Preparing for China’s urban billion

Executive Summary
McKinsey Global Institute

The McKinsey Global Institute (MGI), founded in 1990, is McKinsey & Company’s economics research arm. MGI’s mission is to help business and government leaders develop a deeper understanding of the evolution of the global economy and provide a fact base that contributes to decision making on critical management and policy issues.

MGI’s research is a unique combination of two disciplines: economics and management. By integrating these two perspectives, MGI is able to gain insights into the microeconomic underpinnings of the broad trends shaping the global economy. MGI has utilized this “micro-to-macro” approach in research covering more than 15 countries and 28 industry sectors, on topics that include productivity, global economic integration, offshoring, capital markets, health care, energy, demographics, and consumer demand.

Our research is conducted by a group of full-time MGI fellows based in offices in San Francisco, Washington, DC, London, Brussels, and Shanghai. MGI project teams also include consultants drawn from McKinsey’s offices around the world and are supported by McKinsey’s network of industry and management experts and worldwide partners. In addition, MGI teams work with leading economists, including Nobel laureates and policy experts, who act as advisers to MGI projects.

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Preface

The McKinsey Global Institute (MGI) launched a major initiative two years ago to study the evolution of urbanization of China and to derive insights into how this process will develop. More than 20 consultants and experts have explored the global economic and social implications of the unprecedented expansion of China’s cities and how national and local policy makers can shape China’s urban development to 2025 and beyond. Preparing for China’s Urban Billion describes the findings of our research and is available to download for free at our web site www.mckinsey.com/mgi.

The views presented in this two-volume work are based on long-term macroeconomic trends in China. While the recent downturn in the global economy is bound to impact China in the short term, we believe the long-term fundamentals on which we have based our study are likely to hold out.

Janamitra Devan, an MGI senior fellow in the Shanghai office, worked closely with us to provide overall leadership for this project. Stefano Negri, an engagement manager in the Shanghai office, managed the project, which, for the most part, involved our professional staff in China. The project was comprised of three significant components, each led by a sub-team. Luke Jordan, a consultant in the Shanghai office, led and managed the analysis of urbanization scenarios with team members Flora Yu, Wayne Chen, Wander Yi, Nica Liu, Ellen Mo, and Zhiqiang He. Geoff Tseng, a consultant in the Shanghai office, and Alexander Maasry, a consultant from the New York office, led our city case studies and field visits with team members Liang Wang, Kevin Huang, Yichan Yuan, Ji Zhong, and Alexandra Liu. Other consultants who provided significant research support included Xiao Chen from the Munich office, Francesco Renzo from the Milan office, and Dapeng Lai from the Shanghai office. Senior research analyst
Yangmei Hu led the econometric modeling effort with team members Jonathan Ablett from the North America Knowledge Center, and Xiujun Lillian Li, Mei Song, and John Gao from the China Knowledge Center. Geoff Greene, an independent econometrician, made significant contributions to the building of the McKinsey Global Institute China All City model.

Many McKinsey colleagues around the world including Dominic Barton, Andrew Grant, Gordon Orr, and Ian St-Maurice from the Shanghai office; Heinz-Peter Elstrodt from the Sao Paulo office; Kevin Lane from the Zurich office, and Diana Farrell from the San Francisco office provided valuable insights and advice.

We owe a special debt of gratitude to our external advisors Professor Li Shi from Beijing Normal University and Professor Kam Wing Chan from the University of Washington in Seattle. Their guidance and unique perspectives on China’s urbanization were critical throughout the project. In addition, Professor Zhao Renwei, retired professor of economics from the Chinese Academy of Social Sciences, and Professor Xiao Geng, Director of the Brookings-Tsinghua Center for Public Policy, provided invaluable insights.

We are grateful to Glenn Leibowitz and Joyce Hau in Shanghai, and Rebeca Robboy in San Francisco for their help with external communications; Janet Bush, MGI senior editor in London, for providing strong editorial support; and Helen Zhang, MGI’s administrator in Shanghai, who managed complex logistics for the project team. We also thank McKinsey’s superb R&I staff from the China Knowledge Center and the technical and production services of the Firm.

We benefited from numerous interviews with public and private sector leaders in several of China’s cities, and we are very grateful for their time and help.

The work is part of the fulfillment of MGI’s mission to help global leaders to understand the forces transforming the global economy, improve company performance, and work for better national and international policies. As with all MGI research, we would like to emphasize that this work is independent and has not been commissioned or sponsored in anyway by any business, government, or other institution.

Dr. Jonathan Woetzel, Director, McKinsey Shanghai office
Lenny Mendonca, Director, Chairman of the McKinsey Global Institute

March 1, 2009
Fast forward to the future—
China’s urbanization in 2025

350 million
will be added to China’s urban population by 2025—
more than the population of today’s United States

1 billion
people who will live in China’s cities by 2030

221
Chinese cities will have one million + people living in them—
Europe has 35 today

5 billion
square meters of road will be paved
170
mass-transit systems could be built

40 billion
square meters of floor space will be built—in five million buildings

50,000
of these buildings could be skyscrapers—the equivalent to constructing up to ten New York cities

5 times
—the number by which GDP will have multiplied by 2025
China’s burgeoning economic success and the rapidly rising standard of living of its people have resulted in a historically unprecedented surge of urbanization that is set to continue. If current trends hold, nearly one billion people will live in urban centers by 2025. China will have 221 cities with more than one million inhabitants—compared with 35 in Europe today—of which 23 cities will have more than five million people. The urban economy will generate over 90 percent of China’s GDP by 2025.

As the nation’s urban economy grows, China seems destined to continue to enjoy an impressive pace of increasing national prosperity. In all likelihood the nation’s continuing urbanization will ensure that China will fulfill the ambitious economic growth target set out at the 17th Party Congress in 2007 of quadrupling per capita GDP by 2020. For companies—in China and around the world—the scale of China’s urbanization promises substantial new markets.

At the same time the expansion of China’s cities will represent a huge challenge for local and national leaders. Of the slightly over 350 million people that China will add to its urban population by 2025, more than 240 million will be migrants. Urbanization along current trends will imply major pressure points for many cities including the challenges of securing sufficient public funding for the provision of

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1 While we were researching and writing this study, two significant events have taken place:  
1) the global financial crisis had begun to unfold. While we expect that there will be a short-term slowdown in China’s economic growth and that this could decelerate the pace of China’s urbanization, our long-term perspectives on urbanization in China will likely hold;  
2) the Chinese government has announced a package of land-reform measures which will, inter alia, enable residents of the rural sector to lease their allotted lots to others. We expect that, if fully enacted, this reform could increase the scale of urbanization significantly. However, China had not, at time of writing, released details of the measure and MGI has taken only an initial view of the package. Therefore, the results presented in this report do not reflect the potential impact of this reform.
social services, and dealing with demand and supply pressures on land, energy, water, and the environment. All of these pressures will intensify in time, as China’s leaders acknowledge. Although China will likely achieve its GDP growth target in the timeframe it has set for itself, a focus solely on GDP growth will not achieve the harmonious development that the Chinese leadership desires.

