More efficient land use, better urban planning and, in particular, transport policies that discourage car use and improve public transport all hold out the prospect of improving economic performance, quality of life and environmental outcomes (Li, Wang and Li, 2012; OECD, 2013c). The co-ordination of land-use and transport planning in the context of transit-oriented development is particularly promising. However, such policies have to be well-designed and consistently implemented to deliver. Despite talk in many countries of "densification", the evidence suggests that density alone is only weakly related to environmental outcomes, and excessive density can entail significant costs (Heinonen and Junnila, 2011; Echenique et al., 2012). Indeed, many cities in the developing world combine very high densities with weak public transport and poor planning in ways that result in long commutes, severe congestion and heavy reliance on private motorised transport. In short, they experience a dysfunctional density that is neither green nor economically efficient (Matsumoto and Daudey, 2014).

These problems can be encountered in many Chinese cities, particularly where high densities of residential and commercial space are combined with very low density use of industrial land. Successful density requires, above all, better co-ordination across policy sectors and, in some cases, across jurisdictional boundaries as well.

Environmental concerns loom ever larger in official discussions of urbanisation in China; the authorities are well aware of the need to reduce the environmental impact of urbanisation and, indeed, of development in general. Since 2006, emphasis on greening Chinese cities has been increasing, and two concepts have entered into discussions of Chinese urbanisation – the "sustainable city" (*yongxu chengshi*) and the "harmonious city" (*hexie chengshi*), which encompasses notions of social as well as environmental sustainability. The 2008 law on urban and rural planning put environmental challenges at the heart of urbanisation policies, and a number of national programmes have been launched with a view to advancing urban sustainability. In 2011, the concept of "low-carbon cities" was included in the 12th Five-Year Plan, along with a programme designating eight pilot cities and five pilot provinces.

In a study of three of these eco-city projects,[44] Curien (2014b) highlights the extent to which growth imperatives may compromise the pursuit of green urbanisation in practice. Efforts to green utilities, for example, have focused on the optimisation of existing systems and models, rather than on experimentation with really new ones. Short-termism, the logic of standardisation and a lack of consideration for local social, environmental and territorial characteristics, as well as the continuous spatial expansion of centralised networks, all point in this direction. Curien argues that the "ecological" and "low-carbon" city projects put in train since 2006 in places like Dongtan, Tianjin, Qingdao and Caofeidian, have yet to deliver on the vision of urban sustainability and often conform to traditional Chinese urban-planning approaches (large-scale functional segregation, road-based transport, etc.). The addition of a layer of green technology to unchanged urban infrastructure systems is a step forward, but it falls far short of the potential offered by these new city projects. This is not to deny that these projects – which are in any case still unfinished and largely unoccupied – have not introduced important urban innovations to China: the Suzhou Industrial Park, in particular, has benefited from Singaporean know-how with respect to systematic and integrated planning and management of various networks, services and urban activities. However, he notes that its urban planning design is all too typical of new Chinese cities. This means, among other things, that it is all but impossible to get around without reliance on private motorised transport.

In practice, Curien (2014a) argues, "greening" the city is often confused with the provision of green space. Issues like the energy efficiency of buildings and the environmental assessment of industrial activities are also addressed, particularly in some of the key pilot projects, but these are quite distinct from urban planning. There is a growing emphasis on public transport – another issue that is critical to sustainable cities but still distinct from urban planning. These are welcome developments and should be extended, but there is much to do when it comes to building environmental concerns into the layout of new Chinese cities and urban districts.

While there is much that can be done at city level to make Chinese cities greener, a great deal depends on larger national policy frameworks. For example, a meaningful carbon price would make it far easier to finance investments in greater energy efficiency – whether these investments target new green buildings or retrofits of the existing stock of buildings, an area where there is great potential in China and one that has been prominent in the 11th and 12th FYPs (OECD, 2013c). If fossil fuel prices are low, such investments will not pay

off quickly. Their environmental impact may also be blunted, owing to rebound effects. All other things being equal, increased energy efficiency leads to lower energy prices and higher real incomes. Some of this additional income may be spent directly on increased energy consumption (people may, for example, drive larger vehicles or keep their homes warmer in winter). Alternatively, consumers may spend more of the savings on other goods and services, which may be equally or even more energy and CO_2-intensive. To these direct income and substitution effects must be added the possibility that faster growth, supported by greater energy efficiency, may lead to higher fuel consumption and thus higher emissions. To say all this is not to question the need for greater energy efficiency – particularly in China, which remains one of the most energy-intensive economies in the world (Hill, 2013). Energy efficiency is an essential component of a green growth strategy – it can help offset the growth impact of higher fuel prices. Moreover, public support for retrofits for low-income households can help mitigate the distributional consequences as well. The point is simply that the impact of such measures is magnified when they are going with the grain of national policies.

In this context, Hill (2013) identifies a number of strands of national policy that might over time help China's cities to become cleaner as well as more prosperous. Overall, he argues that market-oriented reforms have the potential to improve environmental outcomes, to the extent that they encourage greater resource efficiency. When it comes to fossil fuel subsidies, for example, there has been significant progress with respect to domestic oil prices, but gas and electricity prices remain artificially low, as do water prices. Electricity prices are particularly an issue in view of China's heavy reliance on coal. As the country moves towards full cost-recovery pricing in these sectors, the efficiency of resource use can be expected to increase. This will also make it easier (and less costly) to support the development of renewable energy sources. More direct pollution pricing is another mechanism with considerable potential: as Hill observes, China has long experience with such instruments and already collects more environmental taxes, levies and charges (relative to GDP) than most OECD countries. However, implementation and enforcement have sometimes been patchy, and more remains to be done. The Chinese authorities are well aware of the potential of such instruments, and the 12th FYP gives a prominent role to market mechanisms for controlling pollution; carbon pricing is a key element of the longer-term strategy to control GHG emissions. To be sure, market mechanisms will not fix every problem. There is still a role for better fuel-emissions standards, as well as energy-efficiency standards for new buildings and consumer durables.

Conclusion

The agenda outlined above is vast. Nevertheless, it is feasible – not least because the elements are coherent: reforms to policies governing migration, land use and urban planning will tend to reinforce each other, breaking down the segmentation of land and labour markets, while encouraging more efficient allocation of resources and, in particular, more efficient use of land. This, in turn, is likely to ensure more efficient urban specialisation and to facilitate some degree of de-concentration of urbanisation processes, without resorting to policies aimed at curtailing the freedom of firms and households to choose their locations. Moreover, such measures are entirely consonant with efforts to reduce the environmental impact of Chinese urbanisation and to help advance the authorities' goal of a more "people-centred" urbanisation. Finally, the changes discussed above go beyond cities and urbanisation narrowly conceived: they coincide with China's broader desire to shift to a model of growth that relies more on domestic consumption, that is cleaner and that delivers better lives for the country's people.

Notes

1. In this respect, they are moving towards a vision not dissimilar to that set out in the EU's Leipzig Charter and the subsequent Toledo Declaration on cities, although they are pursuing these objectives in radically different conditions from those prevailing in Europe.

2. Du (2014) argues that effective labour supply peaked in 2011, as the demographic shift was accentuated by the combination of *i)* longer education and later labour market entry for youth and *ii)* the ageing of the existing workforce.

3. China's population-control policy is in fact less stringent than the term "one-child policy" would suggest, though its impact is greater on urban than rural households. Rural families can have a second child if the first child is a girl or is disabled, and ethnic minorities are exempt, as are residents of the Special Administrative Regions of Hong Kong and Macau, and foreigners living in China. Moreover, couples in which neither spouse has siblings are also allowed to have two children. In 2007, it was estimated that approximately 35.9% of China's population was subject to a one-child restriction, but the vast majority of these households were urban (*China Daily*, 11 July 2007). In November 2013, the government announced that families would in future be allowed to have two children if one of the parents (rather than both) were an only child.

4. Wheatley (1971) identifies the North China Plain, along with Mesopotamia, the Indus Valley, the lower Nile, Meso-America, the central Andes and the Yoruba territories of West Africa as the regions of primary urbanisation in the world.

5. For a few cases, over a million.

6. On recent debates concerning productivity and surplus labour in agriculture, see Fang and Wang, 2010; Das and N'Diaye, 2013, Du and Yang, 2014.

7. *Hukou* was initially introduced in 1951, but at that point applied only to the cities.

8. This figure varied widely, from around 8.3% in Guizhou to as much as 63.2% in Shanghai. *China Township and Village Enterprise Yearbook* (1993).

9. In rural areas, household income from agricultural production often has a large random component due to fluctuations in the weather. For example, the output of agricultural products, including potatoes, tobacco, fruit, tea and wheat, fell by up to 50% in one-third of Chinese provinces in 2009-10 due to severe droughts. Affected provinces included Chongqing, Yunnan, Guizhou, Guangxi, Sichuan, etc. (*China Daily*, 9 April 2010).

10. CNY 26 959 for urban households vs. 7 917 for rural households.

11. The National Bureau of Statistics has long been aware of the problems with measuring migrant incomes and in 2014 conducted a unified household survey, encompassing both rural and urban places, with a sample of 116 000 households. A large-scale survey of migrants was part of the survey design. The result of this, when available, will cast new light on the problem.

12. Tianjin in 2012 recorded GDP per capita of CNY 95 093, versus CNY 19 608 in Guizhou.

13. In some more prosperous regions, the contribution of the individual, as well as the central government, is lower: in places like Fujian, Shandong and Tianjin, trainees may not have to pay at all.

14. Chang and Brada (2006) point out that migration would leave the country better off in terms of job creation and output, even if it were assumed that competition between migrant workers and unskilled workers with urban *hukou* dominated these complementarities.

15. Collectively, these are sometimes referred to as the "386199 group", a reference to Women's Day (March 8 or 3/8), Children's Day (June 1 or 6/1), and the ninth day of the ninth lunar month, which is "Respect the Elderly" Day in China.

16. This extra-budget revenue is excluded from the revenue accounts compiled by the Ministry of Finance (Yanyun Man, 2011; Wong, 2014).

17. OECD estimate based on the average cost of an academic high school place derived from the *China Statistical Yearbook*.

18. According to CDRF (2013), there were 16 different contribution rates across the country, ranging from 10 to 22%, as well as differences between schemes that relied on basic pay to calculate contributions (about one-third of all schemes) and those that relied on gross pay (as required by law).

19. One couple was denied pension benefits because their son had violated the one-child policy.

20. See the discussion in Koen et al. (2013); also Zheng (2009), Huang (2010) and Chen, Lu and Zhong (2012).

21. Cai and Du (2011) find that the significance of *hukou* in terms of urban wage differentials has been declining, particularly in the low-income quintiles, because barriers to mobility are starting to lead to labour shortages in some high-income areas, especially along the coast. However, that would imply greater inequity as regards the exclusion of potential migrants still wishing to move to such places.

22. USDA figures from the 2010 National Resources Inventory (USDA-NRCS, 2010).

23. See Cui and Kattamuri (2011) on the concerns about the policy, which reflects above all a reluctance to rely on markets, given the domination of world food markets by a small number of non-Chinese companies.

24. Based on data from the OECD-FAO (2014).

25. When the HRS was adopted, rural households received rights to a share of the collective farmland, which was determined on the basis of such factors as household size or labour supply. To ensure equity across households despite differences in fertility, location and irrigation, households were typically allocated a number of noncontiguous land plots of varying quality – usually three to four such plots but in some cases as many as ten (Huang, Wang and Qui, 2012).

26. Article 41 of the Land Administration Law (1986) stipulated that "a resident with non-agricultural *hukou* who needs to build a house on rural collective land must obtain approval from the county government …" In other words, it was – at least in theory – possible for urban citizens to use rural residential plot land in the same way as did local farmers. However, Article 43 of the Land Administration Law (1998)

eliminated this provision and stated, "If any entity or individual needs to use land for construction, they must apply for the use of state-owned land …" The latter legislation remains in force; thus, it is no longer possible for urban citizens to build houses in the countryside. However, there is no explicit provision on how to deal with the SPRH built during the effective period of the 1986 law.

27. The estimate was given by Zhang Shuguang, director of Unirule Institute of Economics, to a conference in Shenzhen; *Oriental Morning Post*, 12 May 2009.

28. In accordance with the LAL, the compensation package for expropriated arable land includes three parts: *i)* compensation for the land, which is 6-10 times the annual average value of the production on the land in the three years prior to the land expropriation; *ii)* compensation for farmers' resettlement, which is typically 4-6 times the annual average value of the production on the land in the three years prior to the land expropriation but is sometimes based on per capita calculations; and *iii)* compensation costs for attachments on the ground and existing crops, the level of which is set by the provincial government.

29. It is difficult to be precise here, because the accounting of such income is not sufficiently systematic or transparent across the country.

30. In Shanghai, China's largest city in both population and economic terms, when direct and indirect taxes are included, land-based activities including real estate development have reportedly accounted for 35% of total revenues since 2006. In 2009, they accounted for fully 50% of the growth in revenues. (Shanghai Financial College, 2010).

31. Qi, L. and G. Zhu (2013) "Researcher Puts China's Local Government Debt at $3.3 Trillion", *The Wall Street Journal*, 17 Sept. 2013.

32. In physical volumes, they were down about 12.5% from the 2011 peak (though above the level of 2012), while in value terms they were up around one-third on 2011 (EMIS, 2014).

33. As of 2012, the United States had 533 skyscrapers (buildings taller than 152 metres), ranking top in the world, followed by 470 in China, but by 2022, China is predicted to have 1 318 skyscrapers, far exceeding the 536 projected for the US, the Beijing-based China Economic Weekly reports, citing the web portal of Motian City, a skyscraper think tank and integrated services firm.

34. Ren, Xiong and Yuan (2012).

35. In this respect, China resembles many OECD countries, where national-level policies to promote housing demand (e.g. via favourable tax treatment of home ownership) clash with local-level policies that restrict supply (e.g. via zoning).

36. *South China Morning Post*, 21 December.

37. For a range of views, see Au and Henderson (2006a, 2006b), Yang, Song and Lin (2012), Chen, Lu and Zhong (2012) and Chen and Partridge (2013).

38. See also Lee and Gordon (2007), who emphasise the roles of industrial structure and transport networks in determining the relationship between concentration and growth at the level of the metropolitan area.

39. Unfortunately, the data cover only the period to 2007, as more recent data are unavailable.

40. Shi (2011) highlights the admittedly extreme case of Guangzhou, which in December 2005 was granted State Council approval for a master plan begun in 1989.

41. "Each block has a function" ("*Mei kuaidi dou you yiding de yongtu*"); from *Principles of Urban Planning* (*Chengshi guihua yuanli*), cited in Curien (2014a, pp. 27).

42. Of 189 economies covered; ironically, the Hong Kong SAR ranks first.

43. The American general Dwight Eisenhower reportedly said, "In preparing for battle, I have always found that plans are useless, but planning is indispensable." Something similar may be said of regional development planning.

44. The Suzhou Industrial Park, the Shanghai Chemical Industrial Park and the Sino-Singapore Tianjin Eco-city.

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Chapter 3

Enhancing China's urban governance structure*

This chapter examines urban governance in China. It assesses the main challenges presented by the current system of inter-governmental relations, which often seems to impede co-ordination across levels of government and among agencies at the same level of government. The chapter proposes strategies for strengthening collaboration for urban planning across levels of government and exploiting potential complementarities across jurisdictions and policy sectors. It also explores local government finance and the way the current arrangements for managing local public finance influence urbanisation decisions. It formulates some recommendations to enable local governments to finance urban development projects in a more sustainable, less distorting way. Finally, the chapter addresses the capacity gaps in Chinese local governments and proposes some measures to acquire the right competences and skills to formulate and implement urban development policies. It concludes with proposals to develop a strategic and integrated approach to urban planning involving real citizen participation.

* The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Introduction

Cities in China are growing at an unprecedented pace. The process of urbanisation means that the number of its urban residents will keep on growing. In 1978, only 200 million Chinese lived in cities. Today, that figure is more than 700 million, and by 2030, the country's urban population is expected to grow by another 300 million people (Harvey, 2013). One of the main challenges this demographic phenomenon poses is ensuring that all residents have access to basic public services (water, housing, electricity, drainage, transport, education, social security and health care). This only adds to the burden of construction and maintenance of all infrastructure required for more liveable, inclusive and sustainable cities. It is therefore no surprise that urban issues have emerged as a key feature in China's 12th Five Year Plan.

This chapter shows that the success of China's urbanisation process depends, to a large extent, on the capacity of the urban governance structure to ensure seamless collaboration and unambiguous and equitable distribution of responsibilities across levels of government. Revising the financial relations across levels of government will be critical for bridging the gap between financial capacity and the mandate at the sub-national level to guarantee cost-effective delivery of public services to a growing urban population. A successful urbanisation process in China also requires strengthening central and sub-national governments' capacity to formulate and implement sound policies, as well as enhancing citizens' participation in policy debate and assessment. Adjusting the institutions and framework of urban governance could help China overcome administrative fragmentation and make the urban governance structure more dynamic and flexible; this could help adapt policies to the emerging demands and priorities of the urbanisation process.[1]

Based on the experience of OECD countries, this chapter discusses the governance challenges of China's current urbanisation process and formulates some policy recommendations intended to reinforce the strategies of Chinese authorities in the implementation of the National Urbanisation Plan 2014-2020 (NUP). This chapter first outlines China's governance framework and the characteristics of relations across levels of government, and then provides some recommendations for revitalising the urban governance structure. It then moves on to explore the financial and capacity challenges of sub-national levels of government and offers some suggestions on improving the financial relations across levels of government and the financing of urban development policies, as well as on ensuring a capable workforce.

Chinese urban governance: The challenge of implementation in a decentralised bureaucracy

In China, urbanisation has placed considerable pressure on sub-national levels of government. Incorporating migrants as formal urban residents, providing more and better services to a growing urban population, ensuring the upgrade and expansion of existing infrastructure for transport and communication and above all housing, are only some of the challenges that sub-national governments have to face. Dealing with these issues will require a co-ordinated response across levels of government, to ensure that sub-national governments have enough resources and capacity to implement centrally designed policies.

China's regionally decentralised administrative system

Among China's cities, there is a wide variety of functional responsibilities …

China is a unitary state where central government faces little constitutional limit on its power over regional authorities. The central government has routinely imposed new mandates, such as on school enrolment, immunisation, rural road construction, clean water, and so on, generally expecting local governments to pay for them (Su, Tao and Yang, 2012). The problem is exacerbated by the wide divergence in functional responsibilities among all China's cities. Most responsibilities for social and economic development are at the municipal level; few today are exercised directly by central government agencies. Central government responsibilities include policing, tertiary education, assistance to veterans, airports, strategic ports and harbours, power generation and distribution through regional power corporations, postal services, telecommunications and radio/television (through centrally owned corporations, and centrally owned SOEs and zones). By and large, district responsibilities are limited to operation of enterprises owned by district governments and their agencies: street cleaning and solid waste collection, maintenance of local parks, land leasing (where allowed), limited primary health care through clinics, and localised social welfare services. In county-level cities, these functions are exercised at the municipal level.

Every province, autonomous region and municipal-level city has its own priorities and particular socio-economic conditions. Given the differences among China's cities, ensuring basic levels of equity and efficiency in service delivery will mean that the central government needs to clearly define the lower and upper margins of municipal functional responsibilities and explicitly tie these to expenditure and revenue assignments. For this reallocation to be effective, changes must also be made to the structure of municipal and sub-municipal governance, so that units of government that have the territorial and functional mandates can exercise their responsibilities efficiently for the benefit of all residents. This is particularly true for metropolitan regions (Kamal-Chaoui et al., 2009).

… but sub-national governments have no inherent power, which is delegated from central government

China's Constitution stipulates that sub-national governments' power and responsibilities are delegated by the central authorities. The central government delegates power to regions and may also rescind it. This may explain why China's Organic Law of the Local People's Congresses and Local People's Governments does not define precise functional responsibilities that municipal governments are expected to exercise. Delegation is the underlying basis of China's sub-national governance (Kamal-Chaoui et al., 2009), handed down by administrative directive from the central and provincial levels. These directives are unpredictable and subject to modification, which makes municipal planning and budgeting difficult. Experts interviewed for this Review argued that the delegation of responsibilities to municipal governments over the last two decades has been extensive and that additional responsibilities might still be parcelled out.

The experience of OECD countries suggests that decentralisation reform, in any of its three principal forms (deconcentration, delegation and devolution), requires building strong capacities at the local level, to design, implement, monitor and evaluate local public policies.[2] This process involves not just political institutions, but also administrative structures and service delivery arrangements and, more important, some degree of local fiscal autonomy.

Chinese governance arrangements – main features

A complex, hierarchical local administrative system

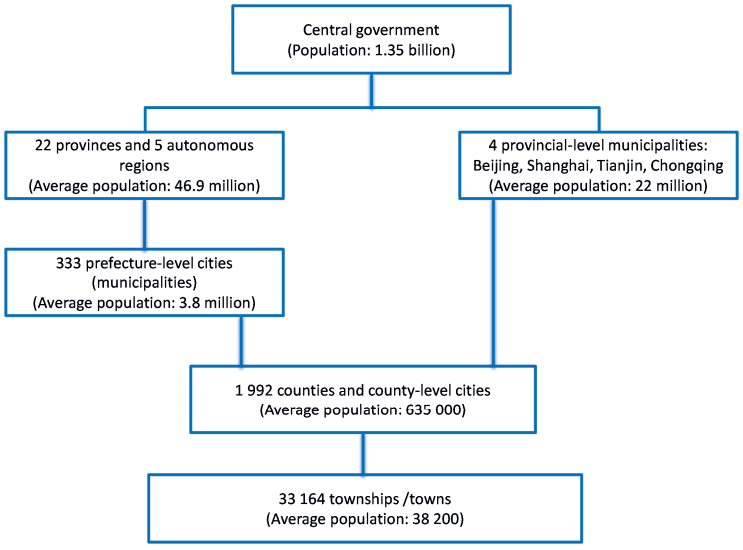
China's administrative system has five levels (Figure 3.1):

- Central government;
- Provincial governments (provinces, autonomous regions and municipalities);
- Prefecture-level governments (prefecture-level cities);
- County governments (municipal districts, county-level cities and counties), and;
- Township governments (townships, nationality townships and towns).[3]

At the sub-national level, China's administrative system is extremely complex, both in structure and in the relationships it creates. It works as a nested hierarchy in which each level of government interacts only with the next level up or down. The central government directs only the provincial governments; provincial governments report to the central government above and direct the prefectural level below, and so on down the hierarchy. The central government also has the possibility of setting up special administrative regions.

In China, all levels of administration are subordinate to the central government. Governments of provinces and municipalities under the central government can decide on the establishment and geographic division of townships, ethnic townships and towns. However, the establishment of a new district, county or municipal government can only occur with the approval of the central State Council.

Figure 3.1. **China's structure of government**



Source: Wong, C. (2014), *Municipal Finance in China: Structure and Processes*, background paper prepared for the OECD *OECD Urban Policy Reviews: China 2015*, unpublished, NBS (2013), *China Statistical Yearbook 2013,* China Statistics Press, Beijing and NBS (2012), *China City Statistical Yearbook 2012,* China Statistics Press, Beijing.

Under this system, cities higher in the hierarchy are favoured in important ways. They are given greater autonomy in decision making, more public finance resources, greater access to transport corridors and rail capacity, etc. Many small cities and rural areas, in comparison, 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 government (Henderson, 2009).

At present, the creation of a system of only four levels: central government, provincial governments, municipal and county governments, and township governments, is under discussion. Under this proposal, the prefecture-level cities (PLC) would be abolished. It is generally understood that the current number of administrative levels compromises the effective management and execution of the tax-sharing system and intergovernmental transfers. Under current arrangements, it is the higher levels rather than the lower levels of government that capture and use the largest part of the resources. Another issue under discussion is whether or not the standards for establishing cities are out of date and should be revised (Box 3.1).[4]

Provincial governments are the first-level local state administrative organs in China. These include the 22 provinces, five autonomous regions, four municipalities with provincial status (Beijing, Tianjin, Shanghai and Chongqing) and two special administrative regions (Hong Kong and Macau). They are under the direct leadership of the State Council, which decides on the division of responsibilities between the central government and the provincial administrative organs. Provincial governments implement local laws, regulations and decisions of the provincial people's congresses and their standing committees, to which they also report on their work. They exercise leadership over the work of governments in cities, counties, townships and towns under their jurisdiction.[5] Provincial-level governments are authorised to create agencies, called "administrative offices", to provide guidance and co-ordinate the work of the counties and cities within the regions on their behalf.

In addition to the 32 provincial capital cities, five cities are specifically designated in the state plan: Dalian, Xiamen, Shenzhen, Qingdao and Ningbo. There are also "deputy provincial cities": Changchun, Chengdu, Guangzhou, Hangzhou, Harbin, Jinan, Nanjing, Shenyang, Wuhan and Xian. The 15 cities have the deputy provincial title, but the first five are usually controlled by central government, while the remaining ten are controlled by provincial governments.

Generally speaking, prefectural-level cities (municipalities) are large and medium-sized cities, not included among the sub-provincial-level cities. In general, they are cities with a nonfarming population of more than a quarter of a million. They have a relatively advanced tertiary industry, whose production value is more than that of the primary sector, and makes up more than 35% of their GDP. County-level cities are established in relatively small areas, in conformity with national standards for setting up cities (Box 3.1).

Box 3.1. **The Chinese municipal system**

In China, talking about a city or town involves two concepts: population and administrative regions. Cities and towns are settlements where a certain number of non-agricultural population and non-agricultural industries are concentrated. Their residential and social organization is different from villages.' According to this concept, the hierarchy of China's urban and rural settlements consist of villages and townships collectively referred to as rural areas; while towns and cities are referred to as urban areas.

