

MCKINSEY GLOBAL INSTITUTE

URBAN WORLD: MEETING THE DEMOGRAPHIC CHALLENGE

OCTOBER 2016



MCKINSEY
GLOBAL
INSTITUTE

CELEBRATING
25 YEARS OF
INSIGHT

25

MCKINSEY GLOBAL INSTITUTE

In the 25 years since its founding, the McKinsey Global Institute (MGI) has sought to develop a deeper understanding of the evolving global economy. As the business and economics research arm of McKinsey & Company, MGI aims to provide leaders in the commercial, public, and social sectors with the facts and insights on which to base management and policy decisions. The Lauder Institute at the University of Pennsylvania ranked MGI the world's number-one private-sector think tank in its 2015 Global Think Tank Index.

MGI research combines the disciplines of economics and management, employing the analytical tools of economics with the insights of business leaders. Our “micro-to-macro” methodology examines microeconomic industry trends to better understand the broad macroeconomic forces affecting business strategy and public policy. MGI's in-depth reports have covered more than 20 countries and 30 industries. Current research focuses on six themes: productivity and growth, natural resources, labor markets, the evolution of global financial markets, the economic impact of technology and innovation, and urbanization.

Recent reports have assessed prospects for the Chinese economy, income inequality in advanced economies, the outlook for Africa, and the potential of digital finance in emerging economies. MGI is led by four McKinsey & Company senior partners: Jacques Bughin, James Manyika, Jonathan Woetzel, and Eric Labaye, MGI's chairman. Michael Chui, Susan Lund, Anu Madgavkar, and Jaana Remes serve as MGI partners. Project teams are led by the MGI partners and a group of senior fellows, and include consultants from McKinsey offices around the world.

These teams draw on McKinsey's global network of partners and industry and management experts. Input is provided by the MGI Council, which co-leads projects and provides guidance; members are Andres Cadena, Richard Dobbs, Katy George, Rajat Gupta, Eric Hazan, Acha Leke, Scott Nyquist, Gary Pinkus, Shirish Sankhe, Oliver Tonby, and Eckart Windhagen. In addition, leading economists, including Nobel laureates, act as research advisers.

The partners of McKinsey fund MGI's research; it is not commissioned by any business, government, or other institution. For further information about MGI and to download reports, please visit www.mckinsey.com/mgi.

URBAN WORLD: MEETING THE DEMOGRAPHIC CHALLENGE

OCTOBER 2016



Jonathan Woetzel | Shanghai
Jaana Remes | San Francisco
Jonathan Law | New York
John Means | Washington, DC
Kevin Coles | Toronto
Mekala Krishnan | Stamford

PREFACE

Demographic change is one of the powerful forces transforming the world economy. As global population growth slows and urbanization plateaus in many regions, the outlook for cities and their growth changes profoundly. This paper explores the challenges facing the urban world and strategies that cities might deploy to survive and thrive in a more challenging backdrop. It builds on MGI's report in spring 2016 *Urban world: The global consumers to watch*, the fourth in our *Urban world* series, which analyzed how slowing population growth is likely to shape global consumption over the next 15 years. Readers can explore our comprehensive data on population growth trends in Japan, the United States, and Western Europe on Tableau Public.

The data can be accessed here:

<https://public.tableau.com/profile/mckinsey.analytics#!/>

Click on "Urban World: Demographic trends."

The research in this paper was led by Jaana Remes, an MGI partner based in San Francisco, with guidance from Jonathan Woetzel, an MGI and McKinsey senior partner based in Shanghai. Jonathan Law, a McKinsey partner based in New York, and John Means, a McKinsey partner based in Washington, DC, advised on the work. Kevin Coles (alum), a consultant in Toronto; Mekala Krishnan, an MGI fellow based in Stamford; and Kanaka Pattabiraman (alum), a consultant based in Silicon Valley, led the project team, which comprised Tarun Agarwal, Eduardo Doryan, Vasudha Gupta, Rachit Parekh, Jodi Pearlstein, Melissa Renteria (alum), Maia Eliscovich Sigal, and Sophie Turnbull.

For their valuable guidance, we would like to thank MGI's academic advisor Jed Kolko, chief economist at indeed.com; and Alan Berube and Joseph Parilla, senior fellow and deputy director, and fellow, respectively, of the Metropolitan Policy Program at the Brookings Institution.

MGI's operations team has supported this research. We would like to thank MGI knowledge operations specialist Tim Beacom; senior editor Janet Bush; Matt Cooke in external communications and media relations; Julie Philpot, editorial production manager; Marisa Carder, Richard Johnson, Mary Reddy, Margo Shimasaki, and Patrick White, graphics and data visualization specialists; and Chelsea Grewe and Deadra Henderson in MGI practice management.

This paper contributes to MGI's mission to help business and policy leaders understand the forces transforming the global economy, identify strategic locations, and prepare for the next wave of growth. As with all MGI research, this work is independent and has not been commissioned or sponsored in any way by any business, government, or other institution. We welcome your comments on the research at MGI@mckinsey.com.

Jacques Bughin

Senior partner, McKinsey Global Institute
Brussels

James Manyika

Senior partner, McKinsey Global Institute
San Francisco

Jonathan Woetzel

Senior partner, McKinsey Global Institute
Shanghai

October 2016

INSIDE

In brief

Page iv

Urban world: Meeting the demographic challenge

Page 1

Bibliography

Page 32

IN BRIEF

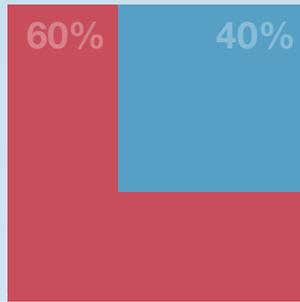
URBAN WORLD: MEETING THE DEMOGRAPHIC CHALLENGE

Cities, which have powered the world economy for decades, are now facing a significant demographic challenge to their growth. How they respond to the pressures will be critical for the health of the global economy in the years ahead. Our findings include:

- Population growth has been the crucial driver of cities' growth. In a sample of 943 global cities with more than 500,000 inhabitants in their metropolitan regions, 58 percent of GDP growth between 2000 and 2012 came from expanding population. Rising per capita income, which also includes the scale benefits to local economies from growing population, contributed the other 42 percent.
- Now cities are exposed to a double demographic shift—markedly so in developed, and increasingly so in developing, regions. First, global population growth is slowing due to declining fertility rates and an aging world. Second, the pace of rural-to-urban migration is waning in many regions.
- As a result, population declined in 6 percent of the world's largest cities—most of them in developed economies—between 2000 and 2015. From 2015 to 2025, we expect population to decline in 17 percent of large cities in developed regions and in 8 percent of all the world's large cities.
- The impact of the double demographic shift on cities promises to be uneven. Cities' growth prospects will reflect very different demographic footprints and dynamics shaped by their local birthrates and death rates, net domestic migration, and net international migration. MGI compared three developed regions to understand the implications.
 - In Japan, the nation furthest along in the demographic shift, some urban hubs continue to grow while most surrounding cities are aging and experiencing slow or negative population growth. The populations of Nagoya and Tokyo are still growing, largely reflecting domestic inward migration; the city of Sapporo, however, has relatively slow population growth because of negative homegrown growth and relatively low inward domestic migration.
 - The United States benefits from a higher fertility rate and migration, compared with Japan and Western Europe. It, too, has significant differentiation among cities that vary in their demographic footprints and dynamics. Raleigh, North Carolina, and Houston, Texas, are experiencing high population growth driven by all three factors. In contrast, Pittsburgh, Pennsylvania, and Cleveland, Ohio, are experiencing flat or negative growth with negative domestic migration.
 - Western Europe is aging unevenly and is likely to experience more differentiation in the future. The capital cities of Berlin, London, Oslo, Paris, and Stockholm are all experiencing growing populations. However, there are also many cities that are already experiencing population decline or low population growth. They include cities in Germany (for example, Chemnitz, Gera, and Saarbrücken) and Italy (Genoa and Venice).
- To sustain economic prosperity in the face of changing demographics, most cities need to sharpen their focus on citizens and raise productivity to boost incomes and be able to meet rising expectations with existing resources. Many more cities are likely to design strategies to appeal to particular demographic groups as they compete with other urban areas to retain and attract citizens. Cities will need to demonstrate flexibility in adapting to the demographic challenges that lie ahead, and focus on maintaining their dynamism and vibrancy to attract talented workers and successful businesses.