As China seeks to mitigate these pressures, there are in fact several paths open to China’s national government but most particularly to China’s city governments, which can, to a great extent, influence how urbanization plays out. In a bid to understand these paths, the McKinsey Global Institute (MGI), the economics research arm of McKinsey & Company, conducted a study of China’s urbanization to a unique level of detail. We employed rigorous macro- and microeconomic approaches through a granular city-level econometric model. From this model, we derived data-driven projections of urbanization’s future challenges. We visited and researched 14 Chinese cities and interviewed hundreds of officials, business leaders, city managers, and academics about the policy levers that were used to influence the scale and shape of development of their cities. We developed and examined four urbanization scenarios, each plausible outcomes of urbanization over the next 20 years.

Our analysis finds that a more concentrated pattern of urbanization is most likely to mitigate pressures and increase the overall productivity of the urban system. Concentrated urban growth scenarios could increase per capita GDP by up to 20 percent over dispersed urban growth scenarios. As a percentage of GDP, public spending will also be lower (16 percent of GDP in concentrated compared with 17 percent in dispersed urban growth scenarios). For China to move in this direction, policy shifts at the national level would be required including, for example, continuing to enforce stricter regulations against city land acquisition, supporting the economic development of larger cities, and adjusting the incentives of China’s city officials. By 2025, these policies could boost the growth of 15 supercities with average populations of 25 million people, or spur the further development of 11 urban “networks” of cities, linked by strong economic ties, with combined populations of 60-plus million each on average.

We also find that encouraging “urban productivity” initiatives at the city level—for example, the implementation of transit-oriented development or the creation of incentives for energy-efficient industrial equipment—could generate substantial positive outcomes in all scenarios. Through the adoption and effective implementation of such policies, China could reduce its annual public
spending in 2025 by more than 1.5 trillion renminbi (equivalent to 2.5 percent of 2025 GDP), going some way toward reducing its funding needs and releasing capital for other uses. Such initiatives could also generate additional savings for the private sector, in particular its resource bill. Potential savings here will total up to an amount equivalent to an additional 1.7 percent of China’s 2025 GDP.

In all scenarios, businesses have not only an opportunity to leverage China’s impending urban billion as a new consumer market, but also to become major investors—in road and rail, public-transit systems, buildings, the energy-supply infrastructure, and energy-efficient technologies—as China manages its urbanization phenomenon. These opportunities will require a new generation of public-private partnerships to enable additional capital and knowledge infusion from the private sector, at the same time as guaranteeing greater efficiency and productivity from major public projects.

**CHINA’S URBANIZATION—A MASSIVE TRANSFORMATION**

China’s economic goals are intertwined with urbanization. The expansion of China’s cities has loomed large over the past two decades—and will continue to do so over the next 20 years. There will be unprecedented investment opportunities for business amid a booming middle class and a stratum of affluent consumers. The scale of urbanization will also be large and migration will be its main driver. As urbanization takes shape, China will have to contend with severe pressures on the basic inputs of its urbanization—land, funding, and natural and human resources.

**China’s economic goals imply continued urbanization**

At the 17th Congress of China’s Communist Party, President Hu Jintao committed the country to the bold target of quadrupling per capita GDP by 2020 compared with its 2000 level. Attaining that goal implies China continuing to urbanize. As it does, our research suggests that China will, barring unforeseen economic shocks, meet its per capita GDP goal with relative ease.

Urbanization and China’s robust economic growth have gone hand in hand. Cities have been the major drivers of China’s GDP growth over the past two decades and they will become even more so over the next 20 years. Projecting current trends forward, we find that the proportion of China’s GDP generated by cities will rise from 75 percent today to 95 percent by 2025.
Private-sector investment has been concentrated in China’s cities. Over the past ten years, almost 50 percent of China’s overall GDP growth has come from urban fixed investment with an annual expenditure of 6.4 trillion renminbi in 2007. If this trend continues, overall urban investment will reach over 24 trillion renminbi by 2025 or 93 percent of total Chinese fixed investment compared with almost 79 percent in 2007.²

Growth in private consumption has also largely been an urban affair with China’s rapidly growing middle classes concentrated in cities. Between 1990 and 2005 China’s urban consumer market began to emerge as a driver of growth in its own right, accounting for 26 percent of overall GDP growth. The urban consumption share of GDP will rise from 25 percent or 3.9 trillion renminbi in 2005 to 33 percent or 21.7 trillion renminbi by 2025.

The scale of urbanization is—and will be—immense

On current trends MGI projects that China’s urban population will expand from 572 million in 2005 to 926 million in 2025 (Exhibit 1). To put the sheer scale of this dynamic into perspective, this increase of more than 350 million Chinese city dwellers is larger than the entire population of the United States today. By 2030, China’s urban population is on track to reach one billion.

Exhibit 1

China is moving toward an urban billion by 2030

<table>
<thead>
<tr>
<th>Population by city size</th>
<th>Millions of people, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>New cities</td>
<td>572</td>
</tr>
<tr>
<td>2005</td>
<td>15</td>
</tr>
<tr>
<td>2025</td>
<td>25</td>
</tr>
<tr>
<td>Big (5–10)</td>
<td>28</td>
</tr>
<tr>
<td>100%</td>
<td>52</td>
</tr>
<tr>
<td>Midsized (1.5–5)</td>
<td>26</td>
</tr>
<tr>
<td>6</td>
<td>53</td>
</tr>
<tr>
<td>Small (0.5–1.5)</td>
<td>25</td>
</tr>
<tr>
<td>Big town (&lt;0.5)</td>
<td>25</td>
</tr>
<tr>
<td>423</td>
<td>128</td>
</tr>
</tbody>
</table>

Source: McKinsey Global Institute China All City Model; McKinsey Global Institute analysis

² We express all renminbi figures in real 2000 renminbi. Urban fixed investment primarily comprises construction and purchases of fixed assets in urban areas.
Over the past 15 years, two Chinese megacities with populations of more than ten million have emerged. On current trends, six more such cities will emerge over the next 20 years (Exhibit 2); of these, two will have populations of more than 20 million. MGI estimates 41 percent of China’s higher income classes (that is, with real per capita disposable incomes of greater than 40,000 renminbi in 2025) compared with 11 percent in 2005 will live in them.\(^3\) Overall, the trend points to China heading toward a dispersed urbanization pattern with more pronounced expansion in the number of midsized and small cities. These cities, together with megacities, will drive future growth.