Administrative regions refer to administrative institutions: city, town, township and village. Their administrative borders are set according to certain criteria. For example, for an urban settlement to be classified as a county-level city (CLC):

- the population density would need to be more than 400 people/square kilometre;
- it should have no less than a population of 120 000 in the town where the county government is seated;
- it should have a non-agricultural population of more than 80 000;
- the ratio of nonagriculture would be about 30%;
- the proportion of industrial production should be no less than 80% of the total value of industrial and agricultural output and no less than CNY 150 million in actual value;
- urban public infrastructure has to meet certain standards, such as provision of a piped water supply for more than 65% of the households, more than 60% of roads paved, and adequate drainage systems;
- other factors considered include: GDP of more than CNY 100 million, tertiary industry of more than 20% of GDP; local financial budgetary revenue of more than 100 CNY/person, total income of more than CNY 60 million, and some responsibility for expenditure.

In turn, for a county-level city to be classified as a prefecture-level city (PLC):

- the non-agricultural urban population should be at least 250 000 people;
- GDP must be over CNY 3 billion;
- industry should account for over 80% of GDP;
- tertiary industry must be developed, with a specific output ratio;
- local financial budgetary revenue must equal more than CNY 200 million annually;
- the city must be considered a "central city" among the county-level cities.

Applications are made and considered annually, and the number of PLCs can vary from year to year. The benefits of becoming a PLC include enhanced status for the governor (or mayor) in question and, potentially, greater resources.

Source: IEAS, UNHABITAT, China's Association of Mayors (2010/2011), *The State of China's Cities 2010/2011: Better City, Better Life*, Foreign Language Press, Beijing; mission notes: OECD mission to China, January 2014.

Governments of county-level cities fall mainly into the following categories: *i*) in areas without an administrative office, they fall under the leadership of provincial or

autonomous regional governments; *ii*) in areas under the leadership of prefectural-level cities, they fall under the jurisdiction of the prefectural government. Governments of county-level cities administer governments of townships and ethnic townships (both of which refer to rural areas) and towns (urban centres in rural China). District governments are urban governments established in districts within municipalities directly under the central government, sub-provincial level cities and prefectural cities. They consist of urban district and suburban district governments. Urban district governments are located within the urban districts and function as grassroots governments in urban areas. They may have agencies in the form of neighbourhood offices.

County governments are local governments established in rural areas. They administer the governments of townships, ethnic townships and towns. They also have the capacity to establish neighbourhood offices. Governments of townships, ethnic townships and towns are grassroots governments in rural areas under the leadership of counties, autonomous counties, county-level cities and districts.

Local "people's congresses" as local organs of state power, and local "people's governments" as administrative organs of the State Council

"People's congresses" and "people's governments" are established in provinces, municipalities directly under the central government, counties, cities, municipal districts, townships, ethnic townships and towns. Local people's congresses at different levels are the local organs of state power. The deputies to the people's congresses of provinces, municipalities directly under the central government, and cities divided into districts are elected by the people's congresses at the level below. Deputies to the people's congresses of counties, cities not divided into districts, municipal districts, townships, nationality townships and towns are elected directly by their constituencies. The term of office of the people's congresses of provinces, of municipalities directly under the central government and of cities divided into districts is in general five years. The term of office of county-level people's congresses, cities not divided into districts, municipal districts, townships, nationality townships and towns is three years.

Local people's governments are administrative organs under the direct leadership of the State Council. There are four types of local governments: *i*) the governments of ordinary local administration, which include: the people's congresses, people's governments, party body and the political consultative conference body established in provinces, municipalities directly under the central government, counties, cities, districts under cities, townships, ethnic townships and towns; *ii*) the organs of self-government of ethnic autonomies; *iii*) the local governments of special administrative regions; and, *iv*) special categories of local governments, such as governments of special economic zones, development zones, mining industrial zones and nature reserves, whose organisation differs from administrative organs of other local governments.

Local people's governments are led by governors, mayors, county heads, district heads, township heads and town heads for a five-year term. A local people's government at or above the county level implements the resolutions of the people's congress and its standing committee, as well as decisions and orders of state administrative organs at higher levels; appoints or removes personnel in State administrative organs; and implements the plan for national economic and social development and the budget. It also conducts administrative work relating to the economy, education, science, culture, public health, physical culture, protection of the environment and natural resources, urban and

rural development, finance, civil affairs, public security, nationality (ethnic) affairs, judicial administration, and family planning.

The people's government of a township or town is responsible for the economy, education, science, culture, public health, physical culture, finance, civil affairs, public security, judicial administration and family planning in its administrative area.

China's urban challenges require governance answers

The pace of urbanisation in China poses several challenges for sub-national governments, including:

- providing basic public services to a rapidly growing urban population, which requires enhancing human and financial capacity at the sub-national level.
- maintaining and expanding urban infrastructure, which requires more co-ordinated and effective investment at the local level.
- tackling environmental degradation and ensuring an adequate use of natural resources, which requires co-ordinated effort across different levels of government.
- providing affordable and good-quality housing for all sectors of society, which requires an effective land policy.
- providing public transport that is reliable, affordable and safe.
- strengthening urban and rural linkages, to resolve congestion in cities and diseconomies of agglomeration.

China's institutional arrangements (that is, its administrative system, the budget and financial practices, the regulatory framework, its human resource management practices and multilevel governance arrangements) are still not adequate to support its ambitious urbanisation goals, for several reasons:

- The system of public finance for sub-national governments is in disarray and in need of urgent action. It encourages too much investment, without requiring from decision makers the necessary monitoring and accountability. This has resulted in inefficient, risky behaviours that have entailed a host of micro- and macro-economic problems (Wong, 2012).
- Chinese metropolises are organised on a regional basis and are difficult to govern. Few coherent polycentric urban networks exist, which calls for new forms of governance (Doulet, 2008).
- Inadequate regional co-ordination constrains the flow of goods and services, due to differences in local interests and a lack of incentives for regional co-operation.
- Local governments have weak capacity to improve metropolitan governance, and state capacity varies substantially among and across levels of government and across regions.
- Fragmented administrative jurisdictions and multiple institutions complicate regional and urban planning, rendering long-term development strategies ineffective.

China's 12th Five Year Plan aims to transform the country's current low-efficiency, high-growth development model to a more balanced approach that addresses a wide range of concerns. To achieve this, reforms will need to be introduced to better regulate the relationship between government and the market, by limiting government power and improving the functioning of the market. Reforms will also have to rebalance the relationship between different levels of government (Zhang, 2011).

The Chinese system of intergovernmental relations

An intergovernmental relations system consists of systems and relationships that enable government bodes to participate effectively in achieving their objectives.

A relation of mutual dependence but with co-ordination gaps

The challenge for China, as in many OECD countries, is to ensure a co-ordinated and integrated urbanisation process and seamless service delivery. Synergy, efficiency and effectiveness entail intensive engagement across levels of government. In China, the relations between levels of government are not only characterised by mutual dependence (with authority devolving from upper levels), but also by a series of co-ordination gaps among the levels of government. China's hierarchical administrative system reflects a top-down relationship in which local governments are subordinated to the level immediately above; however, effective and intensive horizontal interaction, in which jurisdictions and actors at the same level of government collaborate on specific projects for the implementation of urban development plans, is lacking and has little legislative basis. The Urbanisation Plan 2014-2020 and the 12th Five Year Plan do not provide indications on how they will be put into effect at the sub-national level, and there is no indication what concrete capacity issues at sub-national level need to be addressed and how they will be implemented. Although the Urbanisation Plan acknowledges the need to establish and improve cross-regional co-ordination, it fails to specify how to build such mechanisms and platforms for co-ordination.

The Chinese regional administrative structure does not easily lend itself to co-ordination. Its complexities include the regional administrative boundaries, the number of municipalities (deputy provincial cities) under central government supervision rather than that of their respective province, and the number of regional bodies and associations. The administrative regional hierarchy admits of many special cases (e.g. deputy provincial cities that are classified below the level of capital cities but above county-level cities and that report directly to the central government). This complex organisation affects not only intergovernmental co-ordination but also accountability. Poor co-ordination has exacerbated problems of noncompliance, flaws in the oversight function, lack of monitoring and evaluating of progress as well as poor communication. As a result of fragmentation, both vertically and horizontally, and of new forms of governance, the task of integrating policy remains a huge challenge for the Chinese government.

An uneven and unclear distribution of responsibilities across levels of government

Since the 1990s, the Chinese central government has delegated to local levels of government such responsibilities as fixed asset investments (for instance, for infrastructure, transport and manufacturing), business and tax policies, and control of over three-quarters of state industrial firms.[6] The entities expected to execute an activity often lack the resources, capacity and support to deliver. One problem is that the

responsibilities of sub-national governments are not precisely defined and can differ by province. This has led to service delivery gaps, redundancies and inefficiencies. The Organic Law of the Local People's Congresses and the 1979 Local People's Governments does not define precise functional responsibilities municipal governments are expected to fulfil. The legal framework refers only to general functions and powers of the local people's congresses and governments, without specifying the areas for which each level is responsible. Moreover, because each of the layers of the administrative hierarchy has considerable regulatory power, China effectively has a shared governance structure that requires continuous negotiations among the different levels of government.

Delegation of responsibilities to sub-national governments is carried out by administrative fiat from the central and provincial executives. Local governments conduct administrative work at and above county level relating to the economy, education, science, culture, public health, physical culture, urban and rural development, finance, civil affairs, public security, ethnic affairs, judicial administrations, supervision and family planning. They issue decisions and orders, appoint or remove administrative functionaries, train and make evaluations of their performance, and reward or punish them. This problem is more serious in metropolitan areas, where functions are fragmented across separate jurisdictions.

Generally speaking, city functions tend to include urban planning, tertiary education, assistance to veterans, infrastructure construction, market regulations, etc. By and large, district responsibilities are limited to the operation of enterprises owned by district governments and their agencies. Street cleaning and solid waste collection, maintenance of local parks, land leasing (where allowed), limited primary health care through clinics, and some localised social welfare services are conducted at the municipal level. With new activities taking place outside the "work units", more management functions have been added to the territorial organisations that form the local governments. Enterprise reform relieved some work units of their social service functions and transferred them to local governments.[7] With the emergence of non-state actors, more and more people are no longer affiliated to a formal work unit and thus require services from the locality and community.

The distribution of expenditure responsibilities between central and sub-national governments, as presented in Box 3.2, somewhat blurs the distinction between the public and the private sector, and the government's responsibilities are still extensive. A significant number of enterprises are still owned by governments at different levels. The low level of development of the legal framework that regulates the behaviour of government officials has resulted in high levels of administrative discretion. Moreover, as Martinez-Vazquez and Quao (2011) argue, there is an extensive use of overlapping responsibilities (i.e. agriculture, social security, cultural affairs) and highly decentralised responsibilities for basic public services (i.e. urban maintenance).

Box 3.2. Assignment of responsibilities between central and sub-national governments in China

Chief expenditure responsibilities of the central government

- Defence
- Foreign affairs
- Operation of the central government
- Operational expenses for cultural, educational, scientific, and public health at the central level
- Key capital construction
- Technical renovation and new product development in centrally owned enterprises
- Agriculture
- Subsidies
- Macro-economic control and regional co-ordination of economic development
- Social security
- Debt

Main expenditure responsibilities of sub-national governments

- Operation of sub-national governments
- Operational expenses of cultural, educational, scientific and public health activities at the sub-national level
- Sub-national capital construction
- Technical renovation and new product development in locally owned enterprises
- Agriculture
- Urban maintenance and construction
- Social security
- Subsidies

Source: Martinez-Vazquez, J. and B. Quao (2011), "Assessing the Assignment of Expenditure Responsibilities" in Yanyun Man, J. and Y. Hong (eds.) *China's Local Public Finance in Transition*, Lincoln Institute of Land Policy, Cambridge, Massachusetts, pp. 21-40.

The allocation of financial responsibilities does not seem to be correctly assigned. This is most obvious in the case of the responsibility assigned to county-level governments for pensions, unemployment and income support schemes, for which the national or provincial governments would be in a better position to take responsibility. Such social security schemes require a level of risk-pooling and redistribution that cannot be matched at the level of county governments. The inability of many county-level governments to finance social services has created many pension arrears that have required central government subsidies.

Sub-national governments have many incentives to compete with each other, but few for co-operation

Co-operation and co-ordination are essential for the provision of goods and services, above all in metropolitan areas. However, in China, regional competition has been a major feature of reforms for over three decades.

Decentralisation and the dynamics of managing leading local officials have blocked co-operation

In the late 1970s, Chinese local governments were encouraged to find ways to develop faster than their local peers. Policies on special economic zones and other economic development zones were implemented, enabling sub-national governments to compete to attract investments. From the mid-1980s, many better-performing counties have been upgraded to the municipal level, further empowering these local governments, and creating incentives for county governments to compete for the opportunity to be upgraded. After the 1994 fiscal reform, local governments became more dependent on revenues produced by their own enterprises: to increase revenue, the efficiency of their companies needed to improve and had to be privatised as a result. Decentralisation induced privatisation of state-owned companies, increasing the level of cross-regional competition (OECD, 2010a). Xu (2011) explains that Chinese regions, particularly at county level or above, have always been relatively self-sufficient, in that each region contains multiple economic sectors. This economic structure allows competition to take place.

The central government has now delegated more autonomy to sub-national governments, providing strong incentives for them to try out reforms and promote economic growth. Interregional competition has motivated sub-national officials to push reforms forward. Government statistics and the mass media regularly publish rankings of local governments' performance, which has encouraged sub-national governments to compete against each other in performance rankings (Xu, 2011)[8]. Moreover, regional officials' careers are directly linked to the economic performance and GDP growth of their province, city or county, which has discouraged co-operation and co-ordination (Burns and Zhou, 2010; Xu, 2011). However, Su, Tao and Yang (2012) argue that economic performance is not the sole criterion for official promotion, since annual GDP growth rate has been shown not to have a statistically significant impact on promotion, as compared with age and working experience. Officials are evaluated according to criteria including capability, diligence, performance and integrity. In recent years, social stability, population planning, arable land preservation and environmental protection have all been introduced into the list of key performance targets. Nonetheless, even if officials' careers are not expressly linked to economic performance, their quest for additional revenue and for favourable rankings for their regions creates few incentives for co-operation and co-ordination.

Regional competition triggers experimentation and learning, but also leads to duplication

Competition among cities has had positive effects on institutional experimentation. Chinese sub-national governments not only compete on quantifiable targets such as GDP growth, but in initiating or testing new reform policies. The 2010 *OECD Review of Guangdong* found that intercity competition in the region appears to have stimulated capacity building through experimental learning approaches.

Regional experimentation is an essential part of the central decision-making process in China. Sub-national governments have been given considerable responsibility for regional co-ordination within their jurisdiction, which has facilitated regional experiments with reform. Since sub-national governments are closer to the experimenting sites, they are much better informed about conditions on the ground than the central government,

and can therefore co-ordinate more effectively. Experimenting with reform can boost the prestige of a city and its government and the credibility of its leading officials.[9]

Experimentation, of course, has also been an essential component of the reform process, given that Chinese national policies are almost always tested in a region first, rather than going for the *big bang* approach. This allows for, evidence to be gathered that the proposed new national policy works. Incorporating regional experiments as an essential part of the central decision-making process substantially reduces the political risks of advancing reforms, and blunts political opposition to reforms (Xu, 2011). This can facilitate the urbanisation process, by establishing practical approaches, tools and technologies through innovation and testing that enable local governments to reconcile economic development with sustainable urban development issues, whether environmental, social or cultural.

However, competition has not always been beneficial. Inter-city competition has led to duplication of infrastructure, some of which has been absorbed by high growth rates, but some of which could be considered wasteful. In Guangdong province, competition within the Pearl River Delta has resulted in an abundance of major infrastructural facilities. Five international airports serve the region: those of Hong Kong, Macau, Zhuhai, Guangzhou and Shenzhen. A similar number of container ports vie for trade in south China, resulting in an inefficient use of resources and capacity (OECD, 2010a). For example, Zhuhai airport had planned for a maximum capacity of 12 million passengers, but was only handling 2.8 million passengers by 2013.

Bureaucratic fragmentation and dual authority relations compromise accountability

As noted above, administrative units in lower levels of government must report not only to the government at their own level but also to the upper level government on the implementation of central government policies. This dual authority can be an obstacle to accountability and policy implementation, since it can make it necessary to balance conflicting objectives. The number of clearances required at different levels of government before a policy can be carried out reduces the probability of full policy implementation, because central policies and priorities are progressively diluted through the nested hierarchy of sub-national governments. This is demonstrated in the case of the implementation of the Measures on Open Environmental Information (Box 3.3).

Box 3.3. Governance challenges: the case of China's Environmental Transparency Regulations

The rapid economic growth has brought new challenges to China. In particular, pollution problems are multiplying alongside rapid industrialisation, straining not just the long-term sustainability of China's development, but also social stability, as environmental issues become a growing source of citizen discontent. The government's policies have started to reflect the need to balance continued economic transformation with better environmental management. As part of this policy shift, China established a set of "Open Environmental Information" (OEI) measures on 1 May 2008, requiring state government agencies to pro-actively disclose a range of environmental information related to their work and allowing citizens to request information.

The regulations from the Ministry of Environmental Protection (MEP), the "Measures on Open Environmental Information" (OEI), require governments to disclose information on: *i*) environmental laws, regulations and standards; *ii*) allocation of emissions quotas and permits; *iii*) pollution fees and penalties collected; *iv*) exemptions, reductions, or postponements granted; *v*) outcomes of investigations into public complaints; and *vi*) lists of violators of environmental regulations. The MEP's motivations for the transparency measures were manifold: *i)* to strengthen the ministry's regulatory power vis-à-vis other agencies more focused on economic development; *ii)* to strengthen incentives for local governments to enforce environmental regulations, by raising the MEP's monitoring ability; and *iii)* to improve channels for citizen participation, particularly given the rising number of protests over environmental conditions.

Although national policies on issues such as pollution control are drafted in Beijing, their implementation is left to sub-national governments, which often have other goals, such as economic growth. Moreover, functional departments at sub-national levels report to both central agencies and the local government at which they operate, creating dual authority relations. Monitoring agencies are weak for the same reasons: the sub-national units of these agencies report to both local governments and to their central ministries.

Bureaucratic fragmentation in China means that as central regulations are channelled through the layers of the state, policies are diluted and distorted. Implementation of the transparency measures ends up depending on local government objectives, bargaining relations between state authorities and the enterprises that provide public services, and incentives for local governments to respond to pressure from civil society. The main burden of implementing the OEI measures falls on the EPBs within each local government. EPBs receive their policy directives from the MEP, but local governments control EPB resources as well as personnel promotion decisions. As the bureaus also have to respond to citizen complaints, they as agents essentially report to three principals – the MEP, the local government and the public. This situation makes aligning EPB incentives particularly challenging. Environmental policies are often subverted at local levels, as bureaus come under pressure by local governments to overlook violations or lower pollution fines on account of other priorities. The weak bureaucratic position of EPBs means that local government typically plays an important role in implementing the OEI measures.

Source: Tan, Y. (2014), "Transparency Without Democracy: The Unexpected Effects of China's Environmental Disclosure Policy", *Governance: An International Journal of Policy, Administration, and Institutions*, Vol. 27, No.1, pp. 37-62, Wiley Periodicals, Inc.

Moreover, as Box 3.3 suggests, owing to the way policies are designed, full understanding of, and agreement on, policy objectives may not have been reached. Central policies are discussed and approved at central level and communicated to lower levels of government only for implementation. The objectives of central and local governments may not be fully compatible, and the possibility of conflict and confusion is increased when actors, say in the private sector or NGOs, pursue their own goals within a

centrally defined policy or programmes (e.g. enterprise-local government bargaining relations).

Box 3.3 also highlights a problem of communication and co-ordination among the different actors involved in the process of policy making. Since information on central policies has to come down through the hierarchy of governments, it is not possible to ensure that priorities and instructions are understood as intended by central government. The lack of direct interaction between central and local governments (for instance, in the case of county-level cities) exacerbates this problem. Co-ordination is not just a matter of communicating information or setting up administrative structures, it is necessary to ensure compliance through mechanisms of control and supervision, which at present seem to be weak.

Poor co-ordination across levels of government undermines urban development

The success of any urbanisation plan depends to a large extent on how intergovernmental relations are structured. Co-operation and co-ordination are two key elements of these relations, facilitating the exchange of information, the effective and efficient use of financial resources, the avoidance of duplication of programmes and projects, and even the definition of a region or city's future direction.

China has entered a phase of development in which co-ordination is becoming critical. Handling issues such as air and water pollution, for instance, will require collaboration between actors from many levels of government. Meanwhile, the importance of the private sector has increased, and its involvement in cross-sectoral issues is critical. The intervention of the public sector alone no longer guarantees a successful response. Co-ordination in this regard poses a distinct challenge for urbanisation in China:

- *Co-ordination is not legally mandated*. The current regulatory framework for urbanisation, either in the Urban and Rural Planning Law or elsewhere, does not explicitly call for co-ordination with governments at the same or different levels. Effective co-ordination is not used as a criterion for performance evaluation.
- *No financial incentives are in place to enhance co-ordination and build a metropolitan strategy*. Finance and governance in China often appear to be conceived of as a reaction to the problems of urbanisation rather than an attempt to address fundamental issues. Metropolitan areas are generally parcelled out among numerous local governments, and the assignment of expenditure and financial responsibilities to local governments conforms to these boundaries. No overall metropolitan strategy exists for spending, taxing and borrowing in large metropolitan areas. There are no special expenditure assignment provisions for the creation of metropolitan zones with municipalities of different sizes, or even special arrangements under the intergovernmental transfer system. Cities and other levels of government have no financial incentive to co-ordinate their efforts with other governments.
- *The nested hierarchy of governments prevents horizontal co-operation*. Governments are required to interact with the level of government immediately above and below, but a county-level city, for example, cannot interact with the central government. Moreover, this relationship tends to involve control and supervision rather than co-operation. Sub-national governments report to and request approval for urban plans from the next level up, but this relationship does

not appear to provide them any support in implementing the plans or in creating synergies vertically and horizontally.

- *Regional initiatives are not a part of the policy process.* Given the competitive framework, local officials have incentives to promote local, not regional, economic interests, and in general, information gaps obstruct the co-ordination and alignment of goals across levels of government. Mechanisms for sharing information between governments at the same level do not exist.
- *Local officials focus on obtaining rewards and promotions*. Leading local officials work at achieving the targets imposed by the level of government immediately above, with a view to impressing national leaders. This may not necessarily benefit local citizens or result in effective public service delivery and efficient new infrastructure. Since co-operation is subordinated, unreasonable competition and duplication are typical.

Cross-sectoral planning for urban development remains weak

The complexity and ambitious targets of the 12th Five Year Plan and the objectives of the New National Urbanisation Plan 2014-2020 (see Chapter 2) require integrated government action, where civil servants work across sectoral and ministry boundaries to develop the mandated cross-sectoral policies. A key problem is that the legislation in place does not encourage sub-national governments to seek complementarities and create synergies with governments at the same level when working on urbanisation. Coherent horizontal collaboration across jurisdictions and economic sectors in implementing the government's strategic agenda on urbanisation improves its ability both respond to complicated policy challenges and build commitment to a shared vision. China faces challenges generated by the global and financial crisis, climate change, pollution, an ageing population, health and natural disaster emergencies that do not fit neatly within organisational competencies. Collaborative efforts are needed to achieve efficiencies across organisational, administrative and geographical boundaries. An additional challenge for co-operation is the relationships between administrative authorities at different levels of government and the private sector. For example, in tackling environmental problems, tensions exist among Environmental Protection Bureaus (EPBs) (which are part of the provincial administration but also exist at the prefecture and county level) and also with Environmental Protection Divisions (EPDs) of industrial bureaus. As EPDs have greater capacity than EPBs to help enterprises to design ways to comply with environmental laws, many company managers prefer to co-operate with EPDs rather than with EPBs (OECD, 2005a).

Moreover, the Urban and Rural Planning Law does not provide for consultation with other sectors involved in urban development, such as education, health, environment and transport. Cross-sectoral feedback in the preparation of the urban plans is limited. Provincial urban hierarchical plans and overall plans for cities are reviewed by commissions of the State Council representing different sectors. The revisions may incorporate the commissions' views, but do not include a commitment from other sectors to build synergies for each other's benefit. Little discussion occurs on the different projects included in an urban provincial plan. The recently established inter-ministerial committee to discuss urban issues is a positive step for cross-sectoral co-ordination. The Urban and Rural Planning Law only establishes a procedure for monitoring and supervising the implementation of the law.

Revisiting urban governance structures in China

In the view of the OECD Secretariat, based on the experience of OECD member countries, China would benefit from revisiting its urban governance structure, to facilitate the process of urbanisation. Strengthening collaboration across levels of government would be a first step,[10] as would exploiting potential complementarities across jurisdictions and sectors. This would entail, among other things, revamping the metropolitan governance structure and improving the quality of the regulatory framework.

Strengthening collaboration across levels of government

A new relationship between central and sub-national levels of government is required …

China could benefit from a collective commitment across levels of government to enhance the central government's stewardship role with sub-national governments, as "partners", rather than "subordinates". This new relationship would involve strengthening the collective commitment[11] of sub-national governments, to ensure coherence between national and sub-national objectives through consultation and dialogue. This could encourage "buy-in" and successful policy implementation at lower levels of government. Co-ordination and co-operation at the central level, and ongoing consultation with the sub-national level, could help identify needs and capacity, and open channels of information for monitoring and evaluating policies. This would also help provide sub-national governments with the capacity and tools to implement policy and ensure that competences and resources are aligned.