Urban world: The demographic challenge

60% of the GDP growth of large cities was fueled by population growth...



...the remaining 40% has come from per capita income growth

But now urban population growth is slowing due to a double hit: aging and falling fertility, and plateauing urbanization

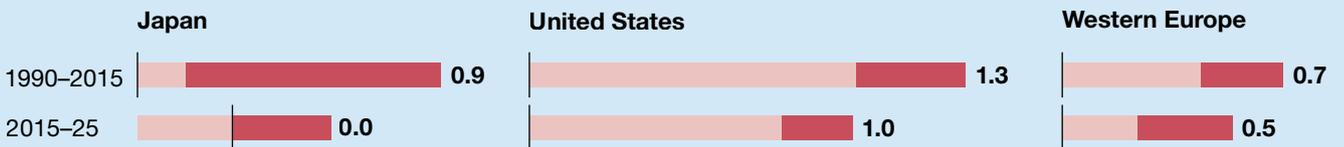
6% of the world's large cities have already experienced a decline in their populations since 2000

17% of large cities in developed regions are likely to experience population decline by 2025

61% of large cities in developed regions will have fewer young adults than today

Compound annual urban population growth rate, %

Total population growth rate (light red) Impact of urbanization (dark red)

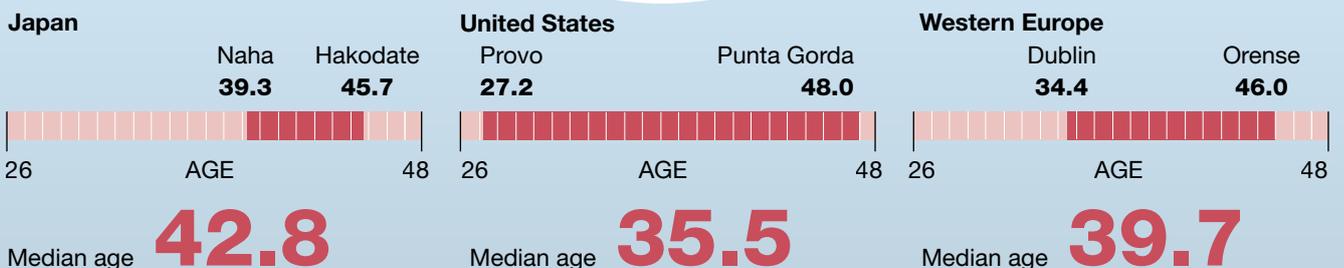


Different demographic profiles mean the impact will be uneven...



...among regions, and in cities within regions

Age range of all cities, by region, by average age



Cities need to sharpen their focus on citizens and raise productivity to compete with other urban areas, and thrive as engines of prosperity



URBAN WORLD: MEETING THE DEMOGRAPHIC CHALLENGE

The urban world is at a pivotal point in its evolution. Cities have powered the world economy for centuries. However, the world's cities are facing more challenging demographics, and the days of "easy" growth are over. In the past, city economies expanded largely because their populations were increasing due to high birthrates and mass migration from rural areas. Both of those sources of urban population growth are now diminishing in their power. Global population growth is slowing because of declining fertility rates and aging. At the same time, rural-to-urban migration is running its course and plateauing in many regions.

As a result, 6 percent of the world's large cities, with the largest share in developed economies, have experienced a decline in their population since 2000.¹ In the period to 2035, the urban population growth rate is expected to decline across all regions (Exhibit 1).² In the developed world, the urban population in the United States and Canada grew at a compound annual rate of 2.2 percent between 1950 and 1970, but dropped to only 1 percent from 2010 to 2015. That rate is expected to persist until 2025, and then decline even further to 0.8 percent from 2025 to 2035. In Northeast Asia—which includes aging Japan and South Korea—the figures are 3.1 percent from 1950 to 1970 and 0.2 percent from 2025 to 2035.

The demographic shift is more advanced in developed regions, but is also affecting emerging regions. For instance, in the Middle East and North Africa, the urban population grew at a compound annual rate of nearly 5 percent from 1950 to 1970 but is expected to increase by only 1.5 percent a year from 2025 to 2035. The contrast between the two periods is expected to be even more dramatic in Eastern Europe and Central Asia, with urban population growth plunging from 3.2 percent from 1950 to 1970 to only 0.3 percent from 2025 to 2035.

Between 2015 and 2025, populations could decline in 17 percent of large cities in developed regions (Exhibit 2).³ Developing countries will start to undergo similar trends, with population expected to decline in 4 percent of large cities in these regions. Across the world, population will decline in 8 percent of large cities. In 61 percent of large cities in developed regions, there will be fewer young adults (15- to 29-year-olds) in absolute terms than there are today. In developing regions, 47 percent of large cities will be in this position.

¹ Based on analysis of the UN Population Division's *World urbanization prospects: The 2014 revision*, for urban population growth in urban agglomerations with 300,000 or more inhabitants in 2014.

² We rely on the UN Population Division's *World urbanization prospects: The 2014 revision* for urban population growth data. The UN's urban area definition is broad and includes small cities and dense villages. For country-level population numbers, the UN counts all residents regardless of legal status or citizenship except for refugees who are not permanently settled in the country of asylum. In 2014, the UN High Commissioner for Refugees estimated that 1.8 million refugees and asylum seekers were in Western Europe. Of these, about 200,000 were from Syria. For future population growth, UN projections include base-case assumptions on the level of migration. Take the case of Germany. According to the UN Population Division's *World population prospects: The 2015 revision*, its population is forecast to decline by 1.4 million by 2030; without net immigration, the country's population would decline by four million. To assess the sensitivity of this projection, we assumed that the exceptionally high immigration levels of the past five years would continue for the next 15 years. In this scenario, Germany's population would remain virtually flat, rising by only 100,000 people by 2030. Uncertainty about future migrant flows is significant.

³ Based on the McKinsey Global Institute's Cityscope database. This database defines cities as broader metropolitan areas that include both a core city and surrounding metropolitan regions integrated into a connected urban region. Large cities include metropolitan areas with 150,000 or more inhabitants in developed regions, and 200,000 or more inhabitants in developing regions.