### Exhibit 2

**Six new megacities will emerge by 2025**

<table>
<thead>
<tr>
<th>City Size</th>
<th>2005 Cities</th>
<th>2025 Cities</th>
<th>% of GDP 2005</th>
<th>% of GDP 2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mega (10M+)</td>
<td>2</td>
<td>8</td>
<td>11%</td>
<td>24%</td>
</tr>
<tr>
<td>Big (5-10M)</td>
<td>12</td>
<td>15</td>
<td>22%</td>
<td>14%</td>
</tr>
<tr>
<td>Midsized (1.5-5)</td>
<td>69</td>
<td>115</td>
<td>28%</td>
<td>34%</td>
</tr>
<tr>
<td>Small (0.5-1.5)</td>
<td>173</td>
<td>280</td>
<td>20%</td>
<td>19%</td>
</tr>
<tr>
<td>Big town (&lt;0.5)</td>
<td>602</td>
<td>521</td>
<td>9%</td>
<td>9%</td>
</tr>
</tbody>
</table>

\(^*\) From the MGI model, the number of new cities between 2000 and 2005 was nine, accounting for about half a percent of total urban population.

Source: McKinsey Global Institute China All City Model; McKinsey Global Institute analysis

Moving in lockstep with urbanization, China’s GDP growth in the next 20 years will be larger than the total current GDP of Japan and will account for 20 percent of global GDP growth in this period.\(^4\)

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3. MGI’s household definition of incomes includes “upper aspirant” households having an income between 40,000 and 100,000 renminbi and “affluent” households having an income between 100,000 renminbi and 200,000 renminbi. For a detailed analysis of evolving urban incomes in China, please see From ‘Made’ in China to ‘Sold’ in China: The Rise of the Chinese Urban Consumer, McKinsey Global Institute, November 2006 (www.mckinsey.com/mgi).

To fuel its investment requirements, urban China will account for around 20 percent of global energy consumption and up to one-quarter of growth in oil demand. We estimate that China would need to build at least 170 Gigawatts of new coal power capacity from 2005 to 2010, which is around 55 percent of the global total, but China has already announced that it intends to outstrip that number.\(^5\) In total, China will need to construct between 700 Gigawatts and 900 Gigawatts of new coal-fired power between 2005 and 2025.

In transportation, up to 170 cities in China could meet planning criteria for mass-transit systems by 2025, more than twice the current number in Europe. This could promise to be the greatest boom in mass-transit construction in history. In addition, China will pave up to five billion square meters of road and up to 28,000 kilometers of metro rail. China’s skyline will change spectacularly, fulfilling the most ambitious dreams of real-estate developers. We project that China will build almost 40 billion square meters of floor space over the next 20 years, requiring the construction of between 20,000 and 50,000 new skyscrapers (buildings of more than 30 floors)—the equivalent of up to ten New York Cities.

Urban China will also become a dominant global market with its aggregate consumption almost twice, and disposable income over two times, those of Germany by 2025.\(^6\) The incremental growth alone in urban China’s consumption between 2008 and 2025 will amount to the creation of a new market the size of the German market in 2007.

**Migration will emerge as the clear driver of future urbanization**

China’s urban centers will become even more dominant in the years ahead. China’s level of urbanization has already more than doubled since 1980 to 44 percent in 2005. By 2025, MGI projects that about two-thirds of the population—64 percent—will live in cities.

While the speed of overall population growth will not be dramatically different from its recent pace, China’s urbanization will nonetheless be fundamentally different from its experience of the past 15 years (Exhibit 3). Between 1990 and 2005, MGI estimates that 103 million people migrated from rural to urban areas (accounting for 32 percent of the population increase).

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5 Various Chinese sources announced plans for 180 Gigawatts to 300 Gigawatts of new coal power capacity by 2010.

6 Data for Germany is from Global Insights, 2007.
Migration will be the driving force of future urbanization

Source: McKinsey Global Institute China All City Model; McKinsey Global Institute analysis

An even more important driver of urban population growth was the acquisition of adjacent land and the simultaneous incorporation of populations living there (about 120 million people). This accounted for close to 40 percent of the increase in urban population during that period. Over the past five years this pattern has reversed. A large number of cities are running out of land into which to expand and national government policy has made land acquisitions more difficult.

We expect that rapid urban development coupled with surplus populations in rural areas generated by gradually increasing productivity in the countryside will together act to boost the mobile population to about an additional 240 million people in the next 20 years. The mass-movement of people we are about to see will eclipse even the substantial migration of the past.7

7 For the purposes of this study, MGI defines a migrant as fulfilling three criteria. First we adopted the same standard as the National Bureau of Statistics of China (NBS) in the length of stay—i.e., a minimum of six months residency in the receiving city or six months away from the individual’s hometown qualifies that individual as a migrant. Second we chose to use a geographic boundary determined by China’s census methodology that combines the city center with its suburban fringe. We can classify any individual moving into, or out of, this area as a migrant. Third, we only count as migrants those who move from a rural to an urban area and effectively discount urban to urban movements. These definitions are explicit to the quantitative estimates we derived from the McKinsey Global Institute China All City Model.
With continued economic growth, job creation in cities will be huge. MGI estimates that urban China will have between 450 million and 500 million jobs in 2025, compared with almost 290 million in 2005. Migrants will tap into this increasing demand for employment, bringing the proportion of mobile population in the cities at above 40 percent under every urbanization scenario. Driven by the high share of job growth in these cities and their rapidly aging officially resident populations, most of this migration will take place in mid- and larger-sized cities where migrant populations will constitute a greater proportion—around 50 percent—of their populations by 2025; in many cities, the mobile population will account for more than half of total populations.

China will also continue to see the emergence of new cities through 2025 but on nothing like the scale that we have seen over the past 15 years. Between 1996 and 2005, MGI estimates that there were 195 additional urban centers that “behaved like cities according to government criteria prevailing in 1996 but which the government did not designate as such. Some of these “unofficial cities” have so far eluded the radar screens of most businesses but they offer promising sources of future growth. For instance, Cangnan, officially not classified as a city, grew at a compound annual growth rate of 19 percent between 2000 and 2005, higher than the average Chinese city’s GDP growth of 15.3 percent and by 2005 boasted a population of more than 750,000.

Between 2006 and 2025, we expect a considerably slower pace of city creation than in the past 15 years. We find that 81 more urban centers will develop the characteristics of cities, with a cumulative population of approximately 27 million, or about 7.5 percent of the urban population increase during this period, compared with 50 million or close to 16 percent from 1990 to 2005. Moreover, most will be located within a 50 kilometer radius from existing cities, reflecting the tendency of these future cities to develop in close proximity to larger cities (Exhibit 4).

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8 In addition to migration, city expansion and the added populations of “unofficial cities”, organic or natural growth in existing urban populations will account for close to 13 percent of overall cumulative growth—or 47 million people.
The pressure of rapid urbanization will intensify

As well as generating impressive growth and rising living standards, rapid urbanization since 1990 has also generated serious pressures, many of which are linked to the dispersed model of growth China has followed as a result of current policies. We believe these could intensify in the future, driven by the rising cost and increased resource requirements of urbanization.