This new relationship between central and sub-national governments would entail greater clarity in defining roles and providing adequate resources across government levels. It would also support accountability in sub-national governments. The appropriate division of responsibilities and resources across government levels would encourage the agencies responsible to ensure adequacy, equity and efficiency in allocating resources for essential public services, in line with national policies.

… based on a streamlined distribution of competences and a reduction of transaction costs

Setting up and clarifying responsibilities for expenditure across all levels of government could go a long way towards improving co-ordination across levels of government and facilitating more efficient provision of basic public services. According to the World Bank (2014b), it is desirable that a national government assume responsibility for national public services, international affairs, monetary policy, regulation, transfers to persons and businesses, fiscal policy co-ordination, regional equity, redistribution, and preservation of an internal common market. Some central functions, such as the regulation of the financial sector and the environment, may be effectively shared with sub-national governments. State governments, or in other words, provincial governments in China, may have primary responsibility for education, health, social insurance, intermunicipal issues and oversight of local governments. All local services should be assigned to local governments. Generally, the central government should be involved in overall policy, setting standards and auditing; state governments should have an oversight function; and local governments should be involved with the

provision of infrastructure and services. Assignment of responsibilities to various local governments may be asymmetric, based on population size, rural/urban classification and fiscal capacity. Large cities may have responsibility for some services that are provided directly by the centre in other cities.

The experience of OECD countries shows that designing a clear-cut allocation of competencies across levels of government is a highly complex process. Many services and policy areas such as urban development require the intervention of all levels of government, given the inherent interdependency. In addition, the assignment of government responsibilities is not always appropriate, either because of overlaps in responsibilities, or because some policy domains are not specifically assigned to any level of government and require co-operation. Co-ordination mechanisms and multilevel governance arrangements are key, both vertically between the centre and the lower levels, and horizontally among the constituent units. This reduces transaction costs and asymmetries of information across levels of government[12].

Chinese authorities may also consider establishing a decentralisation framework that includes the scope, objectives, dimension (administrative, economic, fiscal, and territorial), stages and the timeline for decentralisation. This legal framework would regulate the relationships of different levels of government. France's Laws of Decentralisation and Reform of the State (*Lois de décentralisation et de réforme de l'Etat*) provides an illuminating example of how to clarify the roles and responsibilities of the different levels of government and offer public actors the means to implement government priorities efficiently. China may also wish to reassign selected responsibilities that are currently under the scope of county-level governments to higher levels of government better suited to carrying them out. For example, the financing and provision of security services (pension, disability and survivor benefits and unemployment) could be re-centralised at the provincial or central level, which have a broader view, wider scope of action, and generally more technical capacity. Chinese authorities may wish to analyse the decentralisation experience of the Netherlands (OECD, 2014d). The Dutch de Grave Commission's Report "It is Your Business or Not" calls for a better distribution of tasks across levels of government and streamlining earmarked grants in policy areas involving several government levels (OECD, 2011d).

Introducing a new relationship across levels of government and enhancing decentralisation would require new mechanisms of accountability. Sub-national governments could be provided incentives to properly balance spending on economic development and construction and on other public services, especially in social protection. Central ministries are encouraged not to impose unfunded mandates on sub-national governments, as such mandates and sudden changes in policy generate confusion and uncertainty for sub-national governments' long-term capital planning and budgeting (Mikesell et al., 2011).

Communication and information channels to facilitate collaboration need to be reinforced

Given the importance of sharing and access to timely and accurate information, it is in China's interests to establish mechanisms for information, both vertically and horizontally. In OECD countries, national bodies in charge of sub-national co-ordination, involving meetings of sub-national representatives, are most frequently used to co-ordinate regional development across different levels of government. OECD (2013i) has noted that the greater the degree to which sub-national governments need to secure central government support for their investment priorities, the greater their incentive to

remain informed about the agendas of central-level policy makers. China may draw on the experience of Norway, a more centralised country, in information sharing. Norway's Ministry of Local Government and Modernisation meets with regional administrations and other regional stakeholders to inform them about the central policies for regional development and to discuss key regional issues. China could benefit from a central body to facilitate communication across levels of government. This need not be at ministerial level, as in Norway, but an agency under the umbrella of the National Development and Reform Commission (NDRC), China's chief central planning agency. Its primary tasks would be to explain to sub-national governments what the central policy priorities are and to facilitate dialogue among regional leaders. Meetings with leaders of different provinces could encourage networking. The body could also conduct research on the direction of sub-national government's structure, tasks and finances. Sub-national leaders would find it in their interests to participate, to obtain first-hand information on the central government's strategic priorities.

Another relevant example is France's Ministry of Decentralisation, Reform of the State and Public Function (*Ministère de la décentralisation, de la réforme de l'État et de la fonction publique*) which plans and implements government policy on decentralisation in co-ordination with the Ministry of the Interior and the Ministry of Housing and Territorial Equality. This proposes the measures to ensure that local governments can exercise their functions. It also prepares the strategic orientations of government for the development of metropolitan areas.[13] Canada's Privy Council Office has an office for intergovernmental affairs that provides advice and support to the prime minister and minister of intergovernmental affairs on policies, communications and parliamentary affairs regarding federal-provincial-territorial relations, including fiscal federalism, the evolution of the federation and Canadian unity[14].

Performance budgeting could be used as a co-ordination tool …

Performance-informed budgeting could help China define clear objectives, align financial and performance information and develop a common whole-of-government planning and reporting framework that could be a valuable tool for co-ordination. In performance-informed budgeting, resources are related to proposed future performance or to performance results in an indirect manner. Performance information is used to inform budget decisions along with other information on macro restrictions on fiscal policy and political and policy priorities, but there is no automatic linkage between targets and funding. OECD countries have long experience in performance-informed budgeting that could be relevant for China. Canada, for instance, sets strategic outcomes for all entities and links resources, performance and actual results for all programmes; the United Kingdom's comprehensive spending reviews and public service agreements help allocate funding to key priorities and help departments plan ahead; and the United States' Program Assessment Rating Tool assesses how programmes are performing.[15]

Alternatively, China could explore co-financing arrangements between central and sub-national governments. This is not simply a way to secure funds, but an important co-ordination tool to ensure that national priorities are reflected in regional development projects. Such arrangements can help ensure the commitment of different actors to the success of a project. They could also encourage sub-national governments to engage in projects that generate positive spillover effects on neighbouring areas; and help shift spending priorities of other actors, particularly when linked to new activities. Moreover, co-financing arrangements are an important way to spread risk, which allows greater latitude for experimentation.

… and performance management can help align central and sub-national objectives

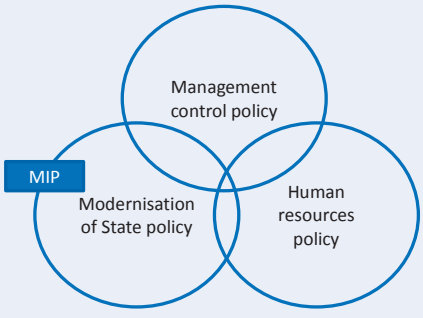
Performance management tools could help China align central and sub-national governments' urban development objectives. This can boost co-ordination across levels of government. One option is the use of strategic planning frameworks at the whole-of-government level and within individual public sector organisations, to ensure that the government's agenda is clearly translated into a work programme with measureable outcomes for each ministry and agency. Measuring performance and using performance indicators are key for aligning central and sub-national objectives, promoting learning and orienting stakeholders towards results.

China has long experience of measuring performance and publishing results as a way to foster economic growth. It could build on this experience to use performance management not only as a way to rate performance but to strengthen collective commitment. Individual performance objectives of each sub-national government could be linked to a shared whole-of-government approach, starting with ministries at central level and cascading down through the public administration. The aim would be to clarify how sub-national objectives and activities are contributing to the strategic objectives of central government on urban development. To support China's efforts in improving its performance management practices, the experience of Chile's Management Improvement Programme (MIP) may be of particular relevance (Box 3.4). The main message for China is that the improvement programme has to evolve, so this should be part of a long-term vision of how the government can support the urbanisation process. The MIP is also closely managed, like other instruments of the Management Evaluation and Control System, with a clear articulation of processes, timetables, tools and responsibilities.

Box 3.4. **Chile's Management Improvement Programme**

Chile's Management Improvement Programme (MIP) aims to improve management in public agencies, to link salary policy to performance, and to provide information to inform budget decisions. It links three policy areas, state modernisation, human resources and the budget. Its relationship with the budget is both general, in increasing efficiency and containing levels of spending, and specific. Three of the 11 MIP systems (planning and management control, financial and accounting administration, and public sector procurement) directly support the budget process. The MIP's planning and management control system is central to results-informed budgeting: it establishes management information systems that define and monitor performance indicators. It also informs wage policy, linking the wage-bill envelope to performance.

The three spheres of government policies in the MIP



Source: Budget Directorate of Chile (DIPRES) (2014), www.dipres.gob.cl/594/w3-propertyvalue- 15230.html (accessed 11 November 2014) and World Bank (2010), *Performance Management Chilean Style: The Management Improvement Program* (PMG).

The challenge for China is to ensure that the performance information from municipalities complies with minimum standards of quality. Another problem is that its complex and diffuse governance system could make collecting data on performance inaccurate, unreliable and incomplete. The National Bureau of Statistics (NBS) of China will need to call for more regular performance data to be published and communicated to central government. The main impact of performance indicators is their ability to reinforce linkages among policy stakeholders at different levels of government, and their contribution to learning and capacity building. As a basis for dialogue, discussion and learning, they help communities of actors identify common reference points. NBS will have to lead a project on building municipal performance indicators. Performance information facilitates the dissemination of information across levels of government, helping actors identify objectives and improving strategic effectiveness. This could be of particular importance to China in enhancing co-operation and accountability.

To improve the collection of performance data, China may wish to review the experience of the Norwegian programme KOSTRA (Box 3.5). The programme has had various benefits for the central and sub-central levels of government. At the central level, the system has rationalised data collection and processing, and established uniform standards that facilitate comparisons of municipalities and service sectors. It has also helped the central government determine whether municipalities are complying with national standards and regulations, and facilitated assessment of economic conditions. This served as the basis of Parliamentary discussion on the transfer of resources to municipalities. In municipalities, KOSTRA has reduced the administrative burden of reporting. It also has provided a tool for internal planning, budgeting and communication at the local level. In addition, it has facilitated knowledge-sharing among municipalities, which use its indicators for the purpose of benchmarking performance. The system, which publishes results electronically, can provide data within a month of their receipt from the municipalities.

Box 3.5. **KOSTRA, Norway's data reporting and information system**

The Norwegian system KOSTRA represents an OECD-area best practice. KOSTRA (Local governments-State-Reporting) is a national information system that provides information on the use of resources by the municipal and county authorities. The system is based on data records and annual reports to Statistics Norway by local authorities. The data includes financial data and data on service provision. Statistics Norway compiles these with other data, such as population figures, and generates key figures for priorities, coverage rates and productivity/efficiency regarding public services. The key indicators are published online in a format that makes it possible to compare resource use by similar municipalities. The comparisons help local authorities identify areas where resources can be used more effectively.

KOSTRA integrates information from local government accounts, service statistics and population statistics. It includes indicators of production, service coverage, needs, quality and efficiency. The information is easily accessible online and facilitates comparison of the performance by local governments, the media and researchers. While individual local governments could use KOSTRA more efficiently (e.g. by systematic benchmarking), the system has helped municipalities in "bench-learning" or "bench-marketing".

Source: KOSTRA (Local governments state reporting) (n.d.) www.regjeringen.no/en/dep/kmd/subjects/municipal-economy/kostra-municipality--state-reporting.html?id=1233 (accessed December 2014); and OECD (2010), *Finland: Working Together to Sustain Success*, OECD Public Governance Reviews, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264086081-en.

Conditionality could help align objectives and foster accountability

To step up its efforts to reinforce vertical accountability, Chinese authorities may wish to include conditionalities in transfers to sub-national governments. Conditionality is a well-established policy tool for vertical co-ordination across OECD countries. It is a type of contractual arrangement whereby a government takes, or promises to take, certain policy or institutional actions, in return for which a higher level of government authority or an international institution will provide specified amounts of financial and/or technical assistance (OECD, 2013i). Conditionality is relevant for regional development because it is at the heart of intergovernmental fiscal relations. It has been used in many inter-governmental relationships, including co-ordination of investment for regional development. The use of conditionalities varies across OECD countries. The most frequent conditions attached to central funding include matching (co-financing) and reporting requirements, as well as predetermined timeframes for spending investment funds. In many countries, earmarking, environmental assessments and additionality requirements are also frequently applied. By using conditionality requirements, the Chinese central government could direct sub-national governments towards cross-municipal participation as a condition for supporting a project.

Although many other OECD countries acknowledge widespread and significant difficulties in the use of conditionalities (OECD, 2013i), China could use them as a mechanism of co-ordination, as they are perceived by the large majority of OECD countries as being very effective in increasing the quality of investment projects. Several countries (e.g. Estonia, Italy and the Slovak Republic) have found them to be effective tools for framing policies and strategic planning, enabling the central level to better understand the local conditions. In Italy and Norway, conditionality has successfully encouraged the concentration of resources, making it easier to promote and anticipate measures deemed crucial for regional development (OECD, 2013i). To ensure that objectives are aligned, China could follow the example of other OECD countries in using performance monitoring. In Italy, for example, this has been positively enforced through a performance reserve that awards regions that perform with additional grants, based on pre-identified indicators and targets.

Conditionalities should not be part of the contract agreement signed between Chinese sub-national leaders and the upper-level government. They should be part of the financial transfer instruments. For example, in Germany, conditionality has been explicitly attached to central government transfers. However, the regular sectoral conferences bringing together representatives of the centre and the regions can allow regional authorities to discuss and engage in the central government's policy objectives.

China may need conditionality mechanisms in inter-governmental transfers to reduce the risks posed by elite groups, clientelism and insider-outsider problems. Chinese sub-national governments need to be accountable to higher levels of government to carry out their assigned tasks, but they also need to be accountable to citizens, the clients for their investments and services. To ensure that sub-national governments are accountable, China may condition transfers to certain matching or co-financing requirements by the sub-national level. It could also attach conditions such as consultation with citizens, as Poland does.

Exploiting potential complementarities across jurisdictions and policy sectors

Horizontal co-ordination of urban plans should be enhanced …

In China's increasingly complex policy environment, the urban development strategy and its implementation need to be developed in collaboration and consultation with appropriate stakeholders. This can help to realise the central government's strategic vision. The experience of OECD countries suggests that strategies developed without considering the rollout on the ground are at a higher risk of implementation failure. In China, as in all OECD member countries, complex policy challenges require ministries to look beyond their own work programmes to see not only how their work is affected by issues in other sectors but how their own sector influences and impacts other sectors. What happens on one government level will have an impact on other levels of government. Urbanisation is a complex policy issue that cuts across multiple ministries and levels of government. Concerted effort is required to develop innovative solutions and policy proposals that sustain the level and quality of services citizens receive. Ministries from central and sub-national governments that continue to work in silos will limit the public administration's ability to commit to the implementation of the urbanisation plan. For example, in Japan, the 2012 Act to Promote the Low-Carbon City encourages local governments to develop a place-based, cross-sectoral Low-Carbon City Development Plan supported by three different line ministries. This helps identify low-carbon projects across sectors (health, transport, public housing, etc.) financed by the central government (OECD, 2013i).

Close co-ordination between the finance and urban planning departments is critical in developing financially feasible plans. Such co-ordination is not easy in China, where authority to create and dissolve governmental entities is highly centralised. If a sub-national government wishes to integrate the functions of the planning department into the finance department, this must first be approved by the central government (Mikesell et al., 2011). In this context, the only way to enhance co-ordination between the planning and finance departments is to involve them in each other's activities. This means allowing the finance agency to play a key role in the development of urban plans and making the planning department's authorisation a prerequisite for the financing of any urban development project, or any other project that has an impact on urban development. A joint board composed of the planning and finance departments could be used to review and approve all urban development projects, to ensure they are aligned with the urban development plan and are financially viable. Forming this board, however, would not require endorsement from the central government.

… and promote effective public investment strategies.

Experience in OECD countries has showed that public investment can be a key contributor to economic growth, although its impact depends to a significant extent on how governments manage it. Public investment shapes choices about where people live and work, influences the nature and location of private investment and affects well-being. However, poor investment choices and implementation not only waste limited public resources and erode public trust, but they may also hamper future growth opportunities. Thus, Chinese policy makers may find the *OECD Principles for Effective Public Investment* (Box 3.6) a basis on which to assess the current arrangements for governing public investment and identify potential improvements.

Box 3.6. **OECD Principles on Effective Public Investment**

The *OECD Principles for Effective Public Investment Across Levels of Government* aim to help governments assess the strengths and weaknesses of their public investment capacity in a multilevel governance perspective and to set priorities for improvement. The Principles group 12 recommendations into three pillars representing systemic multi-level governance challenges for public investment:

Pillar I: Co-ordinate public investment across levels of government and policies.

- Invest using an integrated strategy tailored to different places.
- Adopt effective co-ordination instruments across national and sub-national governments.
- Co-ordinate among sub-national governments to invest at the relevant scale.

Pillar II: Strengthen capacities for public investment and promote policy learning across levels of government.

- Assess in advance long-term impacts and risks of public investment.
- Encourage stakeholder involvement throughout the investment cycle.
- Mobilise private actors and financing institutions to diversify sources of funding and strengthen capacities.
- Reinforce the expertise of public officials and institutions throughout the investment cycle.
- Focus on results and promote learning.

Pillar III: Ensure sound framework conditions for public investment at all levels of government.

- Develop a fiscal framework adapted to the investment objectives pursued.
- Require sound, transparent financial management.
- Promote transparency and strategic use of public procurement at all levels of government.
- Strive for quality and consistency in regulatory systems across levels of government.

Source: OECD (2014e), "Recommendation of the Council on Effective Public Investment Across Levels of Government", www.oecd.org/gov/regional-policy/recommendation-effective-public-investment-across-levels-of-government.htm.

Central government should actively promote cross-jurisdictional co-operation

China's central government should take a leading role in promoting both cross-regional and cross-local collaboration. The benefits of public investments are rarely confined to predetermined administrative boundaries. Spillovers and efficiencies of scale are key drivers for planning and implementing investment projects co-operatively across jurisdictions, to ensure an approach to policy making that reflects functional economies rather than administrative boundaries. There are certain challenges to this co-operation, of course. For example, there could be significant differences in income levels between

adjacent jurisdictions. Yet competitive pressures may arise even in a partnership of equals. In China, it is also possible that inter-jurisdictional competition may be an obstacle to foster horizontal co-operation at the local level. But these challenges need to be faced to make the most of complementarities.

One way to encourage horizontal co-ordination would be to enshrine in the Urban and Rural Planning Law the need to collaborate across jurisdictions, both cross-local and cross-regional. At present, there is no mention of the issue of co-ordination in the law, and that would send the right message across levels of government regarding the need to collaborate. The provision of financial preferences at the national level for joint sub-national public investment proposals, as allowed for in Norway and Spain, is another alternative. In Switzerland, one-third of sub-national funding from central government is reserved for inter-cantonal investment projects. In Germany, Brandenburg has sought to combine top-down and bottom-up elements in an effort to foster cross-municipal co-ordination. The *Land* government has identified 16 "growth cores" around Brandenburg, chiefly the leading municipalities in various parts of the territory, around which the other municipalities can organise. To tap the resources available to support projects in these growth cores, municipalities must affiliate with one of them and must also be ready to participate in the financing. The *Land* gives priority to projects that are expected to generate positive spillovers across municipal boundaries. This approach not only gives the municipalities an incentive to collaborate, it also requires them to approach the *Land* for support on the basis of growth potential rather than need. China could also consider establishing an inter-ministerial regional development agency in the central government, similar to the *Délégation Interministerielle à l'Aménagement du Territoire et à l'Attractivité Régionale* (DATAR) in France. Its task would be to implement regional policy of the government while NDRC, the central planning agency, took care of strategic matters.

Although cross-sectoral co-ordination remains weak in many OECD countries, several examples of good practice could inspire the design of horizontal co-ordination mechanism in China. For example, in the United States, the White House Council on Strong Cities, Strong Communities is an example of cross-sectoral collaboration to ensure the long-term economic development of cities. The initiative has brought together a significant number of central sectoral ministries to develop the programme in six pilot cities.

Revamping metropolitan governance arrangements could deal with fragmentation at the sub-national level

In China, the lack of co-ordination among sub-national levels of government and fragmentation hamper policy effectiveness and reduce the economic performance of metropolitan areas. Metropolitan areas typically cross multiple administrative boundaries, and the mix of local governments often results in a fragmented approach to policy making and urban planning design. Even if different administrative entities could individually achieve the short-term political targets, working in isolation, they are more likely to fall short of developing the economic potential of a metropolitan area. OECD work indicates that metropolitan cities in OECD countries with a higher level of governmental fragmentation experienced lower growth of gross domestic product (GDP) per capita over the last decade (Ahrend et al., 2014).

Three approaches to municipal reform can be observed across most OECD countries (OECD, 2014c). China may consider their example in revising metropolitan governance arrangements:

- **Municipal mergers** have been adopted in some OECD countries (e.g. Denmark, Finland, Greece, Iceland, the Netherlands, Norway and Sweden) to reduce the number of municipalities and increase their scale in terms of geography and population (OECD, 2014c). China has seen movement towards administrative consolidation, especially in the lower tiers of government, where two or three (or more) towns have been merged to become a district, and counties into cities. The primary motivation is to quicken the pace of urbanisation. This is a positive step towards amalgamation of sub-national authorities, which may have an impact in the reduction of costs associated with public service delivery. However, based on the experience of OECD countries, the lesson for China on municipal mergers is that cost savings may not be realised until several years after the reform, as the chief rationale is usually to improve the quality of services, which may require more spending.
- To foster **inter-municipal co-operation**, OECD countries have been adopting arrangements that allow local jurisdictions to work together for certain common services or investments. In China, given that each level of government has to produce a plan in different sectors in a context of weak co-operative relationships among local governments, incentives for better co-ordination for urban policy design among sub-national governments are needed. There is little evidence that the urban plans developed by provinces and municipalities are prepared in co-ordination with other economic development plans. To increase policy coherence across city-region areas, China could develop city networks and develop delivery agreements at the metropolitan or micropolitan levels. In China, as in OECD countries, central government could play a key role in initiating the intermunicipal co-operation governance agreements through the use of fiscal or legal instruments. Canada's experience with intermunicipal co-operation for infrastructure funding could be a source of inspiration for China. In 2005, the government instituted a Gas Tax Fund (GTF) to share half the revenue from the federal excise tax on gasoline with 3 600 municipalities across the country, in order to fund sustainable municipal infrastructure, including transit and waste. To access the funds, municipalities must apply jointly. The programme has resulted in the construction of regional water filtration plans, community co-generation systems and community transit. In 2007, France created agglomeration contracts that involve the central state, the region and the intermunicipal body of either Agglomeration Communities or the Urban Communities, focusing on human capital improvement and economic development initiatives. The introduction of the metropolitan contracts was a major step in recognising functional economic areas, fostering collaboration among municipalities around a commonly defined project for economic development without creating a formal metropolitan body. To strengthen cross-sectoral planning for urban development, Chinese authorities could identify gaps in existing legal authorities and develop tools for co-ordinated response to urban planning involving several sectors. Communication plans involving agencies/organisations in different sectors could also be developed. Using all available co-ordination mechanisms for cross-sectoral planning is a good start for better planning.

- To encourage complementarities, OECD countries tend to focus on metropolitan areas rather than municipalities to address the special needs of larger cities and surrounding areas. There is a growing interest in **metropolitan governance bodies** – broadly defined as bodies organising responsibilities among public authorities in metropolitan areas, including voluntary associations of municipalities, with few or no legal powers.[16] There are different approaches to metropolitan governance: informal/soft co-ordination; intermunicipal authorities, supra-municipal authorities, and special status of metropolitan cities. It is difficult to recommend China a metropolitan governance model, since this is a matter of political and social choice. However, some lessons for effective metropolitan reform emerge from the experience of OECD countries that could prove useful. First, it is critical to identify a common cause for collaboration and build on successful collaboration outcomes (e.g. the creation of the metropolitan authority in Barcelona in 2011). Second, metropolitan leadership and ownership need to be developed (e.g. the leadership of the metropolitan Paris). Third, it is essential to empower and engage stakeholders at an early stage, and ensure accountability and transparency (e.g. the mixed committee of elected officials and citizens of the Montreal Metropolitan Community, which met to discuss a strategic metropolitan plan). Fourth, strengthening the evidence base and tracking progress is needed (e.g. the Greater Toronto Civic Action Alliance's report on "Enough Talk: An Action Plan for the Toronto Region"). Fifth, sources of financing must be secured (e.g. London's Business Board includes members from commerce and industry). And sixth, it is critical to balance clear timeframes and flexibility (Sweden, for example, first tests governance reforms in a few pilot regions).[17] An additional message for China is that reform of metropolitan governance is a long-term process. It takes time to create institutions and trust, and even once they are up and running, governance structures may need to be further adapted (OECD, 2014c). The experience of the metropolitan area of Aix-Marseille in France also shows the need to tackle fragmented governance to foster more dynamic and inclusive growth (OCDE, 2013).