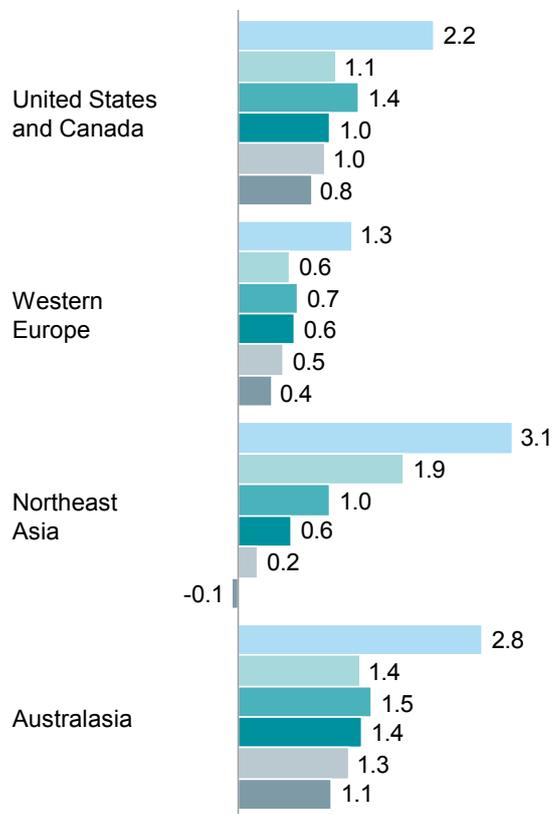
Exhibit 1

Urban population growth is set to slow in developed and developing regions to 2035

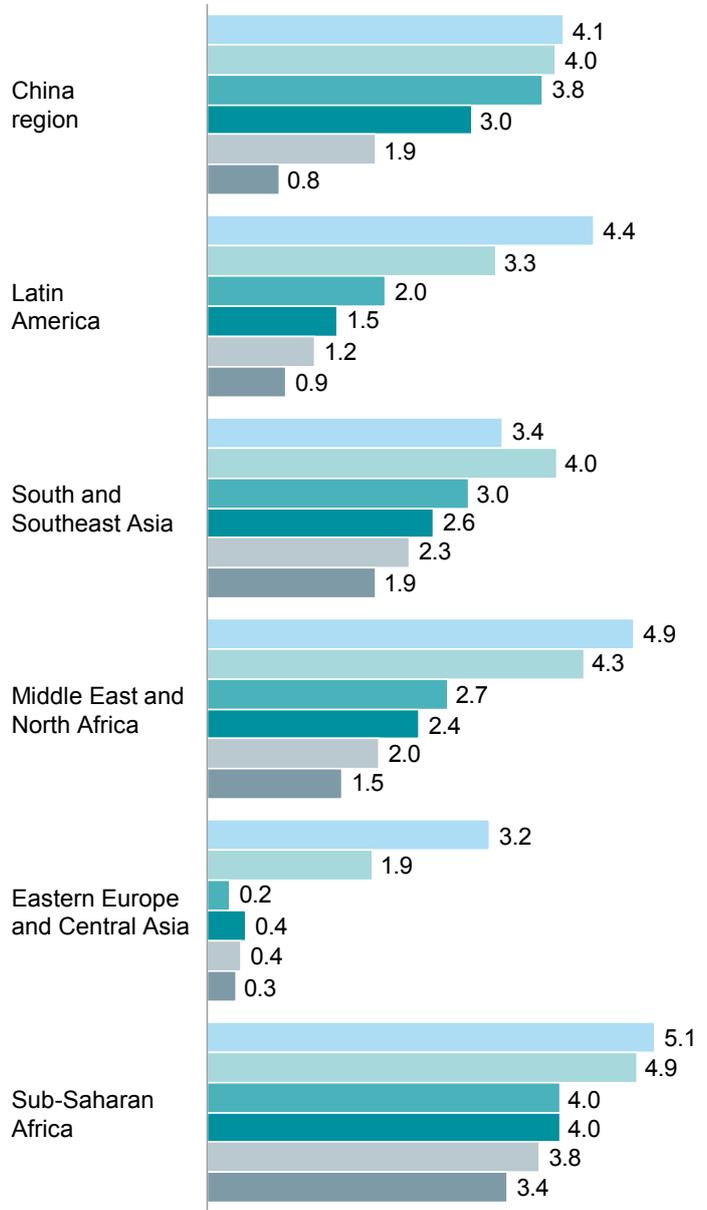
Urban population growth
Compound annual growth rate, %

- 1950–70
- 1970–90
- 1990–2010
- 2010–15
- 2015–25
- 2025–35

Cities in developed regions



Cities in developing regions



SOURCE: World urbanization prospects: The 2014 revision, UN Population Division, July 2014; McKinsey Global Institute analysis

Exhibit 2

Population will decline in 17 percent of large cities in developed regions from 2015 to 2025

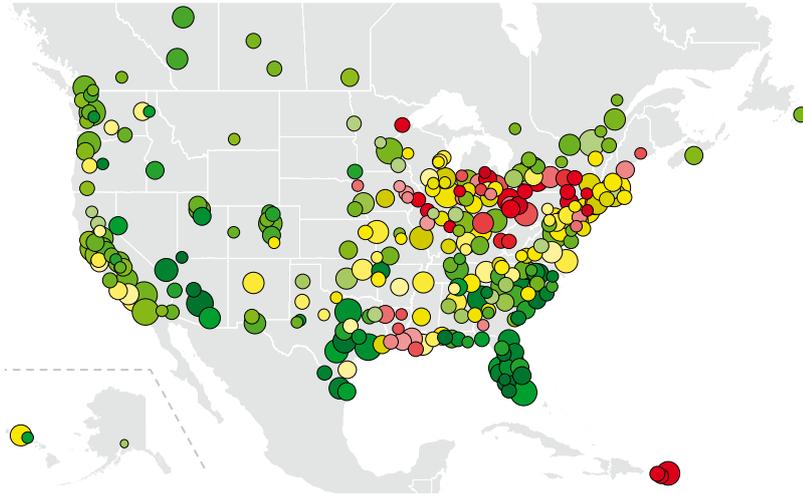
Population, 2015 (thousand)

- ≤200 ● 200–400 ● 400–800
- 800–1,600 ● 1,600–3,200 ● >3,200

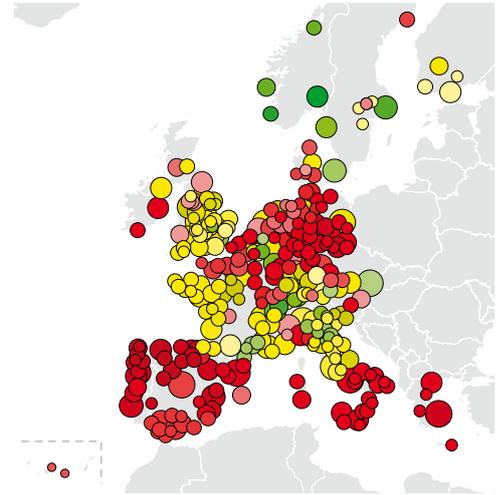
Compound annual growth rate, 2015–25 (%)