These pressures, moreover, will be widely felt. MGI’s trendline estimates indicate that China’s urbanization will continue to be a relatively dispersed affair. While half urban GDP in 2005 was concentrated in the top 40 cities, all of China’s other (smaller) cities generated the rest. The relevance of these remaining “smaller” cities will not decrease over the next 20 years. Indeed, some 900 smaller cities will represent 70 percent of the population by 2025, generating 54 percent of urban GDP and 55 percent of urban GDP growth (Exhibit 5). And it is these cities that will feel the pressure points of urbanization most acutely.
We can group these pressures into four main categories:

1. **Land and spatial development**—the addition of more than 350 million urban residents over the next 20 years will require unprecedented construction. This will threaten extensive urban sprawl, further intensive land development, and extreme congestion. Pressure will continue to bear down on the availability of arable land, which could decline by as much as 20 percent in the worst-case scenario. At the same time larger cities will face crippling congestion pressures (Shanghai’s traffic could outstrip its projected road capacity threefold by 2025). There will be intense tension between the loss of arable land on one hand and cities’ dependency on land sales for revenues to finance urban development on the other hand—a phenomenon that MGI found has thus far afforded China added flexibility in its funding of urbanization.

2. **Resources and pollution**—demand for resources from urban China will double. Energy demand will rise from 60 quadrillion British thermal units (QBTUs) to between 123 QBTUs and 142 QBTUs. Water use is very likely to be a severe challenge, particularly for the megacities in the north that will need national water-transfer projects to meet their needs. However, it is fair to note that most water consumption will still be in agriculture. During our city visits we witnessed the relentless search for new energy and water sources...
by local governments and the massive build up of infrastructure to deliver them, particularly in midsized cities. No matter what, pollution will be severe. Today 59 percent of China’s river water is already below international potable standards, and if the amount of wastewater generated relative to GDP stays at today’s level in midsized and smaller cities, urban water pollution could rise almost five times. Air pollution, in particular NOx, could reach critical levels in larger cities.

3. **Labor and skills**—while migrant labor may still be plentiful, aspiring city officials will face challenges in finding sufficient university graduates. As costs go up, it will be important to create higher-value jobs necessary for top-line growth. China’s stock of university graduates will more than triple by 2025, theoretically meeting the growing economy’s demand for skills. However, these people will spread out unevenly across the country as larger cities offering greater opportunities and benefits will more easily attract them. Moreover, as a previous MGI study noted, China’s talent suffers from quality issues, the most commonly cited deficiencies being in practical skills such as teamwork and taking responsibility, as well as communication skills. We confirmed these findings in many interviews during our city visits and they apply to multinational corporations as well as to local companies. This shortage of skilled labor and talent will pose a serious threat to China’s aspiration to move quickly toward increasingly higher-value-added economic activity.

4. **Funding**—cities will face increased costs in providing services. An important factor will be gradual pressure to extend the provision of services to migrant populations (consistent with recent policy announcements). MGI estimates that by 2025 an additional 1.5 trillion renminbi or almost 2.5 percent of urban GDP will be required to extend public services and benefits including health care and education to migrants across China (Exhibit 6).

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10 We expect this amount to rise even further if the recent land reform package is fully implemented.
Including migrants would significantly increase spending on urban public services

This new cost for Chinese cities, piled on top of increasing needs for capital to build infrastructure, will place strains on the entire public-funding system. Although the overall public-funding requirement for urbanization will grow only slightly relative to GDP, the allocation of funding among different cities and geographies is an issue that will have to be resolved. If it is not resolved, there are likely to be marked imbalances across the nation. Small and medium-sized cities have found—and will continue to do so—that it will be increasingly difficult to fund their ongoing needs as well as to finance necessary infrastructure. And funding is going to be more difficult going forward than it was in the past when revenues from land sales helped to mitigate tightness in financing. Relying on this source of funding is set to become more difficult now that the central government is enforcing tighter restrictions on additional land acquisitions.

Almost all cities, apart from the very large ones, could face significant funding challenges. For example Suzhou (in Anhui province) today already has a budget deficit (before accounting for central government transfers) of about 16 percent of its GDP. In the future, these pressures could increase significantly. A detailed analysis of a midsized city (Taizhou), chosen as representative because of its medium size and its deficit broadly in line with the national average (4 percent of its GDP), showed that its pretransfer deficit could rise substantially, up to 9 percent by 2025. This will occur because even...
sustained rapid growth will not be enough to compensate for rapid increases in the service and administration cost components of city budgets. Local funding limits will remain a challenge that cities will have to face.

Managing all of these pressures and optimizing urbanization’s opportunities will require policy actions not only at the national but also at the local level. These policies will need to be oriented mainly towards increasing the overall efficiency and productivity of the urban system in a holistic sense, devoting China’s resources to the goal of a more economically developed and socially balanced society.

**POLICY OPTIONS FOR CHINA’S FUTURE**

The policy choices that China’s leaders make at national and local levels can significantly alter the shape of urbanization.

Contrary to conventional wisdom among many outside observers, decision making in China is relatively decentralized. Most tax revenues are retained locally. The local government can take decisions on everything from industry subsidies to retail licensing, subject mainly to “negative control” by Beijing. Traditionally Beijing has relied on, and indeed incentivized, the entrepreneurial nature of local bureaucrats to identify and pursue growth opportunities. This means that each city faces different urbanization opportunities and challenges. MGI’s visits to a range of China’s cities served to reinforce this view: we noticed, for example, how pressures caused by pollution, congestion, and land scarcity can be more or less critical, depending on the development path followed by each city. Urbanization is local—policy choices enacted at the level of individual cities, under the overall guidance of the national government, have strongly influenced China’s urban growth.

At the same time there is a powerful national framework for urbanization that fundamentally influences the degrees of freedom available at the local level. National decisions on land policy, location of strategic infrastructure, the process and limits of investment approval authority among other areas, define the level of local authority. Differential treatment of local municipalities can tilt the playing field across cities as well.

We find that there are opportunities at both the national and local level to shape urbanization towards a more positive outcome than the current path. By refocusing on the concept of more balanced and productive growth, China’s leadership can have a dramatic impact on the quality of life of its expected billion urban citizens.
The advantages of scale in China—the case of Shanghai

There are four levels of cities in China—directly controlled municipalities and subprovincial, prefecture-level and county-level cities. All except the directly controlled municipalities (for example, Shanghai) come under the purview of a province. In China, larger cities have packed a more powerful economic punch. Out of a total of 858 cities (official and unofficial), only 14 cities today have populations above five million yet they accounted for 33 percent of China’s total GDP in 2007. Why are China’s larger cities more successful? Without doubt history, location, economies of scale, and broad preferences granted by the central government (for example, Special Economic Zone status) have contributed to these cities’ relative successes compared with others. But that is not all. During our visits to cities, we observed three critical factors that point to why larger cities have more advantageous conditions for economic success: their ability to attract talent, their ability to attract investment, and network effects.