To help innovative thinking, the role of mayors needs to be redefined …

Mayors in China act as chief executive officers (CEOs) of their cities (Henderson, 2009). They are given performance standards and objectives by higher levels of government and are accountable for performance to them. Mayors are mostly focused on economic growth and development issues – which are a legacy of the central planning era. They have little to do with the quality and delivery of urban public services. Henderson (2009) notes that some standards imposed by upper-level governments may deal with national objectives concerning, for example, rural land acquisition or urban density, but these are often ignored with impunity. Rather mayors may *de facto* be heavily graded on industrial growth.

As China shifts from a focus on economic growth to providing its citizens a better quality of life, the role of mayors must adapt. Mayors could be encouraged to become more accountable to citizens for the quality of public services, and citizen satisfaction should be taken into consideration in assessing mayors' performance and their nomination for promotion. Such considerations might also be extended to all senior positions in sub-national governments. Chinese mayors should be prepared to take a leadership role in helping cities accomplish their goals, without engaging the central and even provincial governments. For example, one option might be to bring together other

mayors and financial experts to design new ways of evaluating and financing infrastructure. The mayor's new role would involve the bigger picture, questioning existing practices and scrutinising successful examples beyond the city's borders. OECD countries such as Canada, Chile, the Netherlands, United Kingdom and the United States have introduced the role of city manager in some municipalities to run the daily management of the administration, while the mayor is responsible for decision making on policy issues and community goals.

… and local officials should be made accountable for urbanisation and service delivery

The New Urbanisation Plan 2014-2020 requires the development of reliable mechanisms for accountability and transparency, for oversight and feedback. Such mechanisms should encourage ethical behaviour, by making unethical activities hard to commit and easy to detect. Accountability mechanisms set guidelines for government activities, for checking that results have been achieved, and for checking that due process has been observed. They include internal administrative procedures (requirements that activities or requests be recorded in writing), comprehensive processes such as audits and evaluations of an agency's performance, or new forms of procedures such as whistle-blowing (which can encourage public servants to expose wrongdoing committed by others or to say no when asked to do something inappropriate). They might also be external to the public service: for example, oversight mechanisms such as legislative or parliamentary committees.

Recognising how aspects of the accountability framework fit together is critical (Smoke, 2013). Reasonable national standards and oversight for metropolitan and other local governments are legitimate, and collection and analysis of performance data help higher levels to allocate resources and provide useful information to citizens. Strong downward accountability mechanisms – beyond competitive elections – are needed to realise the anticipated benefits of decentralisation, which is already in place. One option Chinese authorities might consider is a management accountability framework that defines the conditions necessary to ensure good government and promote management excellence. The Canadian Management Accountability Framework (MAF) gives China a valuable example of a mechanism for accountability (Box 3.7. The MAF is a key performance management tool that the federal government uses to support the management accountability of deputy heads and improve management practices across departments and agencies. The main lessons for China from Canada's experience are that: *i*) leadership at the top is critical to improving management practices; *ii*) recognition at the outset that managing with a focus on results requires a culture shift and that progress takes time and sustained focus; *iii*) performance management assessments should be constructive and encourage continuous improvement, and not be used as a means to penalize organizations or people; *iv*) the assessment tools need to be kept updated; and, *v*) the exchange of best practices through annual conferences and workshops supports the continuous improvement of management practices across government.

Box 3.7. **Canada's Management Accountability Framework**

In the context of increased emphasis on results and performance management, and increased delegation of management functions to departments, the Canadian government has developed a Management Accountability Framework to ensure departmental accountability for management results. The MAF is structured around 10 key elements that collectively define management and establish the expectations for good management of a department or agency. It sets clear indicators and measures that can be used to gauge performance over time to help managers, deputy ministers and central agencies assess progress and strengthen accountability for management results.

The MAF is part of the government's efforts to move away from prescriptive rules and heavy central regulation to focus on risk-based monitoring and accountability for results. The government uses annual MAF assessments to identify management strengths and weaknesses in individual departments and agencies, and ultimately government- wide. The assessment process leads to a joint agreement on specific management improvement action plans and ultimately public reporting on the state of management. MAF assessment now also factors into deputy ministers' performance appraisals.

Source: Treasury Board of Canada Secretariat (2014), www.tbs-sct.gc.ca/maf-crg/index-eng.asp (accessed 2 December 2014).

The National Audit Office of China has a central role to play in fostering accountability of central and sub-national governments. Its mandate might include not only the traditional tasks of verifying legality and regularity of financial management and of accounting but also reviews of efficiency and effectiveness of financial and programme management, in the context of public service delivery and urban development programmes (e.g. infrastructure construction). The US Government Accountability Office (GAO) constitutes a good example of a modern supreme audit institution. China may wish to model its National Audit Office on the GAO, by giving it a broader scope of tasks, which could include auditing sub-national governments at the request of the State Council on issues such as urbanisation. GAO, for example, supports congressional oversight by: *i*) auditing agency operations to determine whether federal funds are being spent efficiently and effectively; *ii*) investigating allegations of illegal and improper activities; *iii*) reporting on how well government programs and policies are meeting their objectives; *iv*) performing policy analyses and outlining options for congressional consideration; and *v*) issuing legal decisions and opinions, such as bid protest rulings and reports on agency rules. GAO stands out among its counterparts in OECD countries, because it also advises Congress and the heads of executive agencies on ways to make government more efficient, effective, ethical, equitable and responsive.

Improving the quality and ensuring enforcement of the regulatory framework for urban development

The regulatory framework for urban development in China, and the areas that have an impact on the issue, is quite comprehensive. It includes formulation of the urban and rural plan, implementation, modification, supervision and inspection, legal liability and supplementary provisions. The current Urban and Rural Planning Law is the product of continuous updating and improvements of the old regulatory framework. However, the regulatory framework suffers from at least two main shortcomings: *i)* ambiguity and lack

of clearly defined rights and responsibilities of the different actors; and *ii)* lack of a systematic enforcement of the urban plans. These weaknesses have affected collaboration across levels of government and generated duplication of effort; they have also compromised accountability of the different urban actors.

Chinese authorities may wish to launch a review of urban planning legislation to eliminate discrepancies and gaps between the laws and executive regulations.[18] Urban planning legislation should create effective and credible co-ordination mechanisms across levels of government and sectors, foster coherence across major policy objectives, clarify responsibilities for assuring regulatory quality, and ensure capacity to respond to a changing, fast-paced environment. It should also make certain that institutional frameworks and resources are adequate, and that systems are in place to manage regulatory resources effectively and to discharge enforcement responsibilities. Strengthening regulation by staffing regulatory units adequately is also recommended, as is conducting regular training sessions and making effective use of consultation, including advisory bodies of stakeholders.[19]

To ensure compliance with the rules and regulations on urban planning, Chinese authorities should develop and apply enforcement strategies that deliver the best possible outcomes, by achieving the highest possible levels of compliance while keeping regulatory costs and administrative burdens as low as possible. To address this problem, appropriate compliance-assurance strategies should be developed that enable strict, fair and timely response to noncompliance, while creating incentives to improve compliance and rewards for better behaviour. The discretionary powers of enforcement personnel should be limited, and delineated precisely in the regulations. The experience of OECD countries suggests that a well- formulated enforcement strategy is one that provides correct incentives for regulated subjects as well as appropriate guidelines for enforcement staff, and minimises both monitoring effort and the costs for the regulated subjects and the public sector (OECD, 2014a).

Nonetheless, efforts to make sub-national levels of government comply with the law and avoid making frequent changes to the regulatory detailed plans need to be stepped up. This leaves room for discretionary implementation of the urban plan and for improper behaviour on the part of officials and developers. The State Council's ongoing effort to formulate the Rules for Modification of the Urban Comprehensive Plan, and the Ministry of Housing and Urban-Rural Development's work on measures to assess the implementation of the urban comprehensive plan, need to be continued and reinforced. The central government has taken special action nationwide to promote openness and transparency in decision-making and planning management. It has also required that planning and project approval comply with the law. This is an initial step in limiting the discretion of administrative authorities involved in planning, setting down stricter procedures, and combating corruption.

Financing urbanisation in China

One of the biggest challenges for China is to finance the ambitious urbanisation process. The burden has fallen on local treasuries, since central government financial support has been limited. This section explores how the urbanisation process has been financed so far and, drawing on the experience of OECD countries, presents the options available to sub-national governments to finance urbanisation.

Understanding Chinese fiscal intergovernmental relations

In terms of expenditure responsibilities, China might appear to be one of the most decentralised countries in the world. One sign of fiscal decentralisation is sub-national tax revenue as a percentage of total general government revenue. In China, this figure rose from 20% of the national total in 1958 to 79% in 1961, and peaked in 1993, when the ratio of sub-national fiscal revenue (expenditure) to national fiscal revenue (expenditure) reached 78% (72%) (Table 3.1). Central planning was replaced by regional competition, where sub-national governments were encouraged to compete with each other to fulfil planning targets. By 2011, local government tax revenue represented 47% of general government tax revenue and 34% of general government total revenue (IMF, 2013).

Table 3.1. **Evolution of Chinese fiscal decentralisation**

Year	Sub-national /total revenue (percentage)	Sub-national/total expenditure (percentage)	Institutional changes
1953	17.0	26.1	1st Five Year Plan
1958	19.6	55.7	
1959	75.6	54.1	Great Leap Forward
1961	78.5	55.0	
1966	64.8	36.9	Cultural Revolution
1975	88.2	50.1	
1978	84.5	52.6	Reform starts
1980	75.5	45.7	Fiscal reform starts
1984	59.5	47.5	
1988	67.1	66.1	
1993	78.0	71.7	
1994	44.3	69.7	Fiscal reform sharing
2004	45.1	72.3	
2005	47.7	74.1	

Source: Adapted from Xu, C. (2011), "The Fundamental Institutions of China's Reform and Development", *Journal of Economic Literature*, Vol. 49, No. 4.

In 1994, the central government reversed the fiscal decentralisation trend, to reassert control, particularly with respect to banks and the decline in fiscal revenue at a time of rapid economic growth. As a result, the share of sub-national government's tax revenue in national tax revenue was reduced to 40% from 70% from one year to the next. The central government removed some powers, such as tax collection, from sub-national governments, and control over bank lending was shifted from sub-national governments. However, responsibility for urbanisation and service provision remained with sub-national governments. Xu (2011) argues that these measures had a negative effect on urbanisation: over-reliance in land assets and high levels of debt acquired by indirect channels.

A gap persists between mandate and fiscal capacity at sub-national level …

In China's highly decentralised fiscal system, the burden of financing urban growth has been left almost entirely to municipal governments, with limited financial support from central government (Wong, 2013a). Except for a few favoured cities in rich coastal provinces, the current system of revenue-sharing does not provide sufficient resources for cities to meet their heavy responsibilities in service provision. China's fiscal reforms have not ensured that the assignment of responsibilities for expenditure among central and sub-

national governments is compatible with their revenue capacity and intergovernmental transfer system. Budgetary expenditures are highly devolved and well distributed across all tiers of government (Table 3.2). The central government accounts for only 15% of the total, and this share has been trending downward. The rest is distributed among the four levels of sub-national governments. In 2010, the central government accounted for just 18% of national budgetary expenditures. Sub-national government expenditure represented almost 83% of public expenditure in 2010, a figure particularly high compared with the OECD average of 39.9% in 2012 (OECD, 2013j and 2013k). The provinces accounted for 17%, the prefectures (municipalities) 23% and the county level 43%.[20] These high percentages of expenditure are caused by the assignment of many costly and vital responsibilities to lower-level governments, such as education, health, pensions, unemployment insurance and social welfare. Sub-national governments are also responsible for the majority of capital spending on the budget.

Table 3.2. **Distribution of budgetary expenditures by level of government (2009, % total)**

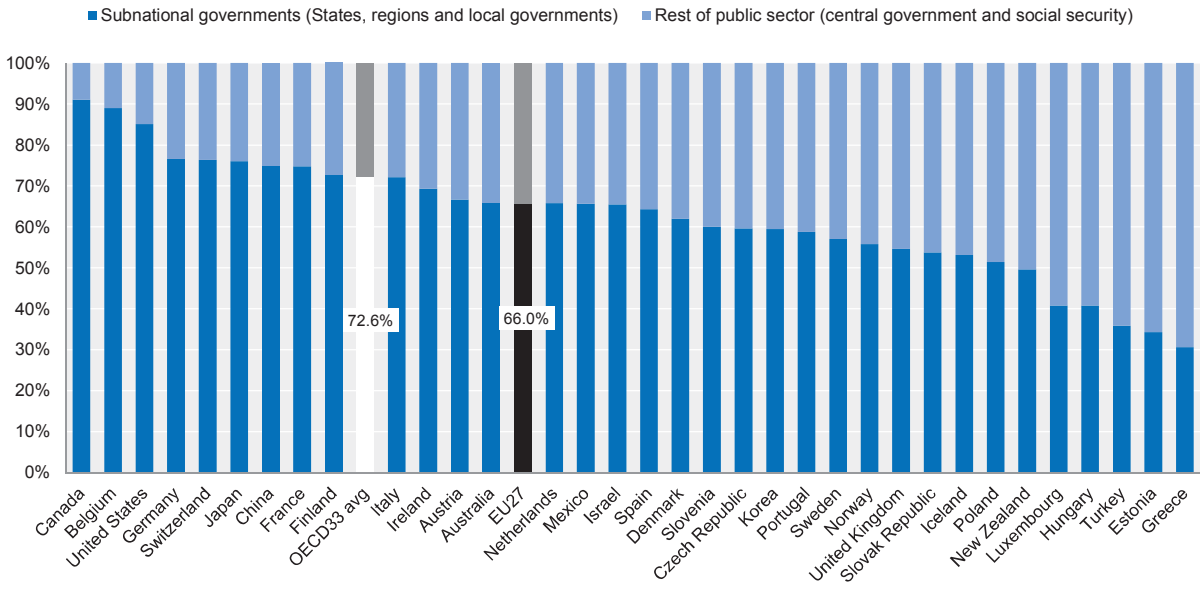
Level of government	Education	Health	Social security and employment	Capital spending (2006)
Central	5.4	1.6	5.5	27.9
Province	14.3	15.4	20.7	18.5
Prefectures	18.4	24.5	27.0	28.8
Counties	61.9	58.6	46.9	24.8

Note: 2006 was the last year for which capital spending was reported separately from recurrent spending. Counties' share includes that of townships.

Source: Calculated from NBS (2010), *Chinese Statistical Yearbook 2010,* China Statistics Press, Beijing, Table 8-6; and *MOF Compendium of Local Fiscal Statistics* 2006 and 2009. Included in Wong (2014), "Municipal Finance in China: Structure and Processes", background paper prepared for *OECD Urban Policy Reviews: China 2015*, unpublished.

Local governments are responsible for financing projects such as schools, hospitals, roads and transport links, utilities and social leisure. The provision of infrastructure also mainly falls to local governments, and they account for 70%-75% of budgetary expenditures on fixed investment in recent years (Yanyun Man, 2011), in line with the OECD average in 2012 (OECD, 2013j and 2013k) (Figure 3.8). Local governments also need to finance the maintenance costs of the expanded social services for a larger urban population. Moreover, the total tax revenues of provinces are generally a fairly similar proportion of local GDP. Given the disparities in GDP across provinces, equalisation of services will require a sizeable increase in transfer payments to lower-income areas. Migration from rural to urban areas is proving nonsustainable in financial terms for local governments. Resources for migrant workers are limited in large cities, due to different fiscal rules. As the local governments of the receiving cities do not have enough resources to host those migrant workers, there is no incentive to absorb migrants. In particular, local governments are reluctant to take migrant workers from other provinces. Although the central government has earmarked cash transfers for situations like this, the resources made available are small.

Figure 3.2. **Sub-national government direct investment as a % of public direct investment, 2012**



Note: Data for China refers to 2011.

Source: OECD (2013), *Subnational Governments in OECD Countries: Key Data* (brochure), OECD, Paris, www.oecd.org/regional/regional-policy. Data for China based on Yanyun Man, J. (2011), "Local Public Finance in China: An Overview" in J. Yanyun Man and Y. Hong (eds.) *China's Local Public Finance in Transition*, Lincoln Institute of Land Policy, Cambridge, Massachusetts, pp. 3-17.

Paying for social welfare is also an issue that puts pressure on local public finances. The current social security fund (SSF) system has made each city responsible for collecting the employer and employee contributions for the provision of pensions and managing the fiduciary responsibilities for the SSF. The central government provides the framework for regulation, but provincial and municipal governments have discretionary powers over details of the scheme. Cities were permitted to vary contribution rates and benefit levels, to minimise fiscal risks. However, the pension scheme was obliged to accept the transfer of existing participants from the unfunded system, including retirees and employees who were approaching retirement, with no provision for covering the costs. As a result, many pension pools are in deficit (Wong, 2013a). On the issue of education, for example, central government takes on 100% of the cost of education in poor provinces, mainly located in western China. The richer eastern coastal provinces receive no financial support from central government for education, a growing financial burden for the local governments of major receiving cities of migrants in the area. For instance, in the city of Dongguan, migrant workers account for 80% of the total population, and students without a Dongguan local *hukou* account for 80% of the total number of the student population in the city. Dongguan, which is located in eastern China, near Hong Kong, receives no educational subsidy from the central government, so the local government of Dongguan pays for the education of all students without Dongguan *hukou*.[21]

China's intergovernmental fiscal system makes no distinction between urban and rural governments, and the assignment of revenues and expenditures is handed out strictly according to their rank in the administrative hierarchy. Under this logic, the provincial

capitals, which tend to be much larger cities, receive the same levels of transfer and revenue-raising powers as other prefectural-level cities (Wong, 2013a).

… partly explained by local governments' limited formal sources of funding: taxes and transfers …

Chinese local governments have limited taxing authority and often do not use the full taxing power they have. Sub-national government tax revenues represent only 7.7% of GDP, which is below the OECD average (16.7%) and very low compared by the standards of federal and decentralised countries (i.e. Nordic countries). A large portion of taxes collected locally is sent to the central government, with only a small proportion retained or redistributed at local level. Local governments can impose fee-based income from businesses, as for example pollution charges, but these fees are assessed at very low levels. Municipalities are prohibited from borrowing even for capital expenditure, making it difficult to finance infrastructure. Wong (2012) suggests that despite these constraints, cities have experienced remarkable growth and development because political leaders have been willing to tolerate a plethora of informal, backdoor solutions that enabled cities to obtain the resources needed and limit eligibility for benefits.

After the 1994 fiscal reform, taxes were divided into central taxes, shared taxes and "local" taxes (Table 3.3). Local governments have almost no freedom to change either the rates or the tax base of the revenues sources allocated to them. The intent of the tax-sharing system was to move away from the negotiated sharing of general revenues under the previous system, to one in which revenues would be divided by tax assignment. Only four taxes are shared, with uniform sharing rates across provinces: the value-added tax (VAT), the corporate income tax (CIT), the personal income tax (PIT) and the securities trading tax. Local governments' revenues accounted for 43% of total tax revenues in 2008 (Yanyun Man, 2011), but by 2011, had increased to 47% (IMF, 2013).

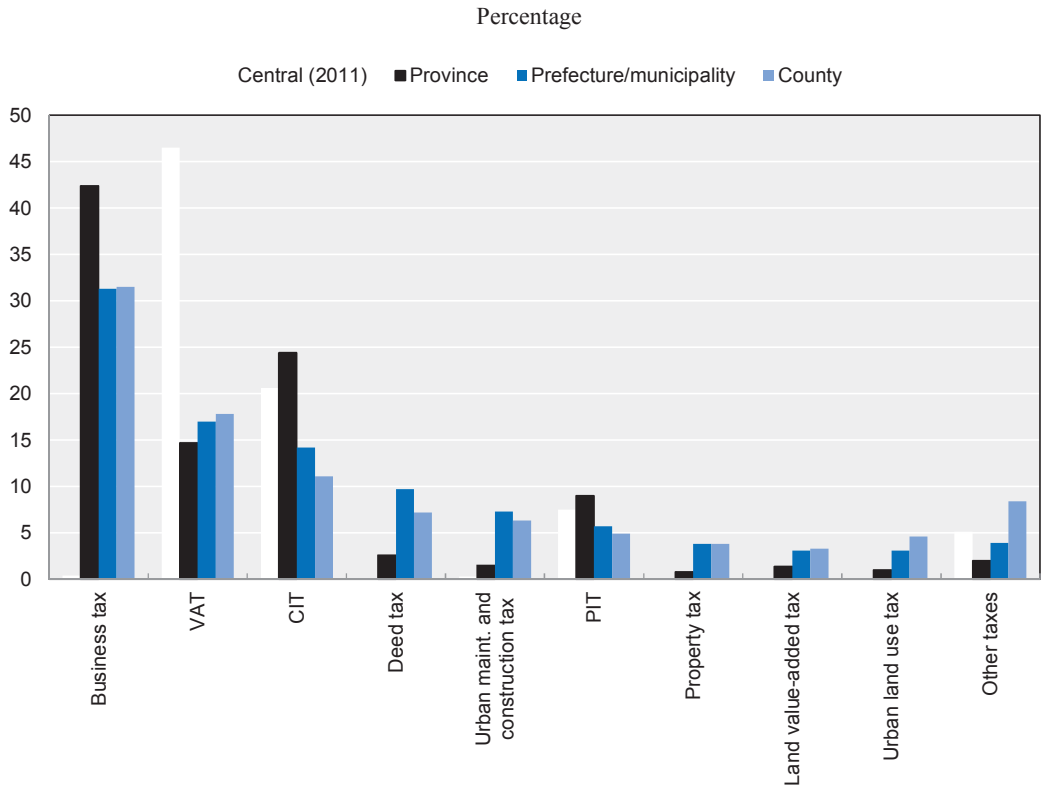
Table 3.3. **Tax assignments in China**

Central taxes	Shared taxes	Local taxes
Excise (consumption tax)	Value-added tax (75/25)	Business tax
Customs duties	Corporate income tax (60/40)	Property tax
Vehicle purchase tax	Personal income tax (60/40)	Urban land use tax
	Security trading tax (97/3)	Vehicle and vessel tax
		Ship tonnage tax
		Deed tax
		Stamp tax
		Urban maintenance and construction tax
		Land value-added tax
		Farmland occupation tax
		Resource tax

Source: Wong (2014), "Municipal Finance in China: Structure and Processes", background paper prepared for *OECD Urban Policy Reviews: China 2015*, unpublished.

The Urban Maintenance and Construction Tax (UMCT), levied as a surcharge on the VAT and BT, was an important source of funding that is earmarked for use in building and maintenance of urban facilities, and accounted for 8% of tax revenues in prefectures and 7% in counties. Because of the extensive sharing of the main taxes among sub-national levels, the same six top the list of revenue sources for the province, prefecture and county levels. The similarities in revenue composition are especially striking at the prefectural and county levels.

Figure 3.3. **Composition of own tax revenues at each administrative level in China (2009)**



Notes: The township level is omitted, given that since 2002/2003, its importance has been substantially downgraded. Other taxes include: Stamp tax, resource tax, farmland occupation tax, vehicle purchase tax and tobacco tax.

Source: Ministry of Finance (MOF), *Compendium of Local Fiscal Statistics* (*Difang caizheng ziliao*), (2009), (ed.) Budget Department and Treasury Department, China Financial and Economic Publishing House, Beijing; NBS (2012), *China City Statistical Yearbook 2012,* China Statistics Press, Beijing*;* based on Wong (2014), "Municipal Finance in China: Structure and Processes", background paper prepared for *OECD Urban Policy Reviews: China 2015*, unpublished.

The tax-sharing system only specifies how taxes should be divided between central and "local" governments and leaves it to the provinces to further divide funds among the four levels of sub-national governments. Since sub-national governments cannot introduce new taxes or change the rate or base of taxes, the system has evolved into one where local taxes are extensively shared among sub-national governments (Wong, 2013a). This leaves sub-national governments with a very limited tax base. They receive a fixed proportion of a number of national taxes, amounting to 15% of local government revenue in 2011. They also get part of the revenue from the sale of land-use rights. Even so, sub-national governments require transfers from central government to balance their budgets, as they are not generally allowed to borrow. The reliance on transfer is particularly marked at the level of the rural counties and county cities, as shown in Table 3.4.

Table 3.4. **Revenue and expenditure across levels of government in China**

Excludes social security and local governments financing platforms

	National consolidated	Central	Sub-national levels				
			Consolidated total	Province	Prefecture	County/ District	Township
	% of national GDP						
Own revenue	27.6	11.4	16.3	3.6	6.1	5.4	1.2
Tax revenue	17.5	9.8	7.7	1.8	2.5	2.4	1.0
Gross land lease revenue	4.4	0.1	4.3	0.4	2.1	1.7	0.1
Other revenue	5.8	1.5	4.3	1.3	1.4	1.4	0.2
Own expenditure	29.4	5.3	24.1	5.1	7.4	10.3	1.3
Land compensation and improvement[1]	2.3	0.0	2.3	0.1	1.1	1.0	0.1
Balance on own account	-1.8	6.1	-7.8	-1.5	-1.3	-4.9	-0.1
Transfers from higher levels of government		0.0	8.4	8.4	6.1	5.5	0.0
Transfers to lower levels of government[2]		8.4		7.2	4.4	0.0	0.0
Net received transfers		-8.4	8.4	1.2	1.7	5.5	0.0
Balance of above = net acquisition of financial assets	-1.8	-2.3	0.5	-0.3	0.3	0.6	-0.1
Use of cash balances (negative means an increase)	-0.8	0.3	-1.1	0.0	-0.5	-0.7	0.1
Net borrowing[3]	2.6	2.0	0.6	0.3	0.2	0.1	0.0
	Net received transfers as percentage % of own expenditure						
Transfer dependency			34.8	23.4	22.5	53.7	n.a.