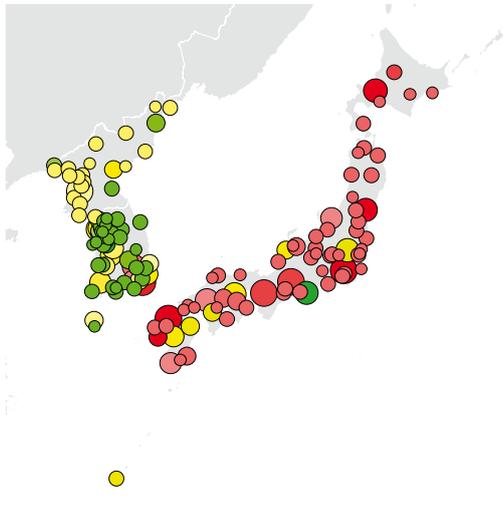
United States and Canada region



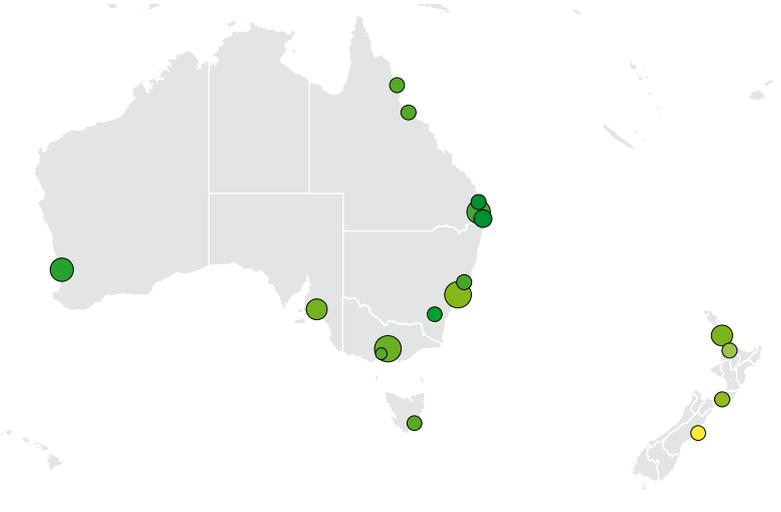
Western Europe region



Northeast Asia region



Australasia region



NOTE: Maps not to scale. The city-level projections rely on demographic and economic data from MGI's Cityscope database, which covers almost 3,000 metropolitan areas in the world that have at least 150,000 inhabitants in developed regions, and at least 200,000 inhabitants in emerging ones. The methodology used is the same as in previous urban world reports, and is described in detail in the technical appendix of *Urban world: Cities and the rise of the consuming class*, McKinsey Global Institute, June 2012.

SOURCE: McKinsey Global Institute Cityscope database; McKinsey Global Institute analysis

This is a challenge to the economic prospects of cities that marks a distinct break from recent history. The past 50 years were truly unusual in demographic terms as large cohorts of working-age populations fueled the growth of cities and nations. In the new demographic era, we are likely to see a much more fragmented urban landscape with pockets of robust expansion but also areas of stagnant and declining populations.⁴ For most cities, economic prosperity will increasingly depend on rising productivity and incomes among their citizens. The economic success of cities cannot be measured simply in terms of their overall GDP growth—cities that are able to increase the per capita income and quality of life of their citizens can thrive even when population growth slows or declines. For many cities, this will mean shifting the focus from expansive growth to the well-being of their citizens. In an era of pressure on urban populations, this is the vital ingredient as cities increasingly compete with each other to retain and attract citizens.

The impact of the double demographic shift—slowing population growth and plateauing urbanization rates—is not homogenous. Cities have very different demographic profiles and dynamics shaped by their local birthrates and death rates, net domestic migration, and net international migration.

Although the double whammy is hitting every region in the world—developed and emerging—the impact is most pronounced in developed regions, and these are the focus of the city-specific analysis in this paper. The demographic profiles of cities are diverging, inequality is rising, and there is no single solution to the challenges that urban areas now face. Cities will need to tailor their response to new realities. They will increasingly need to compete with each other to attract the people who will help to fuel future prosperity. And they will need to ensure that they are as productive as possible to compensate for the waning benefits of growing populations.

How they adjust to the new reality is important not only for individual cities but also for nations that will continue to rely on thriving cities for rising prosperity.⁵ In this paper, we look at changing demographics and their impact on the urban world, and how different strategies can be deployed depending on a city's demographic profile.

URBAN POPULATION GROWTH HAS BEEN THE PRIMARY GROWTH ENGINE FOR CITIES AND THE GLOBAL ECONOMY

Cities are crucial for the growth and prosperity of the world. Large cities generate about 75 percent of global GDP today and will generate 86 percent of worldwide GDP growth between 2015 and 2030. The economic importance of cities is evident in virtually every region of the world. Consider four of the world's megacities (with population of ten million or more apiece)—New York and Los Angeles alone contribute 13 percent of US GDP, and London and Paris contribute 9 percent of Western Europe's. Even more important to global growth than the world's megacities is a group of dynamic "middleweights"—cities with population of 150,000 to ten million. According to MGI's latest Cityscope data, just 569 of the most dynamic middleweight cities are set to contribute nearly half of global GDP growth to 2025.⁶

⁴ The increasing fragmentation is not unique to cities: global consumer markets are also increasingly characterized by more heterogeneous consumers. For more, see *Urban world: The global consumers to watch*, McKinsey Global Institute, April 2016.

⁵ The United Nations called on the Habitat III conference on urban development in Quito, Ecuador, on October 17–20, 2016, to reinvigorate global political commitment to sustainable development in a "new urban agenda."

⁶ MGI's free Urban World app allows you to explore the shifting global urban landscape as aging and urbanization shape city economies. Download the Urban World app and build your own understanding of how the urban world is changing by exploring data on GDP and demographics from more than 3,000 cities worldwide, and tracking the world's shifting economic center of gravity from 1CE to 2025. The app can be downloaded from iTunes, Google Play or the Amazon Appstore.

The economic power of cities comes from their ability to attract large numbers of people, which, in turn, gives them formidable scale benefits.⁷ People have been moving en masse for centuries from relatively low-productivity jobs in rural areas to higher-productivity work in cities—typically earning two to three times what they did in the countryside. Cities have better quality education and training systems than rural areas, and thus disproportionate numbers of skilled workers. This attracts and develops businesses that also enjoy the advantage of a large base of customers. As businesses cluster in cities, jobs are created and incomes rise. The cost of services also declines in densely populated cities. McKinsey research has found that it can be up to 50 percent less costly for large cities to deliver basic services such as water or housing.⁸

Population growth not only contributes a majority of global urban GDP growth, but also boosts per capita income (which is the second driver of growth). In a sample of 943 cities with more than 500,000 inhabitants in 145 countries, 58 percent of the GDP growth of these large cities between 2000 and 2012 was due to the cities' expanding populations. The rest—42 percent—came from rising per capita incomes (Exhibit 3). Research has also shown that doubling a city's population is correlated with increases in per capita economic indicators—wages, personal income, and GDP—of approximately 15 percent.⁹ Indicators of innovation, such as research and development establishments and jobs, and patents, exhibit even stronger returns to scale.¹⁰

Population is also the key factor explaining why some cities experience more rapid economic growth than others—even within the same country. For example, previous MGI analysis found that US cities that achieved GDP growth rates of 25 percent or more above the US average did not, on average, experience higher growth in per capita GDP than cities that underperformed US GDP growth by at least 25 percent. Both groups of cities had identical annual per capita GDP growth of 1.6 percent. Rather, the differentiating factor between these two groups of cities was population growth. For rapidly growing cities, population growth of 2.5 percent a year was significantly higher than the 0.3 percent observed in low-growth cities.¹¹

⁷ There is a large body of literature on urban economics focused on assessing the nature and size of urban economies of scale. See, for example, Edward L. Glaeser and Joshua D. Gottlieb, *The wealth of cities: Agglomeration economies and spatial equilibrium in the United States*, NBER working paper number 14806, March 2009; *World development report 2009: Reshaping economic geography*, World Bank, November 2008; and Indermit S. Gill and Chor-Ching Goh, "Scale economies and cities," *World Bank Research Observer*, volume 25, number 2, August 2010.

⁸ Because cities have so many customers in a relatively confined geographic area, supplying such services is cheaper. For instance, delivering a liter of water to a city can cost only about half as much as delivering the same liter to a small village because, in cities, suppliers can use common depots. Some types of infrastructure are economically viable only when they serve large cities. International airports are an example. According to McKinsey estimates, in a city of five million people, about \$5 million of investment per daily flight is sufficient; in a city of one million, the necessary investment rises to nearly \$13 million. And, of course, having an international airport reinforces a city's attractiveness for both people and businesses. See *Urban world: Cities and the rise of the consuming class*, McKinsey Global Institute, June 2012.