1. Larger cities attract the most talent. Shanghai has the skills and talent it needs to feed current growth. Many high school graduates come to the city for their college education every year while Shanghainese students are reluctant to go to other cities. The city has access to 100,000 or more graduates from 60 higher-education institutions every year. One recent university graduate in Beijing told us, “All of China’s graduates want to go to Beijing or Shanghai for jobs. That is why there is such an oversupply in these cities.” And a leading academic said, “Everyone wants to move to Shanghai.” As a result, more than one-quarter (28 percent) of Shanghai’s labor force has a college education—double the proportion a decade ago. The city is also beginning to attract talent from overseas—the expatriate community is half a million strong. Migrants have also moved in large numbers to fill low-wage jobs in manufacturing and service industries. As a result of a huge influx of migrants, Shanghai has actually put in place a scoring Hukou system designed to give residency only to migrants with sufficient skills so that the city attracts only the best.

2. Large cities attract more investment. Foreign direct investment (FDI) has disproportionately landed in larger cities. FDI in emerging markets at least initially tends to go to those areas that have market access but also better infrastructure, services, and tax and other financial incentives. Larger cities in China have been more competitive than smaller ones in the provision of these and other benefits that are favorable to businesses and Shanghai is
no exception. Moreover, the establishment of a foreign invested community reduces perceived investment risks and creates a virtuous cycle that serves to attract more investment in the future. In addition, large cities tend to attract a disproportionate share of total financing for infrastructure, driven by larger local equity pools, greater perceived creditworthiness, and access to a larger range of financing sources due to scale (e.g., large cities can tap the bond market).

3. City network effects stimulate economic growth. Large cities are almost always at the center of a cluster of smaller cities. Economic network effects spur economic growth and productivity. Within China, Shanghai and the Yangtze River Delta is arguably the best example of an efficient hub and spoke model. The city sits in the middle of a very close-knit cluster of economic centers on the delta, which has driven growth in the entire region.

Concentrated urbanization is the optimal path

At the national level, broadly speaking, there are four approaches to urbanization that China might choose to pursue. Two of these foresee patterns of concentrated growth. Under a “supercities” scenario, a small number of very large cities—with populations of 20 million or more—could emerge. Under a “hub and spoke” scenario, clusters of medium-sized and small cities could develop around larger ones. Two other quite different approaches would involve patterns of dispersed growth. Under a “distributed growth” scenario, we could see a large number of cities with populations of 1.5 million to 5 million spread throughout China. Under a “townization” scenario, many smaller cities—with populations of 500,000 to 1.5 million—could be the model. Other nations around the world have applied all these options. All four are open to China; all four are subject to current public and political debate.

While our trendline projections are not identical in population distribution to any of the four scenarios, their outcomes are closer to the potential implications of dispersed growth scenarios (distributed growth and townization). In these scenarios, midsized cities, which will have the largest share of middle-class consumers, will emerge as the engines of growth over the next 20 years.

Although each scenario presents a largely distinct set of opportunities and challenges, out of the potential urban shapes that we have analyzed, the concentrated growth scenarios appear to be the most optimal. It is important...
to note that we base this evaluation on the performance of cities in China over the past two decades and would not hold it relevant to other countries. Not all megacities (and potential megacities) of the world are success stories; nor do all midsized and smaller cities face severe challenges. However, in aggregate and for various historical and local reasons, large concentrated cities in China are performing more effectively than smaller cities and our projections indicate that this pattern could hold true in the future.

Concentrated growth would have many positive economic implications linked to higher productivity and efficiency. If China were to adopt a strategy of fostering more concentrated urbanization, the results would include:

- **Highest per capita GDP**—supercities and hub and spoke scenarios, both concentrated growth models, would produce up to 20 percent higher per capita GDP than trendline and more dispersed growth scenarios (Exhibit 7). Scale effects and productivity gains, which the evidence shows tend to be larger in concentrated urbanization scenarios, account for most of this differential.\(^{11}\)

- **More efficient use of energy**—energy productivity would be about 20 percent higher in concentrated models of urbanization, although hub and spoke will have the highest total energy use (Exhibit 8).

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11 The major driver of higher GDP outcomes in more concentrated urbanization scenarios is the migration of people to wealthier cities as they search for higher incomes. A smaller gain comes from higher productivity as cities “jump” size categories through to 2025. This effect comes from the underlying Cobb-Douglas equation that MGI’s China All City model employs. Importantly, total factor productivity increases as the population expands, but then declines once the population has reached a certain scale as the effects of congestion come into play. As a result, while China’s bigger cities generally tend to be more productive than smaller ones, several larger cities will see population increases resulting in slightly offsetting productivity-induced declines in per capita GDP. For instance, MGI estimates show that a one million increase in the population of a megacity decreases per capita GDP by around 0.3 percent. Working in the opposite direction, the arrival of migrants with lower wages and earning power dampens per capita GDP by an average of 1,600 renminbi across scenarios. In addition, congestion eventually can have serious negative implications, for example through cutting effective working hours. In some cities, the effect of this cut has led to an estimated 15 percent decrease in productivity.
**Exhibit 7**

Concentrated growth scenarios would generate the highest per capita GDP

<table>
<thead>
<tr>
<th></th>
<th>Urban population</th>
<th>Urban GDP</th>
<th>Urban GDP/capita</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Million people</td>
<td>Renminbi trillion, 2000</td>
<td>Renminbi thousand, 2000</td>
</tr>
<tr>
<td>2005 Supercities</td>
<td>917</td>
<td>68</td>
<td>76</td>
</tr>
<tr>
<td>2005 Hub and spoke</td>
<td>930</td>
<td>68</td>
<td>75</td>
</tr>
<tr>
<td>2005 Distributed growth</td>
<td>944</td>
<td>60</td>
<td>65</td>
</tr>
<tr>
<td>2005 Townization</td>
<td>935</td>
<td>54</td>
<td>62</td>
</tr>
</tbody>
</table>

Exhibit 8

Concentrated growth would entail higher energy consumption but also higher efficiency

<table>
<thead>
<tr>
<th></th>
<th>Urban energy intensity</th>
<th>Urban GDP</th>
<th>Urban energy demand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BTU per renminbi</td>
<td>Renminbi trillion, 2000</td>
<td>QBTUs</td>
</tr>
<tr>
<td>2005 Supercities</td>
<td>1,926</td>
<td>68</td>
<td>131</td>
</tr>
<tr>
<td>2005 Hub and spoke</td>
<td>2,088</td>
<td>68</td>
<td>142</td>
</tr>
<tr>
<td>2005 Distributed growth</td>
<td>2,317</td>
<td>60</td>
<td>139</td>
</tr>
<tr>
<td>2005 Townization</td>
<td>2,278</td>
<td>54</td>
<td>123</td>
</tr>
</tbody>
</table>

Source: McKinsey Global Institute China All City Model; McKinsey Global Institute analysis
- **Lowest rate of loss of arable land**—more concentrated models of urbanization could reduce the loss of arable land to only 7 percent to 8 percent of the current total, whereas a more dispersed pattern of urbanization would result in losses of more than 20 percent (Exhibit 9).