Notes: n.a. Data not available

1. This line measures the cost that local authorities incur before land rights are sold. The costs are i) the compensation paid to farmers and homeowners when land is acquired for development; and ii) the expenses incurred by local governments when they improve the land by installing the roads and utilities on a site before it is sold. The values for individual levels of sub-national government are based on the average proportions for all levels of sub-national government.

2. Transfers to prefectures exclude those prefectures whose provinces make transfers directly to countries and districts.

3. The central government borrows on behalf of provincial governments, which tend to lend to lower levels of government.

Source: OECD (2013f), *OECD Economic Surveys: China,* OECD Publishing, Paris, http://dx.doi.org/10.1787/eco_surveys-chn-2013-en.

The transfers from central government are governed by the rules set out at the time of the 1994 fiscal reform. The transfer system has three parts (OECD, 2013f):

- **general transfers**, which aim to lessen fiscal disparities and which can be used freely (47% of total transfers in 2012);
- **earmarked transfers**, which can be used only for specified goals, such as to subsidise local projects in certain areas, subject to matching outlays by local government (42% of total transfers); and
- **compensation transfers** to provinces that lost revenue as a result of the 1994 reform, which have still not been completely phased out (11% of total transfers).

The amounts spent for public services provided in Chinese cities are much larger than own-source revenues of municipal governments, which means that much of the job of financing local services is left to the intergovernmental transfer system. Indeed, in China transfers have grown rapidly since 1994, from 4.7% of GDP in 1995 to 8.7% by 2012. The transfers only partially alleviate fiscal disparities: there is substantial equalisation across provinces, but disparities within provinces remain high. County-level governments

are particularly dependent on transfers, and many have inadequate revenue to meet central government mandates, even after significant transfers. The share of transfers whose use is unrestricted stands at 58%, well within the (very wide) ranges observed across OECD countries (OECD, 2013f).

The extent to which sub-national governments depend on transfers varies across the country. However, one of the limitations of the Chinese system is that the need for transfers is assessed mostly based on registered rather than actual population in a province. The problem is that the actual population is generally lower than registered population in low-income provinces, given that migrants remain registered in their home province, regardless of where they live. The government is set to henceforth include 15% of the difference between actual and registered population in the formula for determining transfers. This will partly take into account the cost of migrants to a province.

Since 2003, the introduction of a residential property tax has been under consideration as a means of boosting local tax revenue. However, the government owns all urban land in China. Insofar as a property tax reduces the value of land-use rights, governments face a conflict: introducing a generalised property tax would reduce the income that they derive from sales of land-use rights.[22] There is already a range of taxes on property in China that provides about 1.7% of GDP, similar to what is raised through property taxation in the OECD area (OECD, 2013f). However, in China, two-thirds of taxes are based on transactions and so limit the fluidity of the property market. OECD (2013f) considers that the balance of forces in favour of recurrent value-land taxes on immoveable property will gradually increase as China becomes more urbanised.

… and the lack of an explicit strategy for decentralisation of expenditure responsibilities

In China, reforms have largely concentrated on the revenue side of the budgets, and generally, they have not been co-ordinated with an explicit strategy for decentralisation of expenditure assignments. The problem is exacerbated by the lack of any decentralisation law. Martinez-Vazquez and Quao (2011) argue that the current system of expenditure assignment in China presents: *i*) a mismatch between expenditure responsibilities and revenue sources at the lowest level of government (counties and townships), where many important services are concentrated; *ii*) a general lack of clarity of expenditure assignments aggravated by the lack of formal assignments; *iii*) several wrongly assigned responsibilities, such as pension and employment insurance, at the lowest level; and *iv*) the lack of horizontal accountability mechanisms, which has led to a lack of provision of basic public services.

The current expenditure assignments present several challenges that undermine sub-national governments' capacity to pay for the current process of urbanisation. For example, as noted above, there is a mismatch of expenditure responsibilities and revenue sources at the lowest levels of administration. Whereas the tax sharing system has re-centralised revenue assignments, there has been considerable devolution of expenditure responsibilities at sub-national levels of government. Furthermore, the current system of decentralised finance yields significant horizontal fiscal disparities across but also within provinces, especially between urban and rural areas.

Since the tax-sharing system reform in 1994, a few assignments have changed. Under this framework, taking the prefecture/municipal level as the one most representative of urban governments,[23] the aggregate trend in revenues shown in Table 3.5 appears to have been broadly unfavourable to municipal finance. The prefectural share of revenues has

declined steadily since 1993 (as well as 1998), even as the urban economy has grown rapidly (Wong, 2014). On the expenditure side, the trend looks even more unfavourable: the prefectural share has fallen from 29% of the national total to 23%, even as the population living in prefectural cities has more than doubled in the interim, while the national population increased by 13%.

Table 3.5. **Aggregate trends in revenues and expenditures by tier of government (% of total)**

	1993	1998	2002	2006	2010
Revenues					
Central	22	50	55	53	55
Provincial	13	10	12	12	10
Prefecture/municipal	34	20	16	17	15
County+Township	32	20	17	19	21
Expenditures					
Central	34	29	31	25	18
Provincial	11	19	20	18	17
Prefecture/municipal	29	24	21	23	23
County+Township	27	28	29	34	43

Source: Ministry of Finance (MOF), *Compendium of Local Fiscal Statistics* (*Difang caizheng ziliao*) (various years), (ed.) Budget Department and Treasury Department, China Financial and Economic Publishing House, Beijing; Ministry of Finance (MOF) (2011), *China Finance Yearbook,* China Financial and Economic Publishing House Beijing; Wong (2014), "Municipal Finance in China: Structure and Processes", background paper prepared for *OECD Urban Policy Reviews: China 2015*, unpublished.

The lack of explicit expenditure assignments at the sub-provincial level has led to considerable overlapping of responsibilities and, in turn, lower accountability, because of the difficulty in identifying what level of government should be accountable for the delivery of particular services. Hence, local governments have to go outside of the budget to finance urbanisation projects

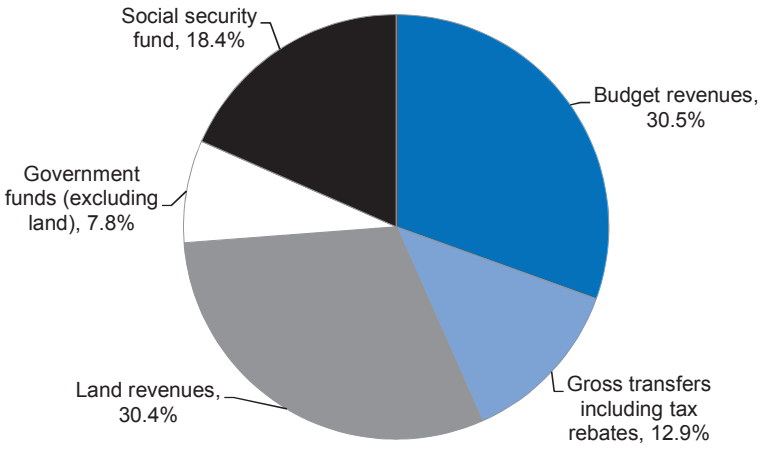
To pay for urbanisation projects and other expenditure responsibilities, Chinese local governments are borrowing at an unsustainable pace (IMF, 2014). Augmented net borrowing, which includes off-budget borrowing by local governments' financial vehicles (LGFVs), has remained high, and rose to 7.5% of GDP in 2013 (IMF, 2014). In 2013, outstanding provincial debt was equivalent to an average of nearly 70% of consolidated fiscal revenue, or around 23% of provincial GDP. Adding government-guaranteed and contingent liabilities pushes the average to about 33% of provincial GDP, and over 60% of GDP in some provinces. The IMF (2014) considers that at the moment, risks appear manageable, although the system of local borrowing is not transparent, making assessment difficult. Despite good social and commercial returns on some of the investments, many provinces and localities rely excessively on LGFVs to support growth. This overall trend is unsustainable and needs to change, because linkages to the financial system and real estate sector are increasingly complex and potentially difficult to manage.

The use of fees, user charges and penalties have proliferated among local government agencies under the current fiscal context, where some of the funds are used for bonuses and topping-up salaries (World Bank, 2005). The use of fees has been used in a wide variety of services, including education and health. For example, in the late 1990s, schools received on average only one-half of their operating revenue from the formal budget, with the rest from fees and other income (Wong 2013a).

Figure 3.4 presents a distribution of the total share of the prefectural-level cities' budget in 2013. It shows that land revenues are equal in size to budget revenues, each of

which is equal to 30% of the total comprehensive budget. Even including transfers from higher-level governments, only 43% of the total is in-budget. Extra-budgetary revenues account for close to 60% of the total, including the social security fund. The comprehensive budget for all prefectural-level cities for 2013 was CNY 7 051.01 billion.

Figure 3.4. **Distribution of the total share of prefectural-level cities' budget (2013)**



Note: The share of each component is estimated according to the following assumptions: *i)* the prefectural share of budget revenues is assumed to be the same as in 2009 for own revenues. Transfer share is 20%; *ii)* the prefectural share of land revenues assumed to be unchanged from 2004, at 52%. For all components, 50% is used as the prefectural share.

Source: Wong (2014), "Municipal Finance in China: Structure and Processes", background paper prepared for *OECD Urban Policy Reviews: China 2015*, unpublished.

China's municipal finances are complex and opaque. Like any other country, China borrows to build infrastructure that supports its urbanisation process and targets. The main difference is the lack of supervision by authorities at national and even local level. No framework is provided from the Ministry of Finance of China to guide local governments on acquiring debt. There is also a lack of accountability because the debt is not reported to any authority, and in some cases, even the People's Council at provincial and local level have no information on debt levels. Research suggests that even the Ministry of Finance has no complete picture of the level of debt local governments have incurred (Wong, 2013a). The National Audit Office estimated that at the end of 2010, local government direct and contingent debt totalled CNY 10.7 trillion, half of it racked up under the fiscal stimulus programme in 2008-10 (NAO, 2011). By June 2013, the estimate had risen to CNY 17.9 trillion, an increase of two-thirds (NAO 2013). The direct and guaranteed debt of local governments was somewhat smaller, totalling CNY 13.6 trillion. This was equal to 24% of current year GDP, but more than 200% of sub-national revenue (Wong, 2014).

Sub-national governments' budgets are fragmented …

The reliance on extra-budgetary resources has led to a fragmentation of municipal budgets that renders macroeconomic control difficult. Revenues are collected by different agencies and local governments, and information is fragmented and usually

underreported. One salient feature of the extra-budgetary finance practices is their *ad hoc* character. They were created by different agencies in response to the emergence of specific needs that could not be covered under the budget. The social security funds (SSF), for instance, were created in 1996 to put enterprise pensions on a funded basis, as a replacement for the system under the planned economy, when pension entitlements were paid from the current accounts of state-owned enterprises. As market reforms separated the finances of state-owned enterprises from government, new funded schemes were introduced for urban employees to provide coverage for pensions, work injury, unemployment, maternity and health care. They were created as local schemes, with risk pooling assigned to the city-level – whether provincial, prefectural or county-level. Under this system, each city is responsible for collecting the employer and employee contributions for each scheme and managing the fiduciary responsibilities for the SSF. Although the basic framework is based on regulations issued by the central government, many details of the schemes are left to the discretion of the provincial and municipal governments (Hussain, 2007). To minimise fiscal risks, cities were permitted to vary contribution rates and benefit levels, though in recent years, some efforts have been made to harmonise them. At their inception, however, the SSFs were saddled with some unfunded liabilities, when the pension scheme was obliged to accept the transfer of existing participants from the unfunded system, including retirees and employees who were approaching retirement, with no provisions for covering the costs. As a result, many pension pools are in deficit. Annually, the Ministry of Finance sets transfers to help local governments meet the costs of pension shortfalls; in 2013 these totalled CNY 737.15 billion (Lou, 2014).

Management of extra-budgetary funds such as the SSF is often retained by the collecting agency, rather than the Ministry of Finance. Although cities are the budget unit for social security, the SSFs are managed by the line ministries (the Ministry of Human Resources and Social Security and the Ministry of Health) and their subordinates at the local level. In recent years, the government has promoted shifting pension pooling to the provincial level, but for the vast majority of cities, the pools remain city responsibilities. The funds in the pension and health insurance pools likewise reside outside the budget, scattered throughout the cities and provinces.

… and budget information is scattered and not always reported in full

The rules for management and reporting for the extra-budgetary funds (EBF) are usually looser, especially at the sub-national levels, and information is not always reported in full. Until recently, there was little public information about the size of land revenues, since they accrue almost entirely to local governments, and the central government has struggled to gain access. Moreover, until 2001, land transfers were mostly made by administrative allocation and negotiation, and the real value of the transactions was largely hidden. With the increased use of auctions, land transfers have become more transparent. The Ministry of Land Resources has published national and provincial data since 2001. However, the data were incomplete – an audit conducted by the National Audit Office (NAO) of 11 municipalities including Beijing, Tianjin, Chongqing and Guangzhou found that during 2004-2006, land transfer revenues were under-reported by 71%. Reporting has improved since 2007, when the government designated land revenues as a Government Fund, and required them to be remitted to the Treasury.

Under China's decentralised statistical system, information on the SSF is reported by the line ministries, separately from fiscal data. At the national level, there is no

consolidated account of these "budgets". 2014 was the first year when the SSF budget was included in the finance minister's report to the National People's Congress (Lou, 2014). At the sub-national levels, this practice has not yet been adopted. Even if a consolidated account exists in a municipality, there is no public reporting of it. Guan and Peng (2011) note that land revenues are not reported to the people's congresses.

The budget presentation in Jiangyin City, a county-level city in prosperous Jiangsu province, provides an illustration of the fragmented nature of budgetary management in China today (Table 3.6). Unusually, the city statistical yearbook offers a detailed disaggregation of expenditures of extra-budgetary funds (EBF). They show EBF providing supplementary funding for many types of municipal expenditures.

Table 3.6. **Composition of fiscal expenditure in Jiangying City, 2009**

CNY, million

	Budgetary	Extra-budgetary	Social security fund	Government Fund
General public services	1 195.72	70.25		
Public safety	574.58	23.36		
Education	1 681.03	323.48		
Science and technology	223.93	1.27		
Culture, sport and media	99.67	16.97		
Social security and employment assistance	682.15	107.17		
Medical and health care	313.15	60.64		
Environmental protection	358.96	44.8		
Community affairs	2277.67	161.31		
Agriculture, forestry and water conservancy	477.71	88.9		
Transportation	430.52	15.94		
Mining, power and information industry	897.41			
Grain and material reserves	141.46			
Earthquake reconstruction assistance	140			
Other expenditure	662.79	26.83		
Total	10 169.83	940.92	1 605.85	2 900.1
Comprehensive Budget	**15 616.7**			
Per capita (yuan)	12 976			
Per capita, by component (yuan)	8 450	782	1 334	2 410
Shares of comprehensive budget	65.1%	6.0%	10.3%	18.6%
Population (mn)	1.2			

Source: Jiangyin Municipal Statistical Bureau (2010), *Jiangyin Statistical Yearbook. Beijing*, China Statistics Press, cited in Wong (2014), Municipal finance in China: structure and processes, background paper prepared for the OECD National Urban Policy Review of China. Unpublished.

In addition, the yearbook reports that Jiangyin also had expenditures of CNY 1.6 billion in SSF, as well as CNY 2.9 billion in expenditures from Government Funds (GF). Unfortunately, the yearbook does not provide the sources of GF, so it is not clear whether the figure includes land revenues, and no breakdown is provided on the uses of the SSF and GF. This presentation was probably provided by the Department of Finance (DOF), which is responsible for the production of fiscal data in Jiangyin. The

level of detail (and lack thereof) probably reflects the fact that the DOF allocates only revenues from the budget and some of the EBF. All other revenues – the SSF, and land and others that make up the Government Fund, are allocated by the collecting agencies and departments, and they are not reported to the DOF.

The lack of reliable and timely revenue and expenditure data for budget planning, monitoring, expenditure control and reporting has negatively impacted budget management in China's sub-national governments. The results have been a poorly controlled commitment of government resources, often resulting in a large buildup of arrears; excessive borrowing and misallocation of resources, undermining the effectiveness and efficiency of service delivery. Further, Chinese local governments have found it difficult to provide an accurate, complete and transparent account of their financial position to the State Council, the Ministry of Finance and the general public. This lack of information has hindered transparency and the enforcement of accountability in government, and has only contributed to the perceived governance problems.

Investment corporations have helped finance urbanisation but also contributed to financial opacity

The emergence of urban development investment corporations (UDICs) has been one of the most important developments in China over the past two decades, as they have been instrumental in helping cities achieve and maintain high levels of investment in infrastructure. Unfortunately, they have also contributed greatly to the opacity of municipal finance in China. In budgeting terms, the UDICs are extra-budgetary. They are managed outside the budget, much like the other extra-budgetary funds, but little is known about them in terms of the total volume of their fund-raising and how the money is spent (Wong, 2014)[24].

Because UDICs were local "pilots" that were never formally endorsed by the central government, they operated in the interstices of China's mixed economic system. They were never assigned a supervisory agency, and were not required to file regular reporting of their activities. The extent to which the growth and development of UDICs had occurred "below the radar" of central authorities was revealed only in 2010-11, in the wake of the massive CNY 4 trillion stimulus programme introduced by the government to counteract the effects of the global financial crisis. During 2008-10, local governments were invited to set up financial platforms to help finance the "local" share, roughly three-quarters of the stimulus programme. Their overwhelming response in the proliferation of UDICs and local investment finally attracted attention, and worried central government authorities discovered that no agency had systematic information on UDICs.[25] Since mid-2009, the government has been engaged in a catching-up exercise in collecting information on UDICs and their operations, with several regulatory agencies undertaking investigations and surveys, including the China Banking Regulatory Commission, the NAO, the Ministry of Finance and the National Development and Reform Commission. A massive nationwide audit was undertaken in 2011 with 41 000 auditors led by the NAO. This was followed by an even more extensive one in 2013 involving 54 400 auditors. What they learned was that by the end of June 2013, sub-national governments had accumulated CNY 10.9 trillion in direct debt, plus CNY 2.7 trillion in guaranteed debt, and an additional CNY 4.3 trillion in partially guaranteed debt. By comparison, sub-national own revenues in 2012 were CNY 6.1 trillion, and total revenues after transfers were CNY 10.6 trillion (MOF final accounts) (Wong, 2014).

Wong (2014) argues that little is known about the governance structure of UDICs, which, in any case, varies from one locality to another. What is known is that over time, as UDICs became more accepted, the initial insistence of separation from local public finances was relaxed, and sub-national governments began to guarantee many bank loans for UDICs. Many municipalities have even pledged future receipts from land revenues as collateral for bank loans. The NAO audit found that 307 prefectures and 1 131 counties had pledged future land revenues to debt servicing, equal to 93% and 56% of those administrative units, respectively (NAO, 2011).

The audit also found governance to be generally weak at UDICs. By design, UDICs are complex hybrid financial organisations that mix public (fiscal) and private (financial) funding to engage in both public and private (profit-making) activities. In the absence of supervision and monitoring, "mission drift" was pervasive. The audit found that only half of the UDICs were mainly focused on fundraising for government projects, another 18% were partly working on government projects, and a third were engaging wholly in market-oriented projects (NAO, 2011).

Allocation of scarce resources is not always optimal and financial planning is weak

In borrowing to finance infrastructure, China is following common practice in other parts of the world, and borrowing to finance capital spending is considered good public policy when it matches the economic life of expenditure to its financing. By stretching out the payment period to match the long stream of benefits from infrastructure such as bridges, subways or schools, this financing method adheres to the user-pay principal and promotes greater efficiency and intergenerational fairness. Where China differs is in the unsupervised nature of the borrowing, not only by national authorities, but apparently at the local level as well. Municipalities often lack an investment plan or a balance sheet that shows the cities' total debt levels. UDICs often do not compile a balance sheet for assets and liabilities, and they are so closely linked to local governments that it is difficult to separate out or define their responsibilities. In China's immature financial system, banks are ill-equipped to provide the discipline expected from capital markets, especially when local government finances are so complex and opaque. Clearly, in the absence of an effective system of monitoring and evaluation, the unsupervised borrowing by local governments and public institutions had created a soft budget constraint that encouraged excessive borrowing and investment, and wasteful and inefficient use of both land and capital.

Moreover, information gathered through interviews for this Review point to the inadequacy of the allocation of financial resources, which are already limited, for the delivery of basic public services such as education, health and transport. Brixi (2009) finds that public resource allocation for public services is inadequate in both cities and rural areas. Funding for many primary and secondary schools, health care centres and the urban water system have failed to meet the needs of citizens in many cities. Underfunding has been identified as the main cause of the lack of reliability and quality in some public services. Underinvestment in the water distribution networks, for example, has caused frequent delivery problems and contamination in old water pipes.

This underscores another problem in municipal finance: the lack of a robust investment plan indicating where to invest and, if borrowing is necessary, how much. In China, when planning for transport projects, technical planning proceeds far ahead of financial planning, rather than proceeding together. Fares usually fund operating costs, or

an ongoing subsidy is needed. Little advance financial planning appears to be made for operations, and inadequate attention is paid to establishing the operations contractually. The failure to develop strong financial plans means that city governments do not face hard decisions: technical decisions are taken without understanding their financial consequences. City finances are consequently put at risk (World Bank, 2010b).

Moreover, public services in urban areas are directed mostly to urban residents (those with urban *hukou*). This means that a large percentage of the urban population, approximately one-third, do not have access to urban services such as social welfare, education, health care and housing (see Chapter 2). This is not reflected in the accounting of the revenues and expenditure of local governments. The allocation of public financial resources has, to a certain extent, been regressive, as it favours only one part of the population generating inequality. Although this is not explicit government policy, low-income urban official residents and migrants face problems of affordability and access to public services of higher quality. Resources generally go to key schools and hospitals, for example, where only people of medium and high income levels can afford access.

Enabling local governments to finance urbanisation

In the view of the OECD Secretariat, and based on the experience of OECD countries, China may wish to consider the following recommendations to strengthen China's municipal financial system and help finance urbanisation.

Regularising municipal finance should be at the top of the policy agenda

As pressures on public spending grow, regularising municipal finance is paramount. Pressure on China to increase its investment in cities will increase. Urbanisation is a national objective expected to ensure sustainable economic and social development, so public investment in cities can be expected to increase. Second, as the country consolidates as a middle-income economy, per capita income will also rise, and citizens will demand more value for money from public services. Third, businesses and citizens will demand that infrastructure be expanded and upgraded, as well as the public amenities necessary to attract and retain a strong labour force as people move more freely around the country. Fourth, the population will continue to age, and preparing the cities for an ageing population will require adapting existing and new infrastructure, such as houses and transport, to the needs of this sector of the population. And fifth, pollution (of air and water) and congestion (transport) will require continuous attention. These factors have implications for the country's economic growth and citizens' well-being. Rationalising municipal finance is of key importance for the economic and social development of the country.

Introducing a transparent accounting system to reinforce oversight and accountability

In regularising municipal finance, a key step 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, which may be spent on goods and services as if they were managed from the operating budget (Henderson, 2009). Off-book revenues and mixing revenues for capital and operating purposes, however, create a lack of transparency.

The Chinese government needs to regain control over aggregate fiscal discipline by assigning the oversight authority and responsibility over all government funds to a single institution: most suitably the Ministry of Finance. Many of the problems of uncoordinated development in China have stemmed from the inability of the Ministry of Finance (and the sub-national finance departments) to act as the sole fiduciary agent of government over all public funds. At present, land revenues, the social security funds and funds for investment in infrastructure fall outside budgetary oversight, despite their implications for the government's fiscal position. If the Ministry of Finance is to play this oversight role, the reform requires political support from top leaders to adjust the distribution of authority across central institutions, elevating the Ministry of Finance and putting it in charge of all fiscal resources. To make this more palatable, support should also be given to support the National People's Congress (NPC) in its supervisory role over the budget – and hence the Ministry of Finance – assigned under the Constitution. At the same time, the NPC should also be asked to empower the National Audit Office to expand its auditing over budget implementation, as it has done several times since the mid-1990s (Wong, 2012), to include the comprehensive budget as well as public debt management. China may wish to analyse the recent experience of Mexico. At the end of 2013, Mexico's accounting harmonisation authority issued an agreement by which public accounts were to be co-ordinated throughout all government levels. For 2014, sub-national governments are required to present their financial results in the same terms as the federal government to the Ministry of Finance. Changes include a better identification of investment projects, increasing transparency and social control through technological platforms, and the standardisation of the accounting system to collect complete, reliable and standardised accounting and budgetary information to analyse sub-national finances and public debt in an integrated manner.

Another option for China would be to adopt a financial management information system (FMIS) to strengthen its public expenditure management. Although it is not a panacea, Diamond and Khemani (2006) argue that the FMIS could improve recording and processing of government financial transactions and facilitate access to reliable financial data. This would enhance transparency and accountability of the sub-national governments to the central government, State Council and citizens. FMIS could strengthen financial controls, facilitating a full and up-to-date picture of commitments and expenditure on a continuous basis. Once a commitment is made, the system should be able to trace all the stages of the transaction processing, from the release of the budget, commitment, purchase, payment requests, reconciliation of bank statements, and accounting of expenditure. This would permit a comprehensive examination of budget execution. It would also provide the information to ensure improved efficiency and effectiveness of government financial management.