⁹ Luís M. A. Bettencourt et al., *Urban scaling and its deviations: Revealing the structure of wealth, innovation, and crime across cities*, PLoS ONE, volume 5, issue 11, November 2010.

¹⁰ Luís M. A. Bettencourt et al., "Growth, innovation, scaling, and the pace of life in cities," *Proceedings of the National Academy of Sciences, United States*, volume 104, number 17, April 2007.

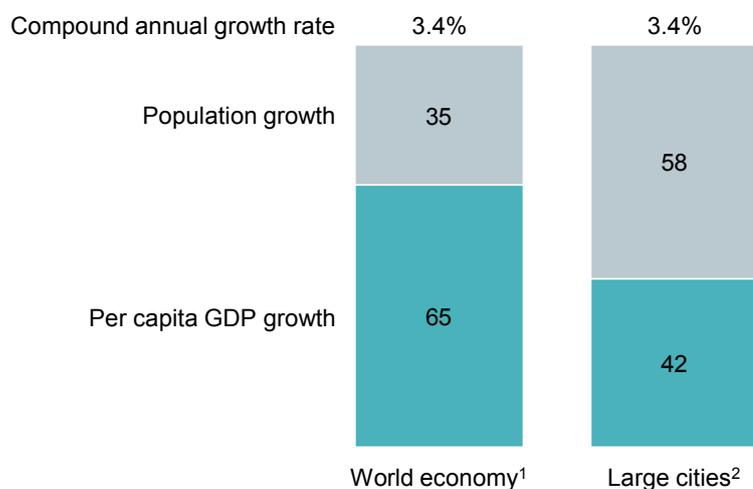
¹¹ *Urban America: US cities in the global economy*, McKinsey Global Institute, April 2012. Our analysis also reveals similar trends for other regions. For example, we conducted a similar segmentation of high- and low-growth cities in Western Europe and Northeast Asia, based on a sample of cities with more than 500,000 inhabitants. We found that differences in population growth among cities accounted for 70 percent or more of the difference in GDP growth between high- and low-growth cities.

Exhibit 3

Population growth has contributed more than half of GDP growth in large cities

Contribution to GDP growth, 2000–12

%



1 Includes 210 countries.

2 Includes 943 cities with more than 500,000 inhabitants in 2012 in 145 countries.

SOURCE: Canback global income distribution database (C-GIDD); McKinsey Global Institute analysis

URBAN POPULATION GROWTH IS SLOWING DUE TO A DOUBLE WHAMMY OF DECLINING BIRTHRATES AND SLOWING MIGRATION FROM RURAL AREAS

The importance of population growth in driving urban economies now leaves cities exposed to a double demographic shift. The first is slowing global population growth due to declining fertility rates and an aging world. The second is the waning pace of rural-to-urban migration in many regions that are now in the latter stages, or even at the end, of their urbanization journeys (Exhibit 4).

This double whammy is already hitting developed regions, and it will affect cities in the developing world in the years to come (Exhibit 5). As a result, urban population growth is slowing across the world, and this trend is expected to continue.¹² Together, these shifts have a profound impact on the first two of three drivers of urban population growth: homegrown population growth, net domestic migration, and international migration or net immigration (see Box 1, “What makes cities grow?”).¹³

¹² When we refer to total population growth, this is at the country or regional level, and includes the impact of births and deaths of inhabitants in a country or region, as well as net immigration. Urban population growth refers to urban areas. The impact of urbanization is the difference between the two.

¹³ Net domestic migration is the number of people moving into the city from the rest of the nation minus people moving out of the city to other parts of the same country. The domestic migrants can come from either source: rural areas or other cities within the same country.

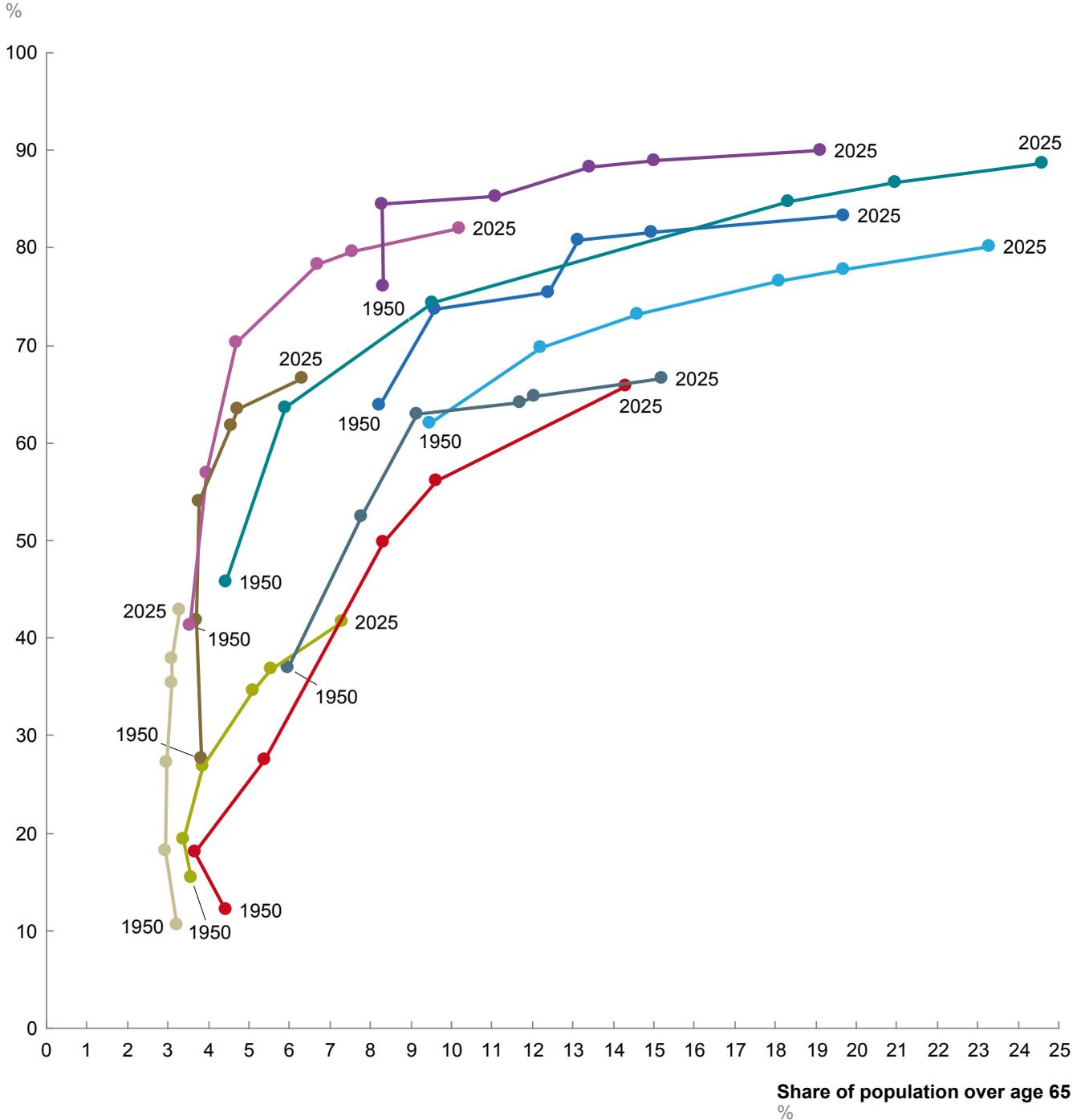
Exhibit 4

Population growth in cities is poised to decline as populations age and the transition from rural to urban areas runs its course