**Exhibit 9**

**Concentrated urbanization would contain the loss of arable land**

<table>
<thead>
<tr>
<th>China total arable land</th>
<th>Million hectares</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Central government</td>
<td></td>
</tr>
<tr>
<td>target minimum for 2010</td>
<td></td>
</tr>
<tr>
<td>Hub and spoke Supercities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-7</td>
</tr>
<tr>
<td>Distributed growth Townization</td>
<td></td>
</tr>
</tbody>
</table>

Source: McKinsey Global Institute China All City Model; McKinsey Global Institute analysis

- **More efficient mass-transit**—concentrated urbanization scenarios would attain the necessary public-transport capacity with lower costs and higher chances of successful execution. In a supercities scenario, China would need to expand its current subway system eight times. But under distributed growth the light-rail system would have to grow nearly 300 times. Indeed distributed growth would require the largest investment in each of mass transit, inner-city roads, and city buses.

- **More effective control of pollution**—although megacities that develop in a supercities scenario would face extremely serious peak pollution problems (e.g. NO\textsubscript{X}), MGI research shows that enforcement of measures to regulate pollution is more widespread and effective in larger cities than in smaller cities. Moreover, MGI finds that a distributed urbanization model would generate the greatest amount of emissions countrywide. Dispersed urbanization would produce more water pollution than would concentrated urbanization scenarios.
• **Availability of talent**—while talent will tend to concentrate in big cities, we expect a significant shortage of these workers in small and midsized cities (the trend is already clear today). Concentrated urbanization scenarios would thus have the advantage of having an abundance of talent in centers that are the engines of economic growth, enabling a more rapid transition to higher-value-added activities.

Each model of urbanization has its tradeoffs and concentrated growth would certainly have its pressures (Exhibit 10).

### Exhibit 10

**Each scenario has pressures—but these appear to be less intense overall in concentrated growth**

<table>
<thead>
<tr>
<th>Pressure points</th>
<th>Super cities</th>
<th>Hub and spoke</th>
<th>Distributed growth</th>
<th>Townization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land development</td>
<td>High pressure</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Congestion</td>
<td>High pressure</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Labor and skills</td>
<td>Low</td>
<td>Medium</td>
<td>High pressure</td>
<td>Medium</td>
</tr>
<tr>
<td>Funding</td>
<td>Low</td>
<td>Medium</td>
<td>High pressure</td>
<td>Medium</td>
</tr>
<tr>
<td>Water</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Energy</td>
<td>High pressure</td>
<td>Medium</td>
<td>Low</td>
<td>High pressure</td>
</tr>
<tr>
<td>Pollution</td>
<td>High pressure</td>
<td>Medium</td>
<td>Low</td>
<td>High pressure</td>
</tr>
</tbody>
</table>

**Comments**

- **Concentrated growth contains loss of land**
- **Congestion worsens under supercities scenario**
- **Small and midsized cities lose graduates**
- **Higher GDP in concentrated growth pays for higher costs**
- **Wealth in concentrated urbanization drives high use**
- **Higher-value industrialization drives efficiency in bigger cities**
- **Pollution will be an issue across the board, but higher density allows more control of national pollutants**

Source: City visits; interviews; McKinsey Global Institute analysis

For instance, a shift toward the direction of more concentrated urbanization in China would likely result in more severe peak pollution and more intense congestion in cities than would a dispersed urbanization strategy. But the funding squeeze in a supercities scenario—at the extreme of concentrated urbanization—would be widespread and acute: while overall public spending as a percentage of GDP would be lower, MGI finds that almost 60 percent of the urban population could live in “funding-at-risk” cities—i.e. generally smaller and midsized cities running a significant budget deficit before central government transfers. Conversely a more moderate form of concentration—a hub and spoke scenario—would be highly effective in mitigating the funding challenge in at-risk cities by being able to pull financially struggling spoke cities closer to their more...
well-endowed hubs. Only some 30 percent of the population would live in at-risk cities under this scenario.

Moving toward concentrated urbanization would in fact guarantee that today’s engines of China’s growth—a set of dynamic clusters of cities—would be able to generate bigger economic surpluses and reduce their deficits to near zero. Megacities will not need financial transfers from the central government any more, therefore freeing up enough resources to ease financial strains of non-megacities without raising taxes (Exhibit 11).

Exhibit 11

Under a supercities scenario, megacities would have no deficit and resources could go to smaller cities

National policy makers can shift China toward concentrated urbanization

Is it possible for China to adopt a more concentrated urbanization model? We base our trendline estimates of urbanization on a well-established policy framework and forces that are already exerting a powerful influence on the pattern of urbanization. The question is whether there are options to reshape China’s urbanization away from the trendline that, as we have noted, is closer to the distributed growth scenario than to any other scenario. We believe that the answer is yes. The areas where relevant policy action can make a decisive difference in the shape of urbanization include:
• **Land policy.** Greater enforcement of policies and tighter restrictions on further acquisition of land by cities would have a greater impact on slowing growth in less-developed urban centers—most of which depend heavily on land sales to fund urban development—while preserving arable land. A preferential land policy that gives more freedom to maneuver to larger cities would enable their growth and therefore encourage a shift toward concentrated urbanization. However China needs to monitor these cities carefully to ensure that such preferential policies are not abused (leading, for example, to unmitigated urban sprawl).

• **Infrastructure investment.** The pattern of transport and other network infrastructure plays a major role in the distribution of growth and therefore in the overall shape of urbanization. Government can promote the development of a highway grid or a road system focused on megacities and/or hubs. Likewise the strategic siting of heavy infrastructure such as refineries and ports, and the development of national educational institutions can make a big difference to regional economic development.

• **Preferential political treatment.** The central government has the option of determining different levels of local autonomy for cities to encourage a certain urbanization outcome. For instance, government could choose to grant more megacities municipality status, thus giving them more freedom to set their own development policies. The recent establishment of Chongqing as a directly reporting municipality is an example of this. Or the government could encourage certain cities that are already in close proximity to each other to coalesce into larger metropolitan areas within a single political unit. The downside of such policies is that they may introduce unhelpful distortions (for example, leaving behind some cities in the peripheries); as such they would need careful monitoring to avoid unwanted risks.

• **Financial pressure.** Establishing national standards for the provision of services to all segments of the population, including low-cost housing and education for migrants, in and of itself will place a significant financial burden on smaller cities. Combined with the requirement that cities maintain balanced budgets, this would in effect make it challenging for smaller cities to pursue aggressive labor-intensive growth policies.

• **Incentives for China’s city officials.** The current system explicitly promotes city-level GDP growth with the effect of favoring distributed growth in particular and dispersed growth in general. Changes to today’s framework
of incentives would be difficult and China would have to calibrate any reformulation effectively. For instance, to enhance the viable development of a predominantly hub and spoke scenario, it would be crucial to ensure that incentives took into account the performance of each existing hub and spoke system in order to encourage the necessary intercity co-operation.