China's authorities should nevertheless bear in mind that FMIS projects should be accompanied by, and related to, other reforms in public sector financial management. FMIS objectives and outputs need to be both relevant and consistent with wider fiscal policy reforms. The decision to introduce an FMIS needs to be accompanied by strong commitment, sufficient manpower and financial resources, widespread internal support and an agenda for effective change management. Without these, the chances of success are limited. An implementation strategy, in terms of functionality and the number of entities involved, needs to be conducted in states. The benefits the system can offer take time, and interim arrangements must be made to facilitate various aspects of financial control and reporting (Diamond and Khemani, 2006).[26]

Restructuring local debt should underpin a reform to the public local finance system

As a way to start putting local public finances back in order, restructuring local public debt is a critical step. Working out a resolution is clearly well within the central government's capacity but beyond that of most local governments, especially since the burden is unevenly distributed.[27] Some restructuring of the debt and a quick resolution of bad debts would end the policy paralysis of the past few years and create more working space for municipal governments and banks.

To improve supervision and management of their debt, local governments should be required to make regular reporting on their direct and contingent liabilities, including borrowing under local government financial vehicles and loan servicing, as well as their borrowing plans (Wong, 2012). Such reforms could draw on the experience of the monitoring and regulatory framework introduced in 2011 by the Ministry of Finance, which requires local governments to report on their debt. The framework could be reinforced by additional measures such as annual audits of local debt and ensuring that local governments have a fully transparent budgetary process, with regular public disclosure of key fiscal data and full sharing of information with the Ministry of Finance.

The experience of OECD countries suggests that ensuring market discipline is a possible option. Central government could request that banks and financial markets assess the credit risks of sub-national governments that wish to issue debt and impose higher borrowing costs on the riskier ones. This should provide incentives to borrowers to improve their solvency, by decreasing the level of debt or raising their revenue. It would also foster political accountability, since markets may signal the poor performance of sub-national governments through increases in interest rates or by blocking access. Experience suggests that central government should not rely exclusively on market discipline to monitor debt, and using other mechanisms is recommended. Relying exclusively on market discipline is rare. Canada is one of the few exceptions, as sub-national debts there have no privileged position and enough information exists on the borrowers' outstanding debt and repayment capacity.

Direct control of sub-national governments' borrowing by central government can be an effective way to monitor sub-national governments' debt. However, it may be interpreted by the lender as a bailout guarantee, and central government may not have all the information necessary to assess local projects and to decide which ones to finance. In China's case, approval of sub-national government debt by central government may only be required under certain conditions, for example, when debt exceeds specific ceilings, or for certain types of borrowing, as in Denmark and Turkey (Hulbert and Vammalle, 2013).

Whatever the mechanism adopted by Chinese authorities, it will be necessary to send the message that rules need to be respected. Penalties would need to be associated with excessive borrowing. In OECD countries, when fiscal rules are broken, central governments impose financial sanctions, obliging sub-national governments to offset the breach in future budgets (e.g. in Belgium, Germany, Italy and Spain). Other sanctions, such as reducing fixed fines or decreases in transfers or shared taxes (e.g. Canada, Denmark and Switzerland), could also be introduced.[28] Legislating debt thresholds and penalties for crossing them, and establishing transparent mechanisms for enforcing public bankruptcies – as in New Zealand's system of court-appointed receiverships – could be a valuable option for China. In Spain, central government can temporarily re-centralise (partially or totally) the budgetary powers of sub-national governments missing deficit targets.

Continue facilitating sub-national governments' access to financial markets to finance urbanisation

Funding by means of issuing local government bonds has enabled some local governments to access capital markets to fund urbanisation. In the past, local governments were prohibited from issuing bonds directly, and all government bonds were issued by the Ministry of Finance. However, in 2011 and 2013, six local governments were allowed to issue bonds directly as part of a pilot programme, and by 2014, the number was increased to 10.[29] The 2014 financial reform allowing sub-national governments to issue bonds to access financing is a positive initiative. Local governments' access to financial markets helps finance capital expenditure, since increasing taxes is not efficient. The benefits of public investment, for instance in infrastructure, often last several decades, and equity considerations would suggest that future generations participate in the financing. Financial markets can also help matching expenditure and tax flows, as the expenditures incurred and tax intake may not always fully match in any given year. Access to financial markets also constitutes an independent mechanism for fostering political accountability by signalling poor performance.[30]

Promoting a full package of financial instruments for financing public infrastructure is also recommended. Long-term bonds are one mechanism, but local governments need more autonomy to decide on which funding methodology fits the needs of the project, thus mitigating certain risk factors. Exploring the use of public-private partnerships (PPPs) is an alternative mechanism of expanding the range of instruments at local governments' disposal. If China's central and local authorities consider that PPPs are the way forward to finance public service delivery, Chinese authorities may wish to consider the OECD Principles for Public Governance of Public-Private Partnerships. These principles aim at guiding the adoption of PPPs for public service delivery, creating value for money transparently and prudently.[31]

Broadening the municipal tax base to reduce the dependency on land leases

Chinese municipal governments need access to transparent and sustainable sources of income such as taxes, user charges and grants to finance urbanisation. This would help to match the level of expenditure responsibilities and revenue. Although the New National Urbanisation Plan 2014-2020 already considers the need to boost the ability of local governments to provide basic public services, increasing local revenue mobilisation will be difficult without broadening the sources of income and without clarity on which type of taxes are more suitable for municipalities. Efficiency in tax administration suggests that local governments should levy taxes on immobile factors (e.g. property taxes) and fiscal need criteria suggest that they should also levy cost recovery user charges such as frontage taxes (tax per linear front foot of property), tolls on local roads and poll taxes (World Bank, 2014b).

The experience of such OECD countries as Australia, Canada, Germany, Mexico, New Zealand, the United Kingdom and the United States suggests that property taxation is the most appropriate tax for sub-central governments, as it is an ongoing source of revenue and is by far the most decentralised tax (Piñero Campos and Vammalle, 2011). In the case of China, tax on residences will provide an incentive for cities to accept new residents, as well as help finance urban public services (Henderson, 2009). However, Wang and Herd (2013) argue that introducing a nationwide residential property tax would exacerbate differences in fiscal revenue across provinces, as it would be imposed uniformly across the country. In this case, the revenue for the property tax would mainly

accrue to prefectural-level cities and their districts, where the bulk for the property is situated. VAT and business taxes as well as land leases attract business but not residents. The tax on business property will cause firms to consider more carefully the opportunities for economy in land and space utilisation, and align more closely the services provided to commercial and industrial property with the costs of providing these services (Henderson, 2009).

A consolidated property tax could be better designed to help shape a more efficient pattern of land use. It could discourage speculative holdings, capture value created by public investments, and produce a steadier stream of recurrent revenues to support the budgets of municipal government. If China decides to implement a residential property tax, it should ensure that it is imposed on an objective basis. Valuation should be key to a productive and fair property tax. Chinese authorities should keep in mind that although property tax is often seen as a good tax, because it has the potential to match tax burdens with expenditure benefits and avoid imposing heavy burdens on poor families, its administration represents a major constraint. Property valuation presents major administrative problems, as it requires properties to be assessed frequently to match the tax with its real market value. The use of technology and the improved quality of staff may lead to more comprehensive and better recordkeeping. However, Henderson (2009) argues that a property tax system in China would not necessarily require investing in a costly cadastre system. It only requires registration of ownership, making a specific individual or firm responsible for timely payment of assessments, which, in turn, do not need to be complex and expensive. An area property tax, such as the United Kingdom's council tax, may be suitable for China (Box 3.8). Properties in each district in a city can be placed into a small set of categories, for example by land-use type, size and quality, with a rate charged for each category. Henderson (2009) suggests that this avoids expensive assessment at the parcel level. Ireland has also put in place a local property tax to increase local government responsibility in financial matters, but since introducing a new tax takes time, the central government decided to introduce a household charge (a type of flat-rate tax) as an interim measure.

Box 3.8. **The United Kingdom's council tax**

Council Tax is the system of local taxation collected by local authorities on domestic property in England, Scotland and Wales to fund some of the services provided by local government. It was introduced in 1993 by the Local Government Finance Act of 1992. All homes are given a council tax valuation band by the Valuation Office Agency (VOA). The band is based on the value of the home on a given date. A different amount of council tax is charged on each band. Each local authority keeps a list of all the domestic property in its area, together with its valuation band.

Each year, every local authority sets a rate of council tax for each valuation band. Usually, one person is liable to pay council tax. This could be the person living in the property, or the owner. Nobody under the age of 18 can be liable. If more than one person lives there, a system known as the "hierarchy of liability" is used to decide who is liable. Not everyone has to pay the full amount of council tax. There are three ways the council tax bill may be reduced: *i)* through a reduction scheme for disabled people; *ii)* discounts; and *iii)* council tax reduction and second adult rebate.

Some property is exempt from council tax altogether, either for a short period or indefinitely. Properties that may be exempt include for instance: *i*) condemned property, *ii*) property that has been legally repossessed by a mortgage lender; *iii*) property unoccupied because the person who lived there now lives elsewhere because they need to be cared for, for example, in hospital, in a care home or with relatives; and *iv*) property that is unoccupied because the person who lived there has left to care for someone else.

Source: Council Tax (n.d.), UK Council Tax website, www.gov.uk/browse/housing/council-tax (accessed December 2014).

In most OECD member countries, user fees are not a major source of revenue for sub-central governments (14% of sub-national governments revenues in 2012, OECD 2013k), despite the fact that they run many public services that could be subject to user fees. In China, user charges – for instance, for health and education – are already high, and in some cases excessive or onerous. It is thus necessary to revisit the tax-sharing system to improve the alignment of revenue and expenditure assignments, which also reflect the recent demographic shifts. At the very least, municipalities could be given greater tax autonomy by granting them some discretion on tax rates for a few selected taxes, such as vehicle tax and license fees. The key issue on charges is to structure them so as to support cost recovery and avoid exemption and preferential treatments to increase revenue, as the experience in many OECD countries suggests. Researchers (Bahl et al., 2013) argue that allowing local governments to set the tax rates and user charge rates so that the cost of local services is more nearly covered is an efficient strategy and reduces the claims of large cities on national budgets. It is also important to consider that a mix of taxes keeps the rate on any tax low, thus reducing the incentive to evade taxes (World Bank, 2014b).

Municipalities could also be allowed to piggyback on or levy surcharges on central or shared taxes, for example, the corporate income tax and personal income tax. Another option would be to introduce some differentiation on tax-sharing rates. This would give large municipalities a greater share of the value-added tax (VAT).[32] Currently, local governments only keep 25% of VAT and 40% of the enterprise income tax, and the remainder goes to central government. Although local governments' manufacturing businesses do not generate much in terms of VAT and enterprise income taxes directly for local governments, the growing business taxes from the service sector are exclusively collected by local governments. That explains why they continue to attract industrial land users. This could be included in the revisions of the tax system, so as to broaden the sources of income. However, the World Bank (2014b) argues that in countries with a national-level VAT, it may be too cumbersome to levy sub-national sales taxes.

Wang and Herd (2013) conclude that since the urbanisation process is far from complete, local authorities have an interest in maintaining the current system of land sales, without a property tax, at least until the process of urbanisation is nearly complete. At that point, land sales will be much less important as a source of revenue and property taxation would represent a stable source of revenue – albeit one that would mainly accrue to the governments of richer areas. Wong (2012) maintains that innovative approaches are needed to create a framework for the development of land and housing markets, to produce a more stable, sustainable revenue stream for municipalities. Opening up the vast tracts of unutilised land currently sitting in the many development zones to private investment in low-cost housing could be a possibility to explore for insight into how to make better use of land taxes. In China, 30% of land is used for commercial and residential uses, compared to 15% in developed countries. The amount of commercial and residential land has outgrown the actual demand by far.

The intergovernmental transfer system should be transparent, simple and based on credible factors

In reforming the intergovernmental transfer system, Chinese authorities may wish to consider that the most appropriate form of transfers depends in large part on their objective. Transfers should be determined as objectively and open as possible, ideally by some well-established formula and not subject to hidden political negotiation. China may

wish the transfer system to be decided by the central government alone, by a quasi-independent expert body like a grants commission, or by some formal system of central-local committees. Transfers should be stable from year to year, to permit rational sub-national budgeting, but also flexible, to meet national objectives. One way of doing this is to set the total level of transfers as a fixed proportion of total central revenues, subject to renegotiation periodically: every three to five years, for example (World Bank, 2014b).

Chinese authorities may consider redesigning the transfer system to be asymmetrical. There is a good case for an asymmetrical transfer system in terms of how big local governments are treated compared with all local governments. For instance, the four provincial-level cities and even deputy provincial cities (Bahl et al., 2013) have a stronger economic base and hence a higher local revenue mobilisation capacity, which might suggest that they require fewer transfers than other jurisdictions. Needless to say, it would be necessary to ensure that these governments or cities have sufficient authority to tax and impose user charges. A hard budget constraint with no "back door" for financing deficits for governments with fewer grants should be part of the strategy. The financing of infrastructure investment would need to be shifted from transfers toward debt finance and better taxing, where borrowing is supported by locally raised revenue, and not land leases. The idea would be not to eliminate grants to big cities or metropolitan areas, but to reduce them so that resources could be devoted to regions where they are most needed. As Wang and Herd (2013) note, China's transfer policy has become more redistributive over the past decade, narrowing large disparities within provinces. Nevertheless, disparities remain high. The extent of fiscal equalisation within a province varies. High provincial income levels are no longer associated with low intra-province inequalities, and vice versa. Chinese authorities may wish to consider Italy's changes to the framework that governs financial relations across levels of government. It is now designed to give more tax autonomy to sub-national government, for increased equalisation.

The revision of the intergovernmental transfer system should also ensure matching responsibilities with funding at sub-national level. This would reduce perverse incentives, in over-relying on fees and fines as a way of funding rather than ensuring compliance with the law. For example, the lack of financial resources for environmental administrations is creating perverse incentives, with deleterious environmental consequences. Many Environmental Protection Bureaus (EPBs) have become dependent on the pollution levies they collect, which yield substantial revenues and are used to cover their operating costs. Since they are allowed to retain as much as 20% of the noncompliance pollution fees they collect, many EPBs depend on the imposition and retention of these fees for their survival. In many cases, EPBs choose to establish unjustifiably strict limits to yield maximum income for the office, rather to ensure compliance. This approach is further reinforced by the central authorities' call for self-supporting government entities. In this context, EPBs prefer to keep enterprises polluting and paying their pollution levy rather than making them comply with discharge standards and stop paying.[33] One way out of this situation would be to reallocate the responsibility for collecting pollution levies to other institutions, such as the tax authority, but in the long term, ensuring adequate funding to these units from the national budget would be preferable. China may wish to examine Hungary's new local government act, which divides tasks and competencies between central and sub-national governments. This establishes new rules for central government transfers, borrowing limits for local governments, debt ceilings and limits on borrowing for investment for development.

Municipal finance needs co-ordinated, coherent and consistent budgeting procedures

To align local and national priorities, particularly in the case of urbanisation, budgeting practices could be revised to ensure that there is a clear, transparent and credible budget document. This will serve as the basis of accountability for the use of public funds to pay for public services. In redesigning the budget process at national and sub-national levels of government, Chinese authorities might like to consider the OECD recommendations on building an overall budgeting framework, based on the experience of OECD member countries (Box 3.9). For China, three key points emerge. First, the budget should account truly and faithfully for all expenditures and revenues of the national government – and sub-national governments should follow by example – and no figure should be omitted or hidden. This expectation should be made explicit through formal laws, rules or declarations that ensure budget sincerity and constrain the use of "off-budget" fiscal mechanisms. Second, the budget document should present a full national overview of public finances, including central and sub-national levels of government, as an essential context for a debate on budgetary choices. And third, the National Audit Office has a fundamental role as a guardian of public trust, and must therefore ensure that budgeted resources are used properly, by supervising financial accountability. It should be noted that budgeting practices can vary widely across countries in light of traditional, institutional and cultural factors.

Box 3.9. **OECD Draft Principles of Budgetary Governance**

1. Fiscal policy should be managed within clear, credible and predictable limits.
2. Top-down budgetary management should be applied to align policies with resources.
3. Budgets should be closely aligned with government-wide strategic priorities.
4. Budgets should be forward-looking, accounting for a medium-term outlook.
5. Budget documents and data should be open, transparent and accessible.
6. The budget process should be inclusive, participative and realistic.
7. Budgets should present a true, full and fair picture of the public finances.
8. Performance, evaluation and value for money should be integral to the budget process.
9. Longer-term sustainability and other fiscal risks should be identified, assessed and managed prudently.
10. The integrity and quality of budgetary forecasts, fiscal plans and budgetary implementation should be promoted through rigorous, independent quality assurance.

Source: OECD (2013g), Draft Principles of Budgetary Governance, Public Governance and Territorial Development Directorate, OECD Senior Budget Officials (SBO).

Better medium-term budgeting and investment planning should be the goal for all levels of government

The urbanisation process requires a large public investment, which is generally lumpy. If China's urbanisation is to take a more sustainable path, central and local governments should engage in better medium-term budgeting and investment planning.

Budgeting in most countries focuses on preparing an annual plan for revenue and expenditure, but a fuller understanding of fiscal developments beyond this relatively short time horizon is critical for making the right choices, particularly regarding long-term projects such as urbanisation. The fundamental aim of medium-term budgeting is to ensure the consistency of bottom-up expenditure and revenue policies with top-down aggregate fiscal policy. Medium-term budgeting is therefore, above all else, a mechanism for strengthening the centre's capacity to enforce top-down limits on aggregate expenditure (Hawkesworth, Huerta Melchor and Robinson, 2013). A medium-term budget framework encourages governments to anticipate policy lags and to initiate reforms that will come into effect only after two or three years (Harris et al., 2013).

A well-designed medium-term budget framework can promote more efficient use of resources by creating more stable and predictable conditions under which ministries, agencies and other levels of government can plan their expenditure. To sustain the urbanisation process, Chinese municipal governments should thus be required to submit capital improvement plans that prioritise investment across sectors. They should also be required to produce multiyear financial plans, covering both operating expenditure and capital investments, to establish what revenue sources will cover spending commitments. Although official spending authorisations remain annual, a medium-term budget framework can enable central government to give clearer commitments to ministries, agencies and other levels of government about their budget allocations for the medium term. This would leave local governments at provincial level in a better position to plan their activities and give clearer commitments to governments at lower levels.

Experience in OECD countries – for instance, the Netherlands, Denmark, France, Korea, Sweden, and Chile – suggests that the impact of a medium-term budget perspective depends on the credibility of the expenditure estimates and ceilings, as well as how this information is used by decision makers and members of society. Failure to achieve medium-term budget objectives is often related to weak arrangements surrounding the preparation, legislation and implementation of budgetary targets. Thus, if China wishes to adopt a medium-term budget framework, it may need to consider that there is no single correct model. The most appropriate model for a given country depends on the point at which policy makers strike a balance between the competing objectives of multiyear budget planning. The experience of OECD countries suggests that aggregate expenditure ceilings tend to promote multiyear expenditure discipline more effectively, ministerial ceilings are more effective at facilitating multiyear expenditure planning, and forward planning estimates provide increased certainty that specific policy outcomes will be achieved. However, successful medium-term budgeting requires sound fiscal institutions. Medium-term estimates need to be built upon a credible annual budget based on credible macroeconomic assumptions, guided by stable and transparent fiscal objectives, and implemented through a comprehensive, unified top-down budget process.

Moreover, to ensure an effective medium-term budget framework, institutional arrangements that enable government to prioritise expenditure within expenditure restrictions, contain expenditure pressures, and demonstrate consistency between restrictions and the current budgetary position are needed. Effective prioritisation of expenditure within constraints requires a clear separation of the cost of new and existing policies and an institutional forum for discussing and choosing between priorities (Harris et al., 2013). This is of key importance in the urbanisation process, as it could help promote a more effective allocation of resources, not only across levels of government but also in determining between lower and higher priorities. It could even help local governments reduce or even shut down programmes or projects that have become

obsolete or have been downgraded in the list of government priorities, subsequently using those resources to fund new or higher priorities.[34]

Ensuring capacity in China's sub-national governments

The experience of OECD countries suggests that a well-organised civil service fosters and sustains good policy making and implementation, effective public service delivery, and accountability and responsibility in utilising public resources. Ensuring capacity in public administration is an essential element to inform and implement urban development policies.

Arrangements for managing the public workforce

Like OECD countries, China has special arrangements for the management of civil servants,[35] designed to promote or preserve the values that society considers important for those engaged to enforce the law.

Efforts are being made to increase governing capacity …

Since the 1980s, China has sought to improve the quality and ability of the people staffing the administrative organs of government. Chinese authorities have undertaken extensive reforms to the civil service system in recent decades, under the 2005 Civil Servants Law effective 1 January 2006. Reform efforts have covered the recruitment and selection, training, evaluation, rewards and punishments, compensation and discipline of civil servants. China should be praised for ensuring that entry into the public service is largely based on merit, in an open competition, and for its efforts to establish a culture of performance.

According to the Civil Servants Law, civil servants are workers who perform official duties according to the laws, are members of the administrative establishment of the State, and whose salaries and welfare benefits are paid by the government.[36] The Law establishes that the administration of civil servants should reflect the principles of openness, equality, competition and selection on the basis of merit. Merit is ensured by recruiting people on the basis of "political integrity" and professional competence, with stress placed on practical achievements at work.[37]

Civil servants are part of a system of established positions called *bianzhi*. This term can be translated as "establishment" and refers to the number of established posts in a unit, office or organisation (Brodsgaard and Chen, 2009). The *bianzhi* is normally controlled by the state and set in terms of the registered population in a determined geographical area. Civil servants' posts are divided into the "core" civil service, which includes the most senior politicians and thus the leadership positions, such as the president, the prime minister, state councillors, ministers, provincial governors, vice ministers, vice governors, etc.,[38] and the group that comprises all civil servants managed under the Civil Servants Law. The posts are divided into leading and non-leading posts (set up at or below the department and bureau level).

… but China's civil service nevertheless suffers from understaffing

China's workforce management practices are somewhat rigid, and are not sufficiently responsive either to the constant flux in the workforce and the labour market or government's needs for timely service delivery. Since all vacancies are filled at once in an annual competition, the lag in recruitment can slow government activity and increase

the workload on remaining personnel. Past efforts to decrease the number of staff at times of budget constraint indicate that staff is considered a cost rather than an asset.[39] This has not allowed for a structured workforce of the appropriate size, with the ability to detect and prepare for changes in public organisations' need for skills and competencies.[40] To solve their problems of understaffing, local governments recruit provisional staff, known as *bianwai renyuan,* to support public servants. This is a heavy burden for the finances of sub-national governments. Mobility across the civil service and across different levels of government, although it has promoted generic skills and increasing internal flexibility to a certain extent, has not contributed to dynamic workforce management. Promotions and transfers depend on how individuals are perceived by the government.

According to the National Bureau of Statistics, 371 million people were employed in urban areas in 2012 in both the public and private sectors, of whom over 152 million were employed in the public sector in urban areas (Table 3.7). In 2012, 7 089 000 were civil servants,[41] that is, nonmanual employees of government agencies, the judiciary, the procuracy, people's congresses (the legislature), people's political consultative conferences, and the discipline inspection commissions employed both centrally and locally and covered by the Civil Servants Law (Wang, 2012).

Table 3.7. **Employment trends in China, 2005-12**

Millions

Year	Population	Urban population	Total employment	Urban employment	Public sector employee in urban areas	Education	Health and social services	Public management, social security and social organisation
2005	1 307.56	562.12	746.47	283.89	114.040	14.832	5.089	12.408
2006	1 314.48	582.88	749.78	296.30	117.132	15.044	5.254	12.656
2007	1 321.29	606.33	753.21	309.53	120.244	15.209	5.428	12.912
2008	1 328.02	624.03	755.64	321.03	121.925	15.340	5.636	13.350
2009	1 334.50	645.12	758.28	333.22	125.730	15.504	5.958	13.943
2010	1 340.91	669.78	761.05	346.87	130.515	15.818	6.325	14.285
2011	1 347.35	690.79	764.20	359.14	144.133	16.178	6.791	14.676
2012	1 354.04	711.82	767.04	371.02	152.364	16.534	7.193	15.415

Source: NBS (2013), *China Statistical Yearbook 2013*, Beijing China Statistics Press.

The Chinese government has not published data on the distribution of civil servants across administrative levels. According to the only publicly available source,[42] in 1998 nearly 60% of civil servants were employed by counties and townships at the most local level (Xi, 2002). Given the general stability of the civil service over the past decade or so (from 1998 to 2012, it grew by one-third, or about 2% per annum), it could be assumed this represents the current overall distribution of civil servants. Estimates from Burns and Wang (2014) indicate that approximately 700 000 civil servants are employed by the central government,[43] which may be too few to carry out its functions. It must be noted that there is no "right size" of the public service workforce, since the size of a civil service depends on individual countries' choices about the scope, level and delivery of public services. The important issue is to manage the workforce strategically (OECD, 2011c). Despite China's effort to improve government capacity by ensuring that a good quality of skills and competences are at the government's disposal, there is no evidence that the public workforce has been managed on a long-term or strategic basis. Decisions

on the number of staff, location and mix of skills and competences appear to be made for short-term or operational reasons.

Table 3.8. **Distribution of staff by level of government (1998)**

Level of government	Percentage of total personnel
Central-level	9.28
Provincial-level	11.11
Prefectural-level	21.26
County-level	40.98
Township-level	17.37

Source: Xi, L. (2002), "Chinese Civil Service System", Tsinghua University Press, Beijing, presented in Burns, J. and X. Wang (2014), *China's Civil Service System*, overview paper prepared for *OECD Urban Policy Reviews: China 2015*, unpublished.