Data points are 1950, 1970, 1990, 2010, 2015, and 2025¹

- South and Southeast Asia
- China region
- Middle East and North Africa
- Western Europe
- United States and Canada
- Northeast Asia
- Australasia
- Sub-Saharan Africa
- Eastern Europe and Central Asia
- Latin America

Urbanization



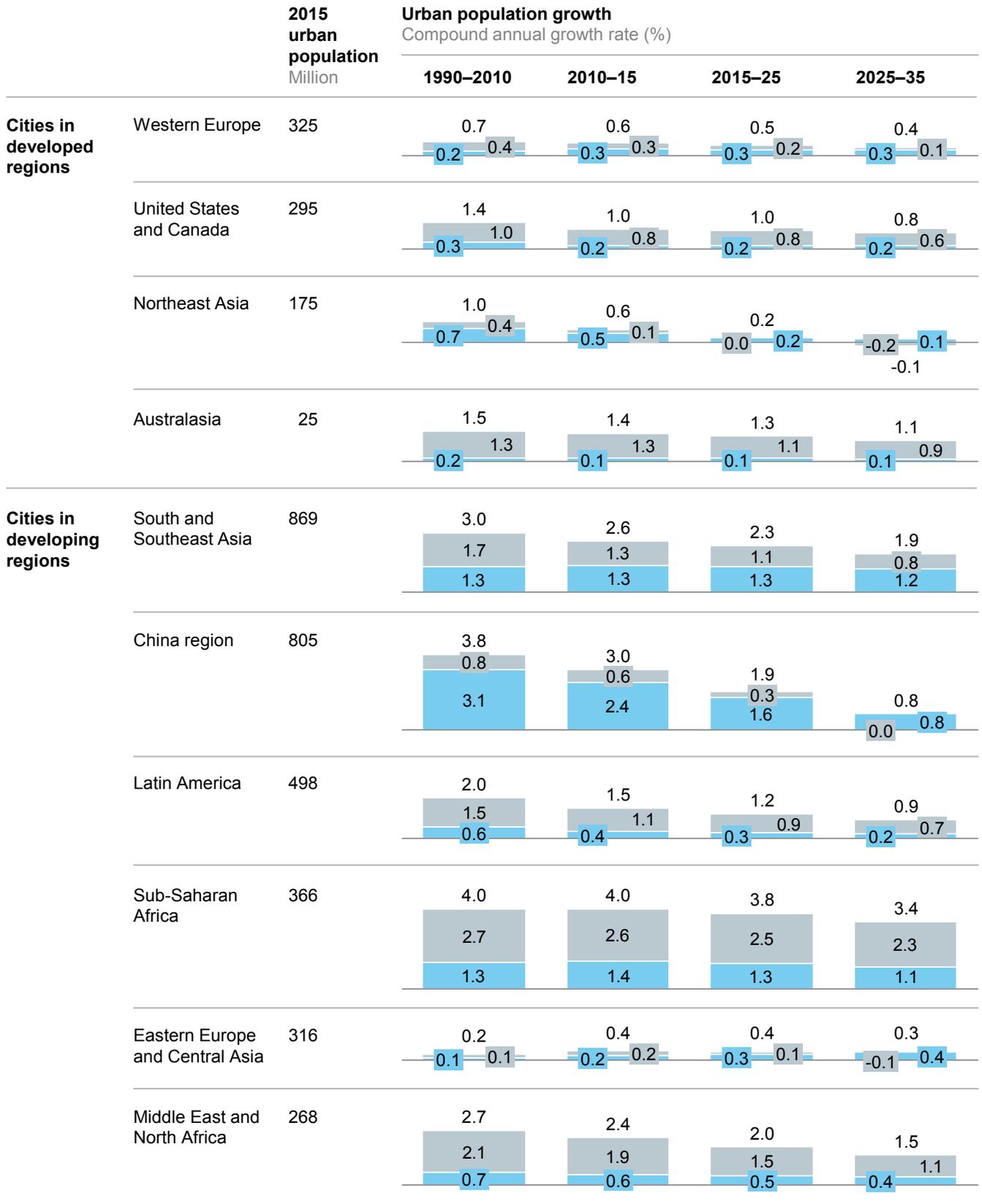
1 Data include 180 countries.

SOURCE: *World urbanization prospects: The 2014 revision*, UN Population Division, Population series, Urban and total population data, July 2014; *World population prospects: The 2015 revision*, UN Population Division, Department of Economic and Social Affairs (zero migration scenario), July 2015; McKinsey Global Institute analysis

Exhibit 5

Waning migration to cities and weaker total population growth rates are slowing urban population growth

■ Total population growth rate ■ Impact of urbanization



NOTE: Numbers may not sum due to rounding.

SOURCE: *World urbanization prospects: The 2014 revision*, UN Population Division, July 2014; McKinsey Global Institute analysis

Looking at the first shift, overall population growth has been slowing across most regions of the world. Over the 50 years to 2014, the global population grew at an annual rate of 1.4 percent, more than doubling the number of people in the world from 3.4 billion to 7.2 billion. Fertility rates were high, infant mortality rates were falling, and life expectancy was increasing as hygiene improved and the provision of health care expanded.

But over the next 50 years, the rate of growth is expected to slow to only 0.4 percent.¹⁴ This reflects the fact that fertility rates are now low or declining in all regions. The birthrate in many countries is falling below the “replacement” threshold of 2.1 children for each woman that is necessary to keep the population stable. Current projections suggest that, worldwide, one million fewer babies will be born in the decade from 2015 to 2025 than in the previous ten years. Declining fertility can rein back GDP growth by decelerating the expansion of the pool of available labor, or even shrinking it. At the same time, many urban populations are aging. Other cities with a relatively younger population and a higher share of women in their prime childbearing years are likely to experience higher birthrates and age more slowly than cities whose populations are already older.

The second shift is the fact that urbanization is plateauing in regions that are now largely urban, and that this leaves less room for further rural-urban migration to fuel the growth of cities’ populations—in developed economies further along in their urbanization journey today as well as in emerging economies as their urban-rural shifts mature in future years.

Worldwide, the share of people living in urban areas steadily increased by 0.9 percent a year between 1960 and 2014. Today, 54 percent of the world’s population lives in cities and towns of all sizes, up from 34 percent in 1960.

Europe—with Britain in the vanguard—and the United States made their shift from rural to urban living in the 18th and 19th centuries, respectively. Today, around 80 to 85 percent of the population in these regions is urban.¹⁵ Latin America experienced very large-scale urban growth in the second half of the 20th century. Urbanization in Latin America is relatively mature, though wide variation exists across countries. Brazil and Argentina have urbanization rates of about 85 percent, while urbanization rates in Bolivia, Nicaragua, and Paraguay are 60 to 70 percent.¹⁶

In other developing economies, urbanization still has some way to go before it plateaus: here, the rural-to-urban migration engine has not yet run out of steam. China is roughly in the middle of its shift.¹⁷ In the first decade of the 21st century, the share of the population that lives in cities increased from 36 to 49 percent, and, on current trends, the urban population could expand from around 560 million in 2005 to about 950 million in just 20 years—that increase is larger than the entire population of the United States today. India is urbanizing rapidly but is still in a relatively early stage in its transition to an urban economy. Only 33 percent of Indians live in cities of all sizes, and only about one in five live in the nation’s 230 or so large cities.¹⁸

¹⁴ These figures are for a 20-country sample—the 19 national members of the G20 plus Nigeria. For more detail, see *Global growth: Can productivity save the day in an aging world?* McKinsey Global Institute, January 2015.