**China’s cities can benefit from local urban productivity policies in all scenarios**

Regardless of urban shape, it is possible to encourage the adoption of an “urban productivity” agenda for local governments. The prime objective of this would be to move towards a productivity-based approach that would incentivize the efficient use of inputs such as energy, water, and land; would focus cities on matching sufficient skilled labor to higher-value-added activities; and would improve the provision of public services. Urban productivity initiatives have the potential to reduce future funding pressures, producing outcomes that are both cost-effective and beneficial to the overall quality of urban life.

MGI estimates that, if China were to move in this direction, the opportunity would be substantial. Independent of the shape of urbanization, China would cut its public spending requirement by 2.5 percent of its GDP, amounting to 1.5 trillion renminbi a year; reduce SO₂ and NOₓ emissions by upward of 35 percent; and halve its water pollution. In addition, savings from the private sector could produce benefits equivalent to 1.7 percent of GDP in 2025, mainly via reduced natural resource consumption (Exhibit 12).

Innovative city governments are already enacting many effective policies but there is a major opportunity to expand, replicate, and coordinate these, as well as to measure their performance. If cities were to implement urban productivity policies across the board in a market as large as urban China, they would open up unprecedented opportunities for innovation in areas such as energy conservation, water recycling, and clean technology. Central government could aim to act as an “enabler” and “distributor” of city best practices, encouraging pilots and, subject to local conditions, aggressively promoting other cities’ take-up of new solutions. By doing this, it could help ensure that cities widely adopt urban productivity measures rather than a few vanguard cities selectively applying them.
Urban productivity initiatives would reduce costs and increase quality of life

**Improvement in urbanization costs shown as a percentage of 2025 urban GDP**

<table>
<thead>
<tr>
<th>Category</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity in public services*</td>
<td>1.6</td>
</tr>
<tr>
<td>Resource management</td>
<td>0.8</td>
</tr>
<tr>
<td>Dense urban planning</td>
<td>0.1</td>
</tr>
<tr>
<td>Total public saving</td>
<td>2.5</td>
</tr>
<tr>
<td>Private sector (mainly resource saving)</td>
<td>1.7</td>
</tr>
<tr>
<td>Total potential saving</td>
<td>4.1**</td>
</tr>
</tbody>
</table>

* Productivity gains in service delivery (9 percent of costs) and lean government administration (20 percent of 2025 projection).
** Numbers do not add due to rounding.

Source: National Bureau of Statistics; Construction, Labor and Finance Yearbooks; McKinsey Global Institute analysis

In addition:
- Reduced concentration of pollutants
- Less loss of arable land
- Lower congestion in big cities
- Improved provision
- Expanded coverage of social benefits

We see four major planks of an urban productivity agenda:

1. **Plan for integrated, dense development**

   The freedom that China’s cities have had to acquire land—and subsequently sell it for development—has been one of the key ingredients of China’s urbanization story and distinguishes China from other countries such as India. There is no doubt that without this source of revenues China’s urbanization would not have been so rapid. The purchase and sale of land has allowed China’s cities to be proactive in funding and building infrastructure. Built-up land in China has increased by 150 percent over the past 15 years and sales of acquired land account for 10 percent to 50 percent of local governments’ revenues. We believe that the tool of land acquisition is one of the primary reasons why China has been able to urbanize without creating massive slums.\(^{12}\) Yet aggressive land acquisition has also caused horizontal development—urban sprawl—and the depletion of arable land.

   In the years ahead, China has the option of building denser, more productive cities. Denser cities tend to produce lower demand for energy—up to 20 percent lower in the case of energy for transport translating to up to four QBTUs in energy savings per year. They also tend to support an economy with a larger

\(^{12}\) Population control and land reform are two other important factors.
share of high-value activities due to the availability of more skilled labor. While national land policy will play a role in managing land-related pressures, there is a range of policies that cities themselves can adopt to contain urban sprawl, and by doing so improve the quality of life of urban residents, cut energy demand, and optimize the use of land.

In order to create this type of dense development, cities will need—possibly within the framework of a comprehensive strategic land-development plan—to focus on maximizing the effectiveness of their transportation infrastructure, on holistic congestion-fighting strategies, and on urban planning that uses land strategically—for instance by developing integrated, mixed-use areas; pursuing transit-oriented development; and increasing floor area ratios (FARs), which regulate building height. New York City, for instance, has long used FARs to guide strategic development, encouraging taller buildings and therefore density around key transportation nodes. In contrast, today many Chinese cities set FARs on an ad hoc, project-by-project basis. This creates inefficiencies such as the location of residential buildings on the outskirts of cities that are much bigger than those in the center and that do not enjoy optimal connections with the main city transportation systems. The result is increased traffic (with a consequent loss to overall productivity) and major difficulties in implementing mass-transit solutions.

2. Manage demand for, not just supply of, resources

Cities could manage demand for resources rather than simply focusing on building the supply infrastructure needed to keep pace with demand. For example, boosting energy productivity—the level of output we achieve from the energy we consume—is largely a “pain-free,” measurable, “low-hanging fruit” option. China’s cities would generate positive returns from future energy savings, freeing up resources for investment elsewhere.\textsuperscript{13} Urban China has the opportunity to abate energy demand growth by 30 QBTUs, including the potential to reduce oil demand by just over four million barrels of oil per day. In tandem, China would be able to cut urban water demand by close to 40 percent by 2025.

To reap the full benefits of higher energy productivity, standards and incentive programs backed up by rigorous monitoring and enforcement at the national level will be important. Nevertheless policy and implementation at the local

level will be crucial. Among the effective tools at cities’ disposal will be the use of incentives to encourage investment in energy-efficient industrial equipment such as regasification technology; standards-based regulations such as establishing energy efficiency in building codes and improved insulation; the deployment of the latest technologies; and “resource saving” pricing schemes. For instance, China’s cities could be bolder in their promotion of energy-efficient lighting—today compact fluorescent lighting (CFL), in the next few years probably light-emitting diodes (LED)—by mandating its use in all new construction.

Or cities could introduce staggered water-price tariffs (e.g., with exemptions at certain value levels for low-income consumers) with aggressive increases in order to cross the “price sensitivity” threshold. Tianjin, for instance, has already begun to move in this direction. Standards in, for instance, lower-volume showers and toilets, would further boost water savings. In addition, cities have a substantial opportunity to optimize the detection of leaks and then the processes used for repair—action that could cut leakage without the need for huge capital outlays as demonstrated recently by a major European water company. MGI estimates that reduction of leakages alone could save almost 20 billion tonnes of water a year. Through such policies to deliver the more efficient use of resources, cities would not only reduce costs but also open up new markets for businesses that can provide solutions.