China has a predominantly career-based system of public employment

The approach to workforce management gives the Chinese human resource management (HRM) system the characteristics of the career-based systems in operation in several OECD countries, for instance, in France, Japan, Korea and Spain. Civil servants are expected to stay in the civil service more or less throughout their working life. Initial entry is based on academic credentials and a civil service entry examination. Once recruited, people are placed in positions at the will of the organisation. This may include moving staff from one ministry to another, from one area of specialisation to another and from one level of government to another. Fairness is ensured by the use of competitive examinations and diplomas. A civil servant's progress depends to a large extent on how he/she is viewed by the organisational hierarchy, a powerful lever for moulding behaviour to conform to group norms. As in OECD countries with a career-based system, this sort of system typically offers limited possibilities for entering the civil service at mid-career and a strong emphasis on career development. It also tends to promote values at entry level in specific subgroups of the civil service, somewhat conforming with the French concept of a *corps*. Its disadvantages include lesser emphasis on individual performance and accountability. There is also a lack of transparency on appointment to different posts, due to weak assessment of individual staff. The problem for China is to build a civil service responsive to the needs and demands for specialised skills of contemporary society. China's HRM arrangements, as in several career-based OECD countries, are less able to deliver specialised skills and flexibility than a position-based system. The appointment system (*pinren zhi*) currently in place has a limited capacity to bring in the necessary skills when they are needed.

Reforms seek to reinforce merit and create flexibility in the civil service …

The selection and recruitment of entry-level civil servants is based on selecting the best applicants among a wider number of candidates who have applied for a specific position. The appointment depends on an examination and a process of "hearing from the masses". Most entry-level posts (section member) are reserved for university graduates. Specialist posts, in addition, require appropriate additional training. The entrance exam usually includes a written exam and an interview, and new recruits are given a one-year probation period.

One of the most important changes introduced by the 2005 Civil Service Law is the possibility of using the appointment system (*pinren zhi*) for positions with strong specialities. This system is based on contracts and gives various administrative departments considerable flexibility in hiring special expertise within areas that require particular attention. Burns and Wang (2014) estimate that as many as 20% of white-collar workers in some government agencies, especially in wealthier cities and in the busiest organizations, may be contract staff. The employment contract usually ranges from 1 to 5 years and is preceded by a probation period of 6 months. Civil servants in China are normally given lifelong tenure. Their job security depends not on a civil service statute but through a unified personnel management system revitalised by the Civil Service Law (Brodsgaard and Chen, 2009).

… but persistent rigidities undermine merit, equal opportunities and accountability

China's government human resource management system is somewhat inflexible. First, the new civil servants are only recruited to fill vacancies on a yearly basis. Second, although it is possible to use the appointment system (*pinren zhi*) on positions that involve strong specialities, permission must be requested from the administrative department above the provincial level, which must fall within the allocated *bianzhi*. Third, the system of established posts (*bianzhi*) limits the number of staff in departments across different levels of government. Finally, the centrally controlled and managed leadership positions may compromise accountability for service delivery.

According to Burns and Wang (2014), a number of requirements for entry into the civil service undermine merit and equal opportunities. First, most civil service positions require a university degree. Although China has made great strides in providing university education in recent years, in 2012 only about 7% of China's working-age population received tertiary education (as compared to 60% in the US, 40% in Japan, and 32% in the UK). This means that only about 13% of the working population has a university degree,[44] which seriously restricts competition for civil service jobs. Second, restrictions on equal access to social services means that the children of migrant workers are unable to compete for scarce resources, such as education, that would enable them to enter the civil service. Currently, 260 million migrant workers living in cities do not enjoy the same benefits as those with household registration.[45] Hence, the labour market for civil service jobs is closed to them.

Third, according to the Civil Servants Law, party membership is not a general requirement for becoming a civil servant.[46] In recent years, lists of positions and their requirements (indicating which posts are restricted to party members) have nevertheless been published on the government's website. The party is spread more thinly at local levels. Still, a locally focused list published online in 2009 reaffirms that sensitive positions in most agencies employing civil servants are limited to party members, including positions in personnel management, confidential document handling, investigations handling, party work, and sometimes financial administration.[47] However, there appears to be a good deal of variation. Among local entry and exit quality inspection and supervision bureaus, only the Tianjin bureau required party membership for every available post. Shanghai and Guangzhou (and virtually all other local bureaus) made no such demand for the same job title. Requiring party membership for certain jobs restricts competition.

Fourth, competition to enter the civil service is restricted by the practice of allowing government agencies to hire contract civil servants with the same benefits. Moreover, local governments have been granted autonomy to decide on their salary levels and in many cases, they pay contract-based civil servants too much. For example, in 2011, Zhejiang province hired five contract-based civil servants with an annual salary almost nine times the average annual salary of officials in the province.[48]

An additional gap in the competitive entry to the civil service is the practice of placing demobilised soldiers in civil service positions, outside the competitive examination system. Each year, the government attempts to find employment for the 85 000 or so demobilised soldiers, referring them to jobs in enterprises, public service units (*shiye danwei*) and in government (Wang, 2012b). There is no evidence of any assessment of the soldiers' competences and skills to grant them access into the civil service.

China's civil service system has a strong performance orientation, but certain weaknesses remain

An evaluation department is in charge of evaluating the standards of performance. GDP growth and local income are key criteria in the evaluation of performance. The Chinese government is now seeking to increase the importance of sustainable growth and environmental protection in such evaluations, but progress is slow. Performance management in the civil service consists of annual appraisals by superiors (with a peer element) related to performance-based pay. A civil servant advances along the grade pay scale with seniority and satisfactory performance.

Performance indicators for municipal government focus on four dimensions: sustainable development, progress in modernisation, the construction of a "harmonious society" and administration by law (Table 3.9). Of the 34 performance indicators used at the provincial level, economic-growth related indices, including GDP, are given most weight. Although the indicators appear to be comprehensive, a single indicator, growth of GDP, correlates highly with mayoral promotion rates. The "urbanisation index" indicator has a middle weight.

The performance management system has also been undermined by non-meritocratic practices, such as the buying and selling of posts (Burns and Wang, 2010). In 2013, China ranked 80th out of 177 countries in the Competition Perception Index of Transparency International. Insofar as promotions are determined through graft, China's meritocracy is undermined, and its capacity to govern is weakened.

China's civil service system is far from homogeneous. To simplify, it may perhaps be viewed as two systems: one that is relatively performance-oriented, selects "the best and brightest" through competitive mechanisms, links rewards to performance and condemns indiscipline and corruption; and another one that *de facto* operates as an employer of last resort, selects based on many different criteria, some of which may be irrelevant to the job, ties rewards to positions, and is prone to wrongdoing (Burns, 2004; OECD, 2005a).[49] The former predominates in richer coastal areas and the latter in the less developed hinterland.

China has a career promotion system where rotation across cities and provinces is the norm. Public servants remain in the same position for no more than six years. When a public servant is moved to another city they bring their expert capability to the post, but where the public servant is sent depends on performance evaluation.

Table 3.9. **Performance indicators for municipal governments in China**

Dimensions	Performance Indicators	Weight	Dimensions	Performance Indicators	Weight
Sustainable Development (35)	1. GDP growth rate	5	Harmonious Society Construction (25)	19. index of new village construction	3
	2. financial development index	4		20. urban residents income index	3
	3. growth rate of fixed assets investment	4		21. income index for rural residents	2
	4. development index for non -state enterprises	3		22. index of educational development	3
	5. population development index	3		23. development index for public health	3
	6. index of human capital development	3		24. rate of social security coverage	3
	7. environment quality index	4		25. rate of registered unemployment	2
	8. energy consumption index	3		26. index of public safety	3
	9. reduction of government debts overdue	3		27. satisfaction rate for public safety	3
	10. urbanisation index	3		28. index of legality for abstract actions	3
	11. development index for tertiary industry	3		29. index of legality for concrete actions	3
	12. proportion of industrial increment	4		30. losing rate in lawsuits	2
	13. development of new industry	3		31. rate of rectification in reconsideration	2
Progress in Modernisation (25)	14. ratio of R&D investment to GDP	2	Administration by Law (10)	32. efficiency in dealing with complaints and visits	3
	15. proportion of hi-tech industry increment	2		33. completion rate of complaints dealing	2
	16. number of patents	2		34. percentage of staff with misconducts	3
	17. index of export dependence	3			
	18. growth rate of overseas capital investment	3			

Source: Fujian Provincial Government (2007), Wo sheng xingzheng fuwu zhongxin jianshe de gongzuo qingkuang [Progress in Construction of Service Centres in Fujian Province], Office of Effectiveness Building, quoted in Burns, J. and Z. Zhou (2010), "Performance Management in the Government of the People's Republic of China: Accountability and Control in the Implementation of Public Policy", *OECD Journal on Budgeting* No. 2, pp. 1-28.

Attracting and retaining qualified staff is a challenge for sub-national governments and a bottle-neck for urban development

Attracting and retaining a highly qualified workforce has become more challenging for sub-national levels of government in recent years. This is a reason for concern, given the number of responsibilities of local governments. Many areas, like urbanisation, demand highly skilled staff. In provincial-level governments, the number of applicants for civil service jobs dropped in both 2013 and 2014. In 16 of the 18 provinces, municipalities and autonomous regions that have recently published the information, the number of applicants fallen consistently in recent years. For example, the number of applicants in Zhejiang province fell 37%, from 360 000 applicants in 2013 to 227 000 in 2014. Other provinces saw a decline of between 10% and 30% in 2014. Graduates from the four municipal-level cities – Beijing, Tianjin, Shanghai and Chongqing – were less

interested in competing for a public service job. Candidates from poor provinces were the most interested in joining the public workforce. One interpretation may be that the level of economic development of the municipality has an influence on the composition of the public sector. Graduates from prosperous cities may prefer to join the private sector, and public sector vacancies are mostly filled with graduates from other regions. This may have a negative impact on western regions, as their better candidates may be sent to fill vacancies in eastern governments or even central government. For the public service as a whole, this situation limits the capacity to implement policies related to urban development, as the knowledge base in the workforce is unstable.

One of the likely explanations for such a drop in applicants in general is the low level of compensation and the long working hours. Interviews with Chinese officials for this Review suggest that compensation for civil servants' jobs is not as competitive as the private sector and that competition for scarce talent in the labour market is fierce. The Civil Servants Law declares that pay levels for civil servants should be similar to those in State-Owned Enterprises (SOEs) doing the same sort of work. Civil service pay levels are broadly comparable to those in SOEs, as required by law, but have fallen behind the salaries of foreign-funded private enterprises, making it difficult to retain the most qualified. Moreover, the financial rewards tied to performance are relatively small and do not serve to motivate government employees. Take-home pay for civil servants of the same rank, who perform similar duties but work in different functional departments of local government, can vary (Gong 2006). The philosophy that permeates the public service is that public servants should not seek compensation, but to make a contribution. This does not help to attract and retain the best possible candidates for the job.[50]

An additional problem for the public sector as a whole is retaining staff. The most difficult to retain are those with five to eight years of service in regulatory agencies, who have developed a deep understanding of government policies and practices. Such candidates are highly sought after in the private sector. At the same time, the central government has begun efforts to streamline public agencies, and local governments are implementing similar policies. Experience shows that when government implements streamlining workforce initiatives, the best staff are the first to leave (OECD, 2011c). In 2014, 15 provincial level governments have cut the number of civil service positions available. For instance, in Zhenjian province, the number of posts was about 1 500 fewer in 2014 than in the previous year.[51] Experience from OECD countries shows that job cuts have tended to have detrimental effects on the public service in terms of morale, capacity and trust, can almost never be implemented smoothly, and reduce the capacity for learning and knowledge management (OECD, 2011c).

Leadership positions at sub-national level are centrally controlled by the upper-level government

Chinese regional leaders are appointed by upper-level governments through the Chinese Communist Party (CCP)system. There are no regional elections. While sub-national governments have autonomous economic power, the central government maintains its influence on regional officials by determining their career paths. The appointment and removal of provincial leaders such as governors is determined by the central government. Similarly, most municipal leaders, such as mayors, are directly controlled by the corresponding provincial government. This nested network extends the central government's personnel control to officials of all levels of regions, from provincial to municipal, then to county and to the bottom of the hierarchy, the township government. This approach is the main instrument for ensuring officials comply with

central government policy, and provides incentives for regional experimentation (Xu, 2011).

Indeed, personnel control is a major channel through which the central government controls, coordinates and motivates sub-national officials. Regional officials control huge amounts of resources within their jurisdiction, but their career paths are controlled by the central government. Appointments, promotions and demotions or other punishments sub-national officials are subjected to are ultimately determined by central government, and their career path is tied to the performance of their jurisdictions.[52]

A set of performance criteria for leading officials at sub-national governments is established by the level of government above it (Burns and Wang, 2014). Sub-national officials are assessed in accordance with the tasks and targets laid down for them by their superior level of governments. Officials at different levels sign target responsibility contracts with their superiors. The targets for the tasks to be attained, as well as the rewards and penalties for not achieving those targets, are specified. To enhance the effectiveness of the performance control system, rotation and cross-region transfer are also practiced. The rotation of provincial-level officials is intended to promote economic development by diffusing or duplicating regional reform experiences.[53] The average duration of their tenure is five years, but some may even last as long as 10 years and some only a single year.

The ethical conduct of public officials at all levels of government is still a source of concern

In China, dealing with corruption and misconduct in the public service is an ongoing challenge. Cases of financial mismanagement have been reported where public funds have been used to provide additional illegal subsidies for civil servants (Chou, 2009). The situation is particularly serious in economically developed areas. Given the relatively high cost of living in these areas, the standard levels of pay are not sufficient to afford the kind of comfortable, middle-class lifestyle that most civil servants expect. Thus, civil servants look for additional sources of income. The ability of some civil servants to supplement income this way depends in large part on the availability of local revenue, mostly from fees and charges levied for routine transactions and services (Wedeman, 2000; Burns and Wang, 2014). To attract and maintain the talented, local governments with large tax revenues chose to set aside public monies in order to provide further remuneration for their employees. One of the objectives of 2006 wage reform was to eliminate the malpractices of local governments in providing additional subsidies for their employees using public funds. The reform stipulated that departments responsible for staff discipline inspection, organisation, supervision, personnel management, auditing and financial affairs should take the initiative to eliminate malpractice in the implementation of the wage reforms (Burns and Wang, 2014).

Low levels of ethical behaviour of public officials may compromise urbanisation. First, corruption, either political or grand corruption, may undermine government revenue, limiting its ability to invest in productivity-enhancing areas.[54] Second, corruption distorts the decision-making connected with public investment projects, as large capital investment projects provide tempting opportunities for graft. Indeed, OECD has found that public procurement is the government activity most vulnerable to waste, fraud and corruption in the absence of fair and transparent procurement systems.[55] Investors may also see their costs increase when having to pay additional fees for obtaining a contract for developing infrastructure projects. Tanzi and Davoodi (1997)

found that higher corruption is associated with higher public investment, lower government revenues, lower expenditure in operations and maintenance, and a lower quality of public infrastructure. Third, trust in government may be affected, diminishing the legitimacy of the state and moral stature of the bureaucracy, and thus limiting investment opportunities in a given city. And finally, corruption may create uncertainty, because when a firm obtains a concession from a bureaucrat as a result of bribery, it cannot know with certainty how long the benefit will last. It is thus in the interests of government to ensure high levels of ethical conduct of government officials at all levels.

The relationship of central to sub-national government depends on the selection of future leaders

As discussed above, the organisation of local government in China has a hierarchical structure. However, the authority of the central government depends on the collective support of local leaders. One of the most important governance mechanisms is the selection of future central and sub-national leaders. The process includes nominations and approvals. Nomination by top leaders is required for any candidate for the central leadership. A nominee must convince top leaders that he/she shares their core values and principles and that has the capability to perform. Excellent performance at the provincial level becomes necessary for nomination and promotion as a top leader. This may sometimes overshadow the satisfaction of citizens' needs and the best interests of the municipality. Supported by the shared collective interests of most national and sub-national officials, the central leadership enjoys considerable authority over potential dissent among sub-national leaders. This authority is used by the central government to ensure sub-national governments comply with top-priority issues such as national unity and macro stability.

Acquiring the right competences and skills to support the implementation of urban development plans

The experience of OECD countries suggests that to achieve the objectives of the urbanisation plan, China needs to increase its governing capacity through more strategic management of its public workforce and reinforcement of the merit principle. China may wish to consider the following recommendations to enhance the management of the public workforce.

Investing in strategic workforce planning and management could increase effective governance

To ensure that China has the capacity to deliver public services to a growing urban population, investing in strategic workforce planning should be one of the government's administrative priorities. Long-term workforce planning could provide the critical information on the state of the public workforce and enhance decision-making. The experience of OECD countries suggests that workforce planning is essential to ensure that governments have adequate human capital to meet their strategic objectives. If China wishes to continue using the population level as a reference to determine the number of staff needed, this parameter should include the actual population living in the region (not just those registered with an urban *hukou*). This will help determine the priorities for the public workforce (based, for example, on the objectives of the urbanisation plan) and improve workforce allocation.

OECD countries' experience suggests that to be effective, workforce planning needs to be flexible, ongoing and sensitive to the evolving needs of government organisations. Objectives need to be changed as needs change, and planning should be seen as building a context for decision-making, not predicting the future. Moreover, workforce planning should be aligned with the budget process. Consideration of what the workforce needs, in terms of numbers, compensation, competencies and skills and allocation in the budget process, will maximise the benefits of workforce planning. Linking performance budgeting to workforce planning, and not just to population levels, may provide a solid basis for determining the right number of people allocated in the right place. This would assist the Chinese government in better deploying staff in areas where a need is reported, for example in the case of those with responsibility for supervising and monitoring (Burns and Wang, 2014).

For strategic workforce planning, China requires a solid management information system that provides the right data at the right time on a timely basis (e.g. the number of civil servants at central and sub-central levels). China could also develop a public service-wide workforce planning framework to give guidance to individual organisations on their planning exercises. Senior managers and public employees should be given full opportunity to learn what the information is, what it represents, and how to interpret it. The National Development and Reform Commission and/or the Ministry of Housing and Urban-Rural Development could review staffing at all levels to assess the gap between their obligations and capacities and identify what steps are required to address priority issues. The experience of OECD countries also suggests that workforce planning should not be too ambitious in its objectives. This is particularly important if experience on workforce planning is limited. Not everything can be covered, and setting priorities is crucial.[56]

Strategic workforce planning orientations should be integrated in all government strategic documents. Ministries and agency heads at central level, and heads of local governments and their ministries at sub-national level, should be responsible for how they plan for the workforce. In the first stages, China could follow the workforce planning practice of France, which, although lengthy and complex, is a good example of centralised workforce planning in a highly decentralised country (Box 3.10). Centralisation of workforce planning for China has two main advantages: *i)* it would help obtain a better view of internal mobility and plan for functions that have not yet been created, as sub-national governments, and even individual ministries, do not have a perspective on the new functions government is expected to perform; and *ii)* it would make it possible to link workforce planning to the budget process, and thus inform decisions on workforce productivity improvements that recognise the balance between costs, continuity, and quality of service.

Box 3.10. **Workforce planning instruments in France: a new, integrated approach**

To face the challenges of an ageing population and the restructuring of strategic state missions, the French government has introduced a holistic approach to workforce planning. This approach includes a significant change in hiring policies, adjustment of medium-term recruitment strategies, and the use of new workforce planning instruments.

The first key instrument is the GPEEC (*Gestion Prévisionnelle des Effectifs, des Emplois et des Compétences*). Introduced in the early 1990s and restructured in 2001, the GPEEC is an ambitious government-wide strategy that analyses the current staffing picture by functions and categories (corps and job families). It aims to forecast staffing needs, to improve the efficiency of the public service, adapt recruitment to the demographic context, increase government's accountability to citizens concerning changes in public workforce numbers, and finally to nurture social dialogue by opening discussions with labour unions.

The GPEEC is a cross-departmental methodology that has established a common framework across government, although each ministerial department is responsible for its own GPEEC plans, under the supervision of the central human resource management body. In the state civil service, the GPEEC has become an important lever of the human resource management reform agenda and a key ministerial strategy. The evaluation of current GPEEC plans shows that all ministries have made progress in aligning staff with missions and integrating human resource management strategies in their GPEEC plans.

In 2006, the GPEEC process was reinforced by the addition of annual conferences on HR workforce planning (CGPRH) – the second instrument. These aim to establish a dialogue between the human resource management central body and each department on specific GPEEC plans. Discussions focus on long-term workforce planning strategies and on management priorities for the year. They result in a roadmap for mutual commitments on workforce planning. Thematic working groups are being established to identify good practices that could be used in all ministries.

A third workforce planning instrument – the RIME (*Répertoire Interministériel des Métiers de l'Etat*) – was launched in November 2006 to provide a catalogue of competencies to be used by all departments. The RIME reviews the different job types and functions within the state administration, to reinforce linkages with the competency needs analysis and to increase cross-departmental staff mobility. It creates a clear picture of the public-sector labour market and may be an important added value in the context of increasing competition for skills with the private sector.

Source: OECD (2007), *OECD Reviews of Human Resource Management in Government: Belgium 2007: Brussels-Capital Region, Federal Government, Flemish Government, French Community, Walloon Region*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264038202-en.

Flexibility in workforce management would strengthen the government's capacity to adapt

To increase flexibility, China could open a number of posts at different levels to external competition, not necessarily only those at entry level. It could also delegate HRM practices to line ministries at different levels of government and lower levels in the hierarchy, so that they can plan their HR needs strategically and conduct recruitment when needed.

China could also delegate responsibility for human resource management to line ministries and agencies at central level and to the different levels of government, while maintaining sufficient authority at the centre for monitoring. The central government,

however, may want to establish minimum standards for recruitment procedures, selection criteria and competency frameworks. However, the key aspect of delegation in recruitment is not the actual selection, but the specification of required competencies and selection criteria by line ministries at different levels of government. This is also an essential complement of workforce planning. For instance, the National Personnel Authority of Japan changed many of its procedures from performing individual and detailed advanced checks to setting clear standards regarding the personnel management system of the public service, as well as checking adherence to those standards. The same could be done in China, not only at central level, but also at the provincial and prefecture level.

Giving more responsibility for HRM to line ministries and administrative units across different levels of government could help to improve performance if public organisations are able to adapt HRM to their own needs. However, it may also delay its modernisation, by permitting islands of unmodernised management to persist. It is important that central government retain sufficient ability and capacity to monitor and supervise the delegated management systems, and to hold operational managers accountable. Insufficient capacity at sub-central levels can block the anticipated benefits, such as a better implementation of public policy. China may also wish to explore the possibility of hiring private sector employees for non-entry level positions, to avoid creating multiple inflexible public sector labour markets within the country.

Strengthening the performance orientation of the workforce could help implement urban plans

A public workforce that focuses on impact, better utilisation of resources and public service improvement is essential to co-ordinate the implementation of the National Urban Plan. A workforce strongly oriented towards performance builds on the experience, talent and knowledge of public employees for efficient implementation of public policies, and responds strategically to the needs of urbanisation. To reinforce this trend, ministries and agencies at different levels of government could develop a performance management system for China's civil service. This is a systematic process in which every organisation should involve its employees, as individuals and members of a group, in improving organisational effectiveness in achieving organisational goals. This system should include: *i)* planning work and setting expectations; *ii)* continually monitoring and appraising performance; *iii)* developing the capacity to perform; *iv)* periodically rating performance according to the latest criteria; and *v)* rewarding good performance and dealing with poor performance. Strengthening the performance orientation of the workforce so as to contribute to urbanisation requires valuing productivity and efficiency as core values of the public service.[57]

An important element of the performance system should be the role of rewards to motivate employees. Rewards should be used in an appropriate manner. Rewards do not only mean pay adjustment or bonuses, as it is the current practice in China. The most important reward is instead recognising employees, individually and as a member of the group, for their performance and contribution to the organisation's mission. To ensure fairness in promotion processes, it is important that Chinese officials make use of the information generated by the performance management, and public sector managers of assessment systems should be trained in performance management. Their ability to manage and promote good performance should be an important element in recruiting and assessing central government managers. China may wish to review Ireland's Strategic Management Initiative, which is designed to boost performance management and the

development of the public workforce. The main lesson from the Irish case is that a performance management system does not in itself improve performance, but provides information that improves decision-making (OECD, 2008a).

Revising the compensation system could help attract and retain a highly qualified workforce …

To make public sector salaries more competitive, compensation programmes should accommodate pay differentials for occupations in high demand within the public sector and consider the critical role that education, experience and performance have in determining pay. It is beyond the scope of this Review to conduct an assessment of the pay structure and compensation policy of China's civil servants, but some suggestions may be offered, based on the experience of OECD countries, to contribute to the debate.

An option China might explore is the concept of "total rewards management", which takes into account the fact that salaries and benefits are not the only rewards of work. Across OECD countries, the recession has heightened interest in this concept. Where pay levels may not be fully competitive, it is particularly important that government employers adopt recognition and reward practices that take advantage of a range of non-cash rewards. The United Kingdom's approach to total rewards may be of inspiration to Chinese authorities as it looks at total reward from four angles: pay, benefits, learning and development, and work environment.