¹⁵ Despite similar overall urbanization rates, there are large differences in the size distribution of cities in the United States and Western Europe. A higher share of people live in large cities in the United States, while Western Europe has a higher number of smaller urban areas. For more details on these differences, see *Urban America: US cities in the global economy*, McKinsey Global Institute, April 2012.

¹⁶ For more detail on urban Latin America, see *Building globally competitive cities: The key to Latin American growth*, McKinsey Global Institute, August 2011.

¹⁷ *Preparing for China’s urban billion*, McKinsey Global Institute, March 2009.

¹⁸ For more on the differences in urbanization patterns by region, see Andrés Cadena, Richard Dobbs, and Jaana Remes, “The growing economic power of cities,” *Journal of International Affairs*, volume 65, number 2, spring/summer 2012, and *India’s urban awakening: Building inclusive cities, sustaining economic growth*, McKinsey Global Institute, April 2010.

Africa is the world's fastest urbanizing region. Over the next decade, an additional 187 million Africans will live in cities. This is equivalent to adding ten cities the size of Cairo, Africa's largest metropolitan area, or half the current population of the United States to the continent's urban population. Between 2015 and 2045, an average of 24 million people are projected to move to African cities each year, compared with 11 million in India and nine million in China. Africa's urban per capita GDP was \$8,200 in 2015, compared with \$3,300 in rural areas.¹⁹ Many countries in the Middle East are relatively far along in their urbanization journey. For example, urbanization rates in Algeria and Iran are between 70 and 75 percent, while those in Gulf countries such as Kuwait, Saudi Arabia, and the United Arab Emirates are 80 percent or higher.

For now, cities in most developing economies can continue to count on urbanization to help bolster their population growth, but eventually urbanization comes to a natural end once a large majority of citizens live in cities. Domestic migration that was largely a move from countryside to city is now largely city-to-city: the clear implication is that cities will need to compete with other urban areas to attract the people they need. Immigration can be an important part of the mix.

¹⁹ MGI estimated this figure by splitting into rural and urban activities sectoral data from the International Labour Organisation; *World economic outlook: Too slow for too long*, IMF, April 2016; United Nations Statistics Division; national statistical offices; and Lars Christian Moller, *Ethiopia's great run: The growth acceleration and how to pace it*, World Bank working paper number 99399, November 2015. For more detail, see *Lions on the move II: Realizing the potential of Africa's economies*, McKinsey Global Institute, September 2016.

Box 1. What makes cities grow?

Population growth in cities can be decomposed into three factors: homegrown population growth, net domestic migration, and net international immigration.

- **Homegrown population growth:** Birthrates and death rates matter for a city's population growth, and these vary not only from country to country but also among cities in the same country. Cities with a higher share of older citizens tend to have a lower fertility rate than cities with a higher share of women of prime childbearing age. Although differences in the demographics of individual cities vary even within their home nations, the differences are rarely the main factor explaining individual cities' deviation from the national average. Differences in fertility rates tend to vary less within regions than variations in migration.
- **Net domestic migration:** An important component of the population growth of a city is net domestic migration, either from rural areas or from other urban areas. In countries where most people already live in cities, people moving to a city are likely to have moved from another. The success of cities in retaining their citizens and attracting new migrants will be an increasingly important factor explaining their growth trajectories.
- **Net international immigration:** Although net international immigration has, on average, a smaller influence than domestic migration, international immigration can make very high contributions to a city's population growth—almost three-quarters in the case of Miami and more than 100 percent in the case of New York, which has net outward migration of domestic citizens (see later discussion). The patterns of international migration flows are likely to shift as many of the countries that have traditionally experienced net emigration are starting to see younger cohorts decline. The future volume and pattern of immigration are highly uncertain.

COUNTRIES AND CITIES WITHIN THEM HAVE THEIR OWN DEMOGRAPHIC FOOTPRINTS

The impact of the double demographic shift on countries and their cities is by no means even. The demographic profiles of each are shaped by different trends and weights in the three components of urban population growth.

Although slowing population growth and aging are a global phenomenon, cities still differ widely in their age profiles (Exhibit 6). In our sample of 1,503 cities across developed and developing countries, the average age ranges from 23 years in the northern Indian city of Shillong to 48 years in Punta Gorda in the US state of Florida. Even within countries, there are large variations in cities' demographic profiles. The average age varied by about a decade in the cities in South Korea and Spain with the oldest and youngest populations, and by more than 20 years in the United States. Take two US examples. The birthrate at the end of 2015 was 23.6 births per 1,000 in Jacksonville, North Carolina, but the city's annual death rate was only 5.3 per 1,000 inhabitants. In contrast, in Punta Gorda, home to many retirees, there were only 5.9 births per 1,000 residents a year but 14.4 deaths.

Our analysis in this section focuses on three developed regions—Japan, the United States, and Western Europe—and their cities because we wanted to ascertain how demographic trends are playing out in countries that are already feeling the impact of slowing population growth and waning rural-to-urban migration. Their stories illustrate the depth of impact of demographic change and indicate that demographic variations among cities could widen as nations age. These trends may be a harbinger of how the new demographics are likely to affect cities in the emerging world that are still experiencing rapid growth and for which downward pressure on population may today seem a distant prospect.²⁰

Japan

Japan's urban population challenges are the most acute of the three developed regions. Urban population growth in Japan was 0.9 percent between 1990 and 2015, and only 0.6 percent between 2010 and 2015 (see infographic, "Japan"). According to UN estimates, urban population growth is expected to be zero percent between 2015 and 2025 and decline to minus 0.4 percent between 2025 and 2035.

One of the reasons for this is the low total population growth rate. Total population growth in Japan declined from 0.2 percent between 1990 and 2010 to minus 0.1 percent between 2010 and 2015. It is projected to decline to minus 0.3 percent between 2015 and 2025.

Japan started aging before Western Europe and the United States. Today, 26 percent of Japan's population is aged over 65, compared with 20 percent in Western Europe and 13 percent in the United States. Japan's fertility rate is less than the replacement rate, and its population has already peaked. At 83 years, Japan's life expectancy is higher than Western Europe's 81 years. Japan is also already largely urbanized with an urbanization rate of 93 percent, leaving little scope for cities to expand through an influx of migrants from rural areas. Indeed, Japan has relatively little domestic migration and very limited international migration. The nation has largely been "aging in place." Japan had a lower net international immigration rate of 0.6 per 1,000 between 2010 and 2015 than the United States, where the international immigration rate is approximately 3.2 per 1,000, and Western Europe where the rate is 2.3 per 1,000.²¹