Combating pollution will require further efforts in tightening standards and requiring technology upgrades. For instance, to control PM\textsubscript{10} emissions cities could mandate the use of methods such as the water-based suppression of dust on construction sites—as we are beginning to see in some parts of Shanghai. Cities could also increase vehicle emission standards and implement “clean” regulations on city fleets that could not only save energy but also provide greater benefits in terms of mitigating pollution. An example of this is Chengdu’s aggressive roll-out of a taxi and bus fleet that runs on compressed natural gas. Enforcement will again be crucial to increase wastewater treatment especially in smaller cities where the current level of compliance is relatively low.

3. Invest in labor and skills development

In addition to guaranteeing a sufficient supply of labor overall, all cities need to increase the quality of labor in order to maximize their economic output through a gradual shift toward value-added economic activities.

To develop the right talent, it will be necessary to target the overall quality of graduates. Farsighted city and provincial leaders are already doing much to raise the quality of graduates by, for instance, encouraging team work in the
class room or partnering with local companies in the provision of internships. These latter arrangements increase work skills and help businesses to secure an advantage in what promises to be an ever-escalating talent war developing in China over the next 20 years. But it will also be important to shift from the current system of measuring performance that emphasizes quantity of inputs (e.g., enrollment numbers) to one that measures attainment (e.g., the employment rate of graduates in those professions that a city may need the most) and therefore encourages improvements in overall quality.

Even more broadly, cities should complement such a shift with systems to measure and improve the labor productivity of their workers. Industrial organizations such as the Hong Kong Productivity Association or Singapore’s National Productivity Board (NPB) could provide one model for how to do this.14

Attracting and retaining talent after graduation is another story. Smaller urban centers are likely to face pronounced shortages of skilled labor, especially of graduates. Local leaders and businesses have a number of tools to mitigate the effects of this gap. MGI believes that “pull” strategies would work better than “push” strategies to rebalance the situation. Some cities already work with companies to offer special salary and benefits packages to attract the talent they need. City governments and local businesses could tailor these packages so that they offer clear career opportunities and social benefits to make them even more appealing to graduates. Taizhou has already been doing this, as has Chengdu, where Intel opened its manufacturing base while simultaneously funding the construction of a hospital in the area. The aim for all smaller urban centers should be to develop competitive packages offering a quality of life comparable or even superior to that offered in larger cities today.

4. Enhance public sector productivity

Enhancing the productivity of China’s public sector is another short-term opportunity for China to have a significant impact. Cities around the world have demonstrated they can improve the effectiveness and efficiency of government through greater clarity around goals, accountabilities, and measurement processes. In some Chinese cities (for example, Wuhan), local mayors are already piloting more aggressive and transparent performance-management systems.

14 The NPB was established in 1972 to improve productivity in all sectors of the Singapore economy. Increasing individual and company productivity at all levels was a priority especially as the economy had already gained steady full employment and greater worker productivity was viewed as a means to extract even greater value added. The NPB used a total productivity approach that emphasized measurement, product quality, a flexible wage system indexed to productivity and used mass media and widespread education to communicate to Singaporeans that productivity needed to be a pillar of the society.
Making service provision and general administration more productive is one vital and easily measurable opportunity that could generate savings worth up to 1.6 percent of GDP and therefore ease future strains on public funding (for example, by closing the remaining deficit after transfers among those cities “left behind” in a supercities scenario). On health care, cities could, for instance, push the utilization of primary care (basic facilities are today at a 50 percent utilization rate) possibly using differentiated co-payment on the basis of patient incomes; redesign the overall incentive system in hospitals by focusing on reducing some key metrics such as the length of stay, which is substantially above international benchmarks (11 days compared with 6 in Europe); and undertake public education and free periodic screening programs to increase the effectiveness of health care spending.

There is also margin for improving the efficiency of capital expenditures. Most often, current inefficiencies arise from overoptimistic price or demand projections, improper design, e.g., in selecting origin and destination points for transit infrastructure, or a failure to consider competition in provision of services. For example, 70 percent of water companies in Western China are reported to be losing money, some due to operating inefficiencies, others from expectations of price rises that have proved to be politically infeasible, and many from underutilized water plants.

Finally, there are also practical steps that smaller cities can take to attract the capital they need to build their urban infrastructure. For instance, by securing participation from experienced Chinese and foreign infrastructure investors and operators (e.g., mass-transit or toll-road operators), they can “buy in” planning and development skills, the lack of which cities currently consider a major barrier. However, doing so could require granting greater protection and flexibility to such investors than cities have so far been willing to do—for example, in determining ticket fares on mass-transit systems. To make equity and debt investments viable, cities will also need to institute greater transparency to allow investors to evaluate the risks and returns of such capital outlays, as well as the fiscal stability of the cities themselves.

CONCLUSIONS

MGI believes that China will see challenges arising out of the sheer scale of its urbanization over the next 20 years. However, China has already demonstrated considerable understanding of these challenges and skill in its management of rapid urbanization. The next test is for China to shift its urbanization strategy.
from one of dispersed growth aiming above all to maximize GDP to one that
gives priority to enhancing the overall productivity of urban areas through the
more efficient use of their financial, human, and natural resources. By doing so,
China can mitigate the financial, environmental, and social costs of urbanization
while still realizing its full economic potential.

The overall opportunity is significant. By 2025 there is the potential to generate
20 percent higher per capita GDP, reduce public spending by the equivalent
of 2.5 percent of urban GDP, and reduce the private sector resource bill by an
additional net amount equivalent to 1.7 percent of GDP. To take advantage of
this opportunity, in which productivity becomes central, policy actions at both
national and local level are necessary.

At the national level, China should tailor policies that would shift urbanization
towards a concentrated growth pattern. MGI finds that pursuing this option
would not be costless but that its benefits would be large.

At the local level, China could mandate the adoption of an array of urban
productivity policy initiatives that will both maximize the outcomes of urbanization
and mitigate its costs and pressures. Those cities that are already successfully
executing an urban productivity agenda can be at the forefront of China’s growth.
If they are successful in putting in place a long-term sustainable model for others
to replicate, China can ensure its stature as a rapidly growing and developing
economic power that is following a sustainable path toward long-term prosperity.

This change of emphasis is urgent because continuing urbanization will
increasingly pressure those least able to sustain themselves—i.e. smaller
cities, migrant workers. A change of gears is also crucial as decisions taken now
will set the course for the next two decades and beyond. Getting the process right
now will be far less costly than attempting to fix problems further down the road.

The scale of China’s urbanization and the role that mega and midsized cities
will play will create enormous new opportunities for companies in China and
around the globe. Business has an opportunity to play a significant and growing
role in the dynamic development of this huge new urban market. Businesses
looking to invest in China and serve its urban market need to look carefully at
the policies cities are implementing. The effectiveness—or lack of it—of these
policies should be a key component of strategic planning for entry, including
decisions about where to locate and which geographies to target. The deeper
the understanding companies develop about this dynamic process, the more
effective will be their strategic choices in China.