Experience suggests that developing a new pay programme requires agreement on the philosophy of, goals of and responsibility for administration of the programme. Several basic issues need to be discussed: *i)* the role and responsibilities of the central human resource management body in programme administration; *ii)* the roles of managers and other individuals involved in programme administration; *iii)* the decisions on compensation delegated to line managers in central and sub-national governments; *iv)* the relative importance of performance, and *v)* the planned alignment with market pay rates. There must be agreement on the procedure and criteria for assessing the programme.[58]

… but steps must be taken to improve the ethical conduct of civil servants

To reinforce the ethical conduct of civil servants, China, like almost all OECD countries, could provide training on ethics issues. Training courses can be compulsory (e.g. for those entering public service in Luxembourg) or largely voluntary (as in Australia). The scope of training in OECD countries ranges from general training schemes covering the whole public service (as in Germany and Italy) to specific programmes determined by ministries or agencies (Ireland, Japan), or a combination of both. The Chinese government could also adopt measures mandating public servants to report misconduct and/or provide procedures to facilitate reporting, which have been introduced in most OECD countries. In particular, OECD countries have given special attention to measures to prevent conflicts of interest in the public sector. A large majority have enacted measures that target officials in positions particularly susceptible to corruption, in order to help prevent conflicts of interest and combat illicit enrichment. These include professions that are exposed to sectors in which economic interests are at stake and at the intersection of the public and private sectors, such as budget execution (Australia and Japan) or health personnel (Norway). In Australia, Greece, Ireland, Italy, Korea and the Netherlands, certain categories of public officials are required to disclose their personal assets and financial interests. Burns and Wang (2014) maintain that the Chinese civil service continues to offer substantial opportunities for corruption. Insofar as

services are sold to the higher bidder, civil servants controlling access and licenses can benefit.

Another alternative for China to strengthen ethics management is to adopt measures to increase the openness and transparency of the civil service. These measures can be implemented at all levels of government. A number of OECD countries have created ombudsman functions to provide an additional channel for airing and investigating complaints from citizens and users of public services. New antifraud or anticorruption offices have also flourished, e.g. the Serious Fraud Office in the United Kingdom, the Independent Commission against Corruption in New South Wales (New Zealand), the Commissions on Integrity in the United States, and the Antifraud Office in Catalonia (Spain). Such functions can help to highlight issues relating to ethics and conduct.

China's actions to promote ethics and integrity in the public service as part of its overall effort to modernise the state and reduce corruption could be further enhanced by aligning those efforts with the OECD's Principles for Managing Ethics in the Public Service and its Guidelines for Managing Conflicts of Interest in the Public Service. China should take an active approach to increasing awareness of ethics and conduct in the civil service. The creation of a Commission for Public Ethics, as in Brazil, responsible for implementing the codes of conduct as well as for oversight and evaluation, would be of great relevance (OECD, 2010d).

Box 3.11. OECD Principles on Ethical Conduct in the Public Service

1. Ethical standards for public service should be clear (civil servants and political officials should know where the boundaries of acceptable behaviour lie). Codes of conduct serve this purpose.
2. Ethical standards should be reflected in the legal framework (laws and regulations provide the framework for guidance, investigation, disciplinary action and prosecution).
3. Ethical guidance should be available (socialisation facilitates ethics awareness, but ongoing guidance and internal consultation mechanisms should be made available to help civil servants, and also politicians, apply ethical standards).
4. Public servants should know their rights and obligations.
5. Political commitment should reinforce ethical conduct of public servants.
6. The decision-making process should be transparent and open to scrutiny (this also involves the role of the legislature and the press).
7. There should be clear guidance for interaction between the public and the private sector.
8. Managers should demonstrate and promote ethical conduct (by providing appropriate incentives, adequate working conditions and effective performance assessments).
9. Management policies, procedures and practices should promote ethical conduct.
10. Public service conditions and management of human resources should promote ethical conduct (this relates, amongst other things, to recruitment processes, promotion and adequate remuneration).
11. Adequate accountability mechanisms should be in place within the public service (internal as well as outward accountability to the public).
12. Appropriate procedures and sanctions should exist to deal with misconduct.

Source: OECD Recommendation of the Council on Improving Ethical Conduct in the Public Service Including Principles for Managing Ethics in the Public Service, http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=129&InstrumentPID=125&Lang=en&Book=.

Strengthening the strategic urban planning framework and capacity

As expressed in the 12th Five Year Plan, Chinese authorities are aware of the need for strategic change to sustain high levels of economic growth and improve citizens' quality of life in both urban and rural areas. China is experiencing major shifts in industrialisation, urban development, communications, opening of commercial markets, and globalisation. However, the interviews conducted for this Review showed that long-standing values and administrative arrangements may constitute an obstacle to adapting China's public sector so that it can fully implement the urbanisation plan. The current administrative and policy structure and the resulting features of its urbanisation are limiting China's ability to achieve national harmony and to sustain growth. To keep up with the dynamics of global and domestic change, China will need to develop a strategic vision of how it wants its cities develop. Strengthening its governance structure to build an integrated urban planning framework is critical.

Developing an integrated and strategic approach to urban planning

The current 12th Five Year Plan marks a turning point from the country's previous emphasis on economic growth to prioritising strategies and measures to ensure long-term prosperity for the entire nation. However, the targets are set for the five-year period of the duration of the Plan. There is no overall, long-term strategy for national development that sets national objectives for the long term, that is, for 10, 15 or 20 years. The Plan is structured in silos, and no mention is made of how to operate cross-sectoral policy initiatives. Even the plans derived from the 12th Five Year Plan are not co-ordinated with each other and are sometimes even in contradiction. The need for integrated, cross-sectoral planning is critical.

China's 12th Year Plan includes policy objectives intended to improve the quality of life of citizens and touches areas that have an urban impact, such as the environment, citizens' livelihoods, economic restructuring and social management. Despite its strategic orientations, there are no initiatives, under the umbrella of a long-term vision for urban development, spelling out how China wants its cities to grow and be organised spatially. The same flaw is found in the New Urbanisation Plan. While it contains the government's intentions on urbanisation to 2020, there is no vision of what Chinese cities will look like in the long term, and how all levels of government, citizens, the private sector and the CCP will interact to make it happen. Without this vision, it is not so much a national strategy as an interministerial work plan. Such a vision and an accompanying strategy would be a fundamental benchmark for urban development policy and programming. It could also become a beacon for sub-national leading officials, who rely on central government for direction.

Urban development is a long-term project that requires strategic vision. Government's ability to seek out and act on the experience and expertise of multiple stakeholders will help develop a strategic vision and to carry it out through strategic planning frameworks. Strategic insight requires planning and decision-making based on flexible, continuously updated data, analysis and consultation.

Sub-national governments as key partners in setting an urban development strategic vision

Building a vision is a collaborative effort among a diverse set of stakeholders, ranging from the central government to individual citizens. The process of building a long-term

vision for urban development in China needs to embrace the sub-national levels as an essential partner and not just as an administrative unit. The rationale is very clear: sub-national governments are in charge of implementation and thus need to have a say in the decision-making process. Strategic purpose should come from the centre, but better co-ordination and much action and experimentation are needed at the local level. Chinese sub-national governments are often more agile than central government, as competition has made them more willing to take risks to experiment and adapt. They may even have lessons to share. Chinese authorities may wish to explore Australia's experiment with a national discussion on its long-term future (Box 3.12).

Box 3.12. **Australia 2020 Summit**

In April 2008, the Australian government convened the *Australia 2020 Summit* to foster a national conversation on Australia's long-term future. The meeting aimed to harness the best ideas for building a modern Australia ready for the challenges of the 21st century. It brought together 1 000 participants from across the country to think about long-term challenges confronting Australia's future, and requiring responses at the national level that would not be limited to the span of the usual electoral cycle. The Summit, held in Canberra, generated more than 900 ideas over two days. Participants, drawn from business, academia, community and industrial organisations and the media, debated and developed long-term options for Australia across ten critical areas: productivity (education, skills, science and innovation); the economy; sustainability (e.g. population, climate change, water); directions for rural industries and communities; a long-term national health strategy; strengthening communities (e.g. social inclusion); indigenous populations; culture (e.g. art, film, design); governance; security and prosperity.

The Department of the Prime Minister and Cabinet provided the secretariat for the Summit and was responsible for co-ordinating the development of the Summit report and the Australian government's response to the Summit, as well as the implementation of the policies and programmes generated.

Source: Australia Vision 2020 (n.d.), The Right to Sight website, www.australia2020.gov.au (accessed 10 October 2014); OECD (2010), *Finland: Working Together to Sustain Success*, OECD Public Governance Reviews, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264086081-en.

The experience of Finland in getting senior officials to understand the challenges ahead and the ways of managing them could inspire similar activities in China for building a vision of the future. In 2006, the Ministerial Committee for Economic Policy of Finland established the change management programme called *Finwin: Towards a New Leadership*, whose aim was to bring about a shared understanding and vision concerning future challenges and the way to manage them. Finwin facilitated horizontal dialogue among senior managers from different ministries and agencies. The programme was organised around seminars that served as forums for discussion on topics like well-being at work, social innovations, functions of the state sector and regional administration reform. This gave participants the opportunity to share their experiences and concerns about the future and the challenges ahead.[59]

Government needs to facilitate and encourage citizens' participationin urban development planning

Public participation in urban planning could help establish trends and shifts in urban preferences. The Urban and Rural Planning Law explicitly mentions that in formulating a

provincial urban hierarchical plan or the overall plan of a city or town, the authority in charge should solicit opinions from the public and experts by holding appraisal conferences or hearings or by other means. However, interviews with Chinese officials for this Review indicated that these activities remain mostly informational. There are no formal channels for citizens to take part in the discussions of urban plans or ways for them to provide feedback on the quality of service delivery.

OECD work on green growth strategies in Asia has shown that community-based approaches may be a way to foster citizens' participation in service delivery and urban development. Such approaches tend to complement the lack of capacity in local government, by sharing responsibility between the local community and the public sector. Moreover, community-based approaches are likely to create local jobs, thereby contributing to inclusive growth (OECD, 2014b).

China could also explore ways to making public service delivery more cost-effective by including citizens' participation. Municipal governments are in charge of the provision of many public services, with limited financial resources. This context offers China an opportunity to rethink the model of service delivery, redefining the boundaries between state and market, and state and society. OECD countries have discovered that engaging individual citizens and civil society organisations as partners in the design, production and delivery of services leads to higher user satisfaction and, potentially, cost reduction (OECD, 2011b).

Indeed, public participation in service delivery could effectively assist in making service providers accountable and in promoting equity, cost control and quality in public service delivery. Citizens can also assist in encouraging sub-national governments to implement national policies and standards. To be able to do so, however, citizens need information and forums where they can express their concerns (Brixi, 2009). OECD countries have begun to explore co-production as a way to deliver public services in many categories and across levels of government. OECD defines co-production as a way of planning, designing, delivering and evaluating public services that draws on direct input from citizens, service users and civil society organisations (OECD, 2011b).

Some OECD countries have recognised the innovative potential of co-production to significantly change public service delivery, and have put it forward as one element of the next phase of public service reform. Examples include Australia's "Ahead of the Game: Blueprint for the Reform of the Australian Government", Japan's "New Public Commons", and the United Kingdom's plans for a new relationship between citizens and the state.[60] The lesson China can draw from the experience of OECD countries is that co-production depends on having the right mix of leadership, capacity and incentives to ensure that all actors buy into the change process, and to guarantee value for effort. It is also necessary to align financial incentives and carefully monitor financial flows so as to improve efficiency and accountability, especially in the case of services designed and delivered by users themselves. Openness, freedom to experiment and risk management also contribute to successful co-production.

To involve citizens in both urban planning and service delivery, China can build on the government's rich experience in promoting public awareness. China has been successful in soliciting citizens' feedback on the reconstruction strategy after the Wenchuan earthquake in 2008, for example (Brixi, 2009). Government agencies in all sectors need to be required to actively disseminate information, facilitate information sharing and promote transparency about government policies, public resource allocation, standards, procedures, fees and the quality of public services. Moreover, local

governments could further expand recent pilot projects to involve citizens in decision making.

Conclusion

China has set the target to pass from a predominantly rural society to a predominantly urban society; the process is ongoing and it is expected to continue for several decades. Urbanisation is expected to boost and sustain the economic potential of the country. They key question is not whether China will reach its urbanisation objectives, but how it realises them in relation to other key social, environmental and economic issues. It cannot be considered an achievement that most of the population lives in cities, if public service provision is ineffective and environmental degradation continues. This report suggests that in order to develop a comprehensive approach to urbanisation, it is necessary to strengthen the urban governance structure. A first priority would be to revise the mechanisms for co-operation and co-ordination across levels of government and promote collaboration among municipalities, to build synergies and exploit complementarities for a cost-effective service delivery. Investing in cross-sectoral planning is critical to ensure that urban development is not conducted in isolation from areas on which it clearly has an impact, e.g. environment, transport, housing, etc. Sub-national government, in particular municipalities, need to have an adequate and sustainable level of revenue to meet their expenditure needs. China needs to refine the current intergovernmental relations designed to strengthen the sub-national tax system, and better align spending mandates with resources. A revision of the current distribution of responsibilities across levels of government is vital in this respect. This report also underlines the need to ensure capacity across all levels of government. Having at its disposal a workforce with the right degree of skills and competences, selected in a fair and transparent process, is essential, not only to increase confidence in government but also to support overall organisational productivity and effectiveness. For this, China needs to invest in a more strategic management of its public workforce, ensuring adequate levels of transparency, merit and ethical behaviour. Developing a strategic approach to urban development and adapting the governance structure accordingly is also critical.

China is well positioned to revitalise its urban governance structure. A factor in China's favour is the possibility of piloting schemes, projects and plans, to improve them before they are fully implemented across the country. Not many OECD countries can afford to pilot urban development ideas. China has also invested much effort and resources in research on urban planning and development, with the advantage that it is focused on the local context. Government should make sure that all accumulated knowledge is used to inform policy making on urbanisation. The fact that only qualified urban planners are entitled to develop urban plans is a good practice, as it ensures certain minimum technical and scientific standards. The selection of public servants through an open competition is another element acting in China's favour, as it opens the opportunity for a diverse and vibrant public workforce.

Notes

1. There are several examples illustrating that good governance supports urban development policies (OECD, 2011a; 2012a; 2013a; 2013b).

2. In general, there are three principal forms of decentralisation: deconcentration, delegation and devolution. They are characterised by differences in local government authority, responsibility and fiscal autonomy. Deconcentration consists of central agencies distributing their own organisation to the local level, in an effort to improve responsiveness of service delivery or to improve monitoring and control. Delegation occurs when higher levels of government assign responsibilities to lower levels, most often for service delivery. While the ultimate authority rests with the higher level, under delegation, conditional transfers of responsibility and authority are accompanied by increased local fiscal transfers from the delegating level of government. Devolution consists of the constitutional and legislative codification of authority and responsibility, accompanied by almost total fiscal autonomy (Kamal-Chaoui, Leeman and Rufei, 2009).

3. For a detailed explanation, see Government of the People's Republic of China. *Constitution of the People's Republic of China*, http://english.people.com.cn/constitution/constitution.html.

4. The current standards were initially established in 1986, and then modified in 1993 and 1997.

5. Wong (2013a) argues that there is a great deal of confusion in the citation of city-level statistics that is partly due to Chinese terminology, which uses *shi* ("municipality") to refer interchangeably to either an administrative unit or a city, and the size difference is normally very large.

6. For example, the enactment of the City Planning Act in 1989 gave municipalities the right to prepare urban plans, to issue land-use and building permits, and to enforce development control. Even projects that are under the central government must apply for land-use permission from the local government before the project can be carried out. In addition, land-leasing certificates must be acquired from the local land administration bureau, if the land is obtained from the market (Wu, 2002).

7. For example, the personnel dossier of a person who gives up his formal employment in a university and research institute and moves to the private sector will be transferred to a human resource exchange centre in the city. The centre is then responsible for confirming his identity.

8. See for example the 2014 Urban Competitiveness Report of the Chinese Academy of Social Sciences. The 2009-10 report on urban competitiveness of the Centre for City and Competitiveness of the Chinese Academy of Social Science included a ranking on comprehensive competitiveness: Rapid upgrading of Chinese cities, ranks close to the global middle level. Top 10 cities for China: Hong Kong (10), Shanghai (37), Taipei (38), Beijin (59), Shenzhen (93), Macau (93), Guangzhou (120), Kaohsiung (123), Tianjin (165), Taichung (165). There were 3 cities in the top global 50 and 6 in the top global 100. www.betterhongkong.org/mediaupload/6344E1F0-87E9-4CC1-9E282EEBE305622F.pdf.

9. Governors Zhao Ziyang of Sichuan and Wan Li of Anhui initiated land reform experiments in a few localities within their jurisdictions in the late 1970s, when the national policy, including the Party's "reform manifesto", did not allow any reform change to collective farming. Similarly, when Governor Xi Zhongxun of Guangdong proposed the Special Economic Zone reform, he was opposed by certain top central leaders. After these locally initiated reforms were endorsed by the central government as national policy, the reforms were implemented by all levels of government nationwide. After the initial success of the regional reforms, the pioneers of the reform were promoted to national posts. Zhao and Wan became premier and executive deputy premier of the State Council, respectively, responsible for national reform; Xi became a vice chairman of the National People's Congress (Xu, 2011).

10 . **Co-ordination:** Joint or shared information, ensured by information flows among organisations. "Co-ordination" implies a particular architecture in the relationship between organisations (either centralised or *peer-to-peer* and *direct* or *indirect*), but not how the information is used. **Co-operation:** Joint intent on the part of individual organisations. "Co-operation" implies joint action, but does not address the organisations' relationship with one another. **Collaboration:** Co-operation (joint intent) together with direct peer-to-peer communications among organisations. "Collaboration" implies both joint action and a structured relationship between organisations. For further information, see OECD (2005b).

11 . Collective commitment is meant to reflect the way the urban plan and strategies are to be executed, taking into account that every sub-national level of government has specific needs and priorities.

12 . For further discussion see Charbit, C. (2011).

13. For further information on the functions of the Ministry of Decentralisation, Reform of the State and the Public Function of France, see www.action-publique.gouv.fr/

14 . For further information, see Canada's Privy Council Office: www.pco-bcp.gc.ca/.

15. For further information, see OECD (2007b).

16 . Around two-thirds of the metropolitan areas in the OECD now have a metropolitan governance body (OECD, 2014c).

17 . For further information, see Kim, S.-J. et al. (forthcoming), "What Governance for Metropolitan Areas?" OECD Regional Development Working Papers, OECD Publishing, Paris.

18. For further information and discussion on the characteristics of a regulatory review, see OECD (2005c).

19. See OECD (2005c).

20. Over the past decade, the Chinese government has moved all major expenditure responsibilities upward from the township to the county level. As a result, the township is no longer a significant level for budgetary purposes. For that reason, it is more useful to aggregate county and township figures.

21. Information gathered during OECD mission interviews with DRC staff.

22. See OECD (2013f) and Wang and Herd (2013) for further discussion.

23. Revenues and expenditure of prefectures/municipalities are net of those of their subordinate counties, so they are approximately the aggregate of prefectural-level cities.

24 . In May 2014, the State Council approved an economic reform under which government bonds were established as the main financing mechanisms of local governments' debt. The local governments' financing platform companies (UDICs) have been stripped of their financing functions and are thus unable to borrow. Once UDICs pay back the credits they acquired, some of them will disappear, and others will be merged to form investment promotion bodies.

25. UDICs grabbed nearly one-third of all new loans issued in 2009, and in the first quarter of 2010, accounted for 40% of all new bank loans (Investors Bulletin, 2010).

26. For an in-depth discussion on the requirements for introducing FMIS, the strategic framework for its introduction and the preconditions for its development, see Diamond and Khemani (2006).

27. Central government debt is small, equal to 18% of GDP.

28. See OECD (2013h) for further information about country examples and an in-depth discussion on debt management at sub-central level.

29. The amounts approved in 2011 were: Shanghai CNY 7.1 billion; Guangdong CNY 6.9 billion; Zhejiang CNY 6.7 billion; and Shenzhen CNY 2.2 billion. The Ministry of Finance will pay the principal and interest on the bonds to the investors after the debt matures, and then the local governments repay the ministry. Half of the debt sold in the programme is three-year and five-year bonds. In 2013, two more local governments were allowed to issue bonds: Jiangsu and Shandong. "China's provinces allowed to issue debts", *People's Daily On Line*, http://english.peopledaily.com.cn/90778/7622625.html and "China allows 2 more local gov'ts to issue bonds" *Xinhuanet*; http://news.xinhuanet.com/english/china/2013-07/04/c_132513207.htm.

30. World Bank (2014b), "Intergovernmental fiscal relations". Decentralization and Subnational Regional Economics, http://www1.worldbank.org/publicsector/decentralization/fiscal.htm.

31. OECD (2012b), Recommendation of the Council on Principles for Public Governance of Public-Private Partnerships, www.oecd.org/gov/budgeting/PPP-Recommendation.pdf. See also for further discussion KPMG Global China Practice, China 360, "China's Urbanization: Funding the Future", December 2013, www.kpmg.com/CN/en/IssuesAndInsights/ArticlesPublications/Newsletters/China-360/Documents/China-360-Issue14-201312-China-urbanization-funding-the-future-v1.pdf.

32. See Wong (2012, 2013a, 2013b) for a detailed discussion on financing urban development in China.

33. See OECD (2005a) for a detailed discussion on environmental governance challenges in China.

34. For a detailed discussion of medium-term budgeting, see Harris et al. (2013), Hawkesworth, Huerta Melchor and Robinson (2013), and OECD (2013e).

35. The concepts of "public servant" and "civil servant" will be used interchangeably, as translations differ.

36. Definition based on the *Law of the People's Republic of China on Civil Servants*; adopted at the 15th Meeting of the Standing Committee of the Tenth National People's Congress on 27 April 2005, www.china.org.cn/english/government/207298.htm on 19 February 2014.

37 . The civil service system is based on the guidelines of Marxism-Leninism, Mao Zedong Thought, Deng Xiaoping Theory, and the thought of "Three Represents".

38. In China, state leaders and cabinet members and other senior officials have climbed to the top vertically, rather than horizontally, as is the case in parliamentary democracies (Brodsgaard and Chen, 2009).

39. For example, there are weaknesses in environmental management capacity at sub-national level due to the lack of staffing. Only a small proportion of township governments have designated employees responsible for environmental management, whereas cities like Dalian, Shanghai and Xiamen routinely invest a significant percentage of their revenue in environmental protection and have developed relatively well-staffed and well-funded Environmental Protection Bureaus (OECD, 2005a).

40. Reform of the public service has been carried out in the midst of two attempts to downsize the government (1993 to 1996 and 1998). The first attempt largely failed to achieve its downsizing goals; the 1998 campaign had better results. However, many government agencies have been unable to implement parts of the public service reforms such as new hiring procedures, because based on new staffing levels, they are considered to be overstaffed (Burns, 2004; Brodsgaard and Chen, 2009).

41. This figure and data for 2008-12 were published officially by the State Administration for Civil Servants in 2013. Prior to that, because official data on the size of the civil service was not published, researchers used estimates (see Brodsgaard and Chen, 2009).

42. L. Xi, a retired official of the Ministry of Personnel, published this data in a publicly available book in 2002, asserting that the civil service included 5.33 million employees. Interviews by academics with Ministry of Personnel officials suggested that these statistics were generally correct. However, the data on personnel distribution are controlled by the CCP Organisation Department, not by the Ministry of Personnel.

43. In 2009, the State Council (core ministries and state agencies) employed only 51 850 people, virtually unchanged from 49 260 in 2002 (Wong, 2013b), as a result of downsizing campaigns.

44. Annual Report on the Development of China's Human Resources, Social Sciences Academic Press, in *China Daily*, 11 October 2013, online at usa.chinadaily.com.cn/china/2013-10/11/content_17022128.htm, accessed 25 May 2014.

45. *China Daily*, 18 December 2013, at www.chinadaily.com.cn/china/2013-12/18/content_17180844.htm, accessed 25 May 2014.

46. See the Civil Service Law, Article 11. In 1998, officials reported that 80% of civil servants were party members. See *Zhongguo jigou* No. 7, 1998, p. 4.

47. For a 2009 list, see the Ministry of Human Resources and Social Security website www.mohrss.gov.cn/mohrss/gwy2009/UserControl/Student/StudentIndex.aspx, for a zip file of available posts dispatched by central state administrative organs, service units of State Council system subordinate units that implement the state civil service system, and "Other posts" (accessed 14 April 2009).

48. See Sina.com news portal: http://news.sina.com.cn/o/2014-05-07/001330073807.shtml, accessed May 22, 2014.

49. There are undoubtedly many gradations in between.

50 . In the current civil service wage system, a typical compensation package for civil servants includes both a visible and an "invisible" component. The visible part is mainly base income, a small part of the total remuneration package, and is determined by a standard wage system applied to the entire civil service. The "invisible" part refers to the remainder of the salary, made up of subsidies, allowances and other staff benefits, which are separately determined by locally maintained and arbitrary wage systems and hence, are not transparent to outsiders (Burns and Wang, 2014).

51. See Baijie (2014) for further information.

52. For an in-depth discussion, see Burns (2004), OECD (2005a), Xu (2011) and Su, Tao and Yang (2012).

53. Between 1978 and 2005, 80% of governors were promoted or transferred from other provinces. Many of them were not promoted within the same province (Xu, 2011).

54 . For an in-depth discussion, see Lopez-Claros, A. (2014).

55 . For further information, see OECD (2013l).

56. For further information on strategic workforce planning in OECD countries, see Huerta Melchor (2013).

57. Recommendations on how to improve the performance evaluation system have been formulated in the recent report from the World Bank (2014a), *Urban China: Toward Efficient, Inclusive and Sustainable Urbanization*. Suggestions in this report are intended to complement those of the World Bank, since individual performance assessment in particular, and the management of the public workforce across levels of governments, have not been discussed in other reports.

58. For further information on public sector compensation across OECD countries, see OECD (2012c).

59. For further details, see Huerta Melchor, O. (2008).

60. For an in-depth discussion on co-production across OECD countries, see OECD (2011b).

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