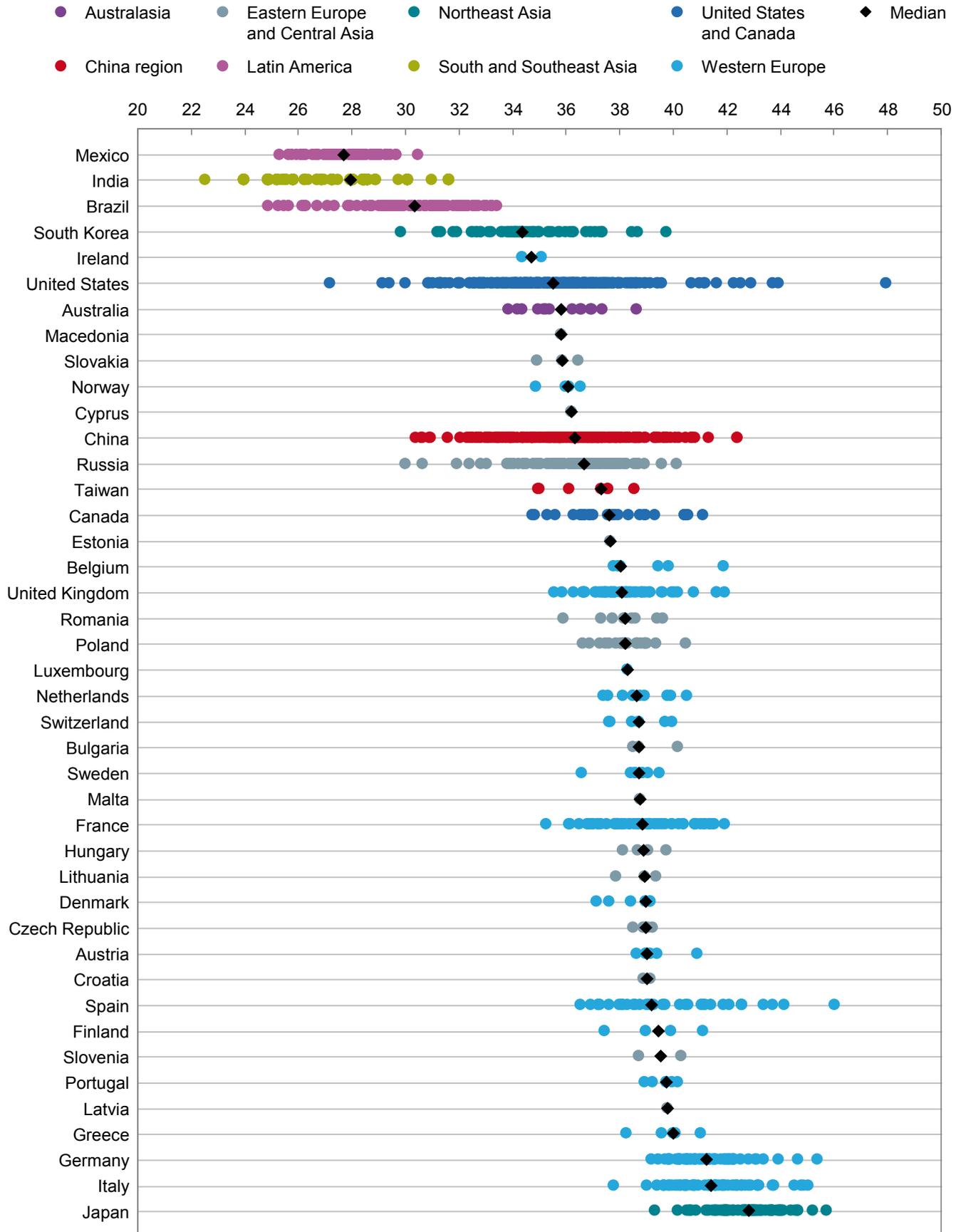
²⁰ An additional factor limiting our ability to analyze emerging markets was limited data availability at the city level.

²¹ *World population prospects: The 2015 revision*, UN Population Division, Department of Economic and Social Affairs, July 2015.

Exhibit 6

The age profile of different cities can vary significantly within countries

City weighted-average age (sample of 1,503 cities)



SOURCE: McKinsey Global Institute Cityscope database; McKinsey Global Institute analysis

The population of Japan's urban areas is projected to record the slowest growth between 2015 and 2025 of all the three regions we looked at, with zero population growth, compared with 0.5 percent in Western Europe and 1.0 percent in the United States. But, as in all three of the developed regions we looked at, there are some differences among cities. The population of some urban hubs continues to grow, while most surrounding cities are aging and experiencing slow or negative population growth.

Japan has a small number of cities whose population is growing relatively rapidly, largely due to domestic migration. For example, the population is still growing in the large cities of Nagoya and Tokyo. Some growing cities, such as Isezaki, which experienced annual population growth of 1.7 percent between 2012 and 2015, are clustered around Tokyo and Nagoya. Others include Japan's most dynamic manufacturing hubs such as Suzuka, Honda's base, and Ota, Subaru's home base, which had annual population growth of 1.1 percent and 1.4 percent, respectively, over the same period.

In contrast, the city of Sapporo has relatively low population growth because of negative homegrown growth and relatively low inward domestic migration. The population of 27 out of 70 Japanese cities we analyzed declined between 2012 and 2015, and these cities risk experiencing diminishing urban economies of scale. The cities are aging and have low birthrates and may experience outward migration as younger people of working age seek economic opportunities elsewhere. The Japan Policy Council expects that Akita, Aomori, Hakodate, and some other cities could experience a further 50 to 60 percent decline in the number of women of childbearing age between 2010 and 2040. As these cities' population shrinks and ages, they become less attractive to young people, risking a downward demographic spiral.

United States

Overall urban population growth in the United States is projected to decline slightly from 1.3 percent between 1990 and 2015 to 1.0 percent over the next decade (see infographic, "United States").²²

Total population growth in the United States was 1.0 percent between 1990 and 2010 and 0.8 percent between 2010 and 2015. It is projected to be 0.8 percent between 2015 and 2025 and 0.6 percent between 2025 and 2035. The United States has a higher birthrate than Japan and also higher rates of international and domestic migration.

The US urban system is much more diversified and more dynamic than those of either Japan or Western Europe, with many large cities, a broad swath of middleweight cities, and many "niche" cities. Raleigh, North Carolina, and Houston, Texas, are experiencing high population growth driven by all three sources. In contrast, Pittsburgh, Pennsylvania, and Cleveland, Ohio, are experiencing flat or negative growth with negative domestic migration.

There are US cities—growth hot spots—that have achieved remarkable growth through a healthy birthrate, domestic migration, international migration, or some combination of the three. The cities that have benefited from all three are located largely in the Sun Belt—Atlanta, Georgia; Austin, Dallas, and Houston in Texas; Riverside and Sacramento in California; Orlando in Florida; and Phoenix, Arizona, among them—but also include some southeastern cities including Nashville, Tennessee, and Charlotte and Raleigh in North Carolina. Population growth in these metropolitan areas averages 1.5 percent or higher a year, roughly twice the average growth in large cities.

The US national birthrate is declining, but some cities continue to expand because of fertility rates that are higher than average. Many of these cities have a higher share of first- and

²² For more on cities in the United States, see *Urban America: US cities in the global economy*, McKinsey Global Institute, April 2012.

second-generation immigrant households hailing from Latin America and Asia. In such cities, which include Brownsville and El Paso in Texas; Salt Lake City, Utah; and Bakersfield and Fresno in California, the average birthrate is between 16 and 18 births per 1,000 inhabitants, higher than the US average of around 12.

In addition to growth hot spots, the United States has different types of niche cities that offer an attractive quality of life to particular demographic groups. These niche cities include ones that are home to educational establishments and have a large student population—college towns such as Ann Arbor, Michigan; Lubbock, Texas; and Tallahassee, Florida—and retirement cities that make a virtue of an aging population by offering an excellent quality of life for the older generation and exploit a general trend in US migration for populations to move southward. Many of these latter type of niche cities are in Florida and include Cape Coral, Deltona, Palm Bay, and Naples.

International migrants are particularly important for the growth of large coastal cities. But it is not just large, well-known cities like New York that attract a substantial share of international migrants. Even in fast-growing cities such as Atlanta, Dallas, Houston, and Phoenix, international migrants have contributed up to a quarter of their rapid growth, perhaps reflecting an uptick in economic growth and the development of new industries, including technology companies.

The United States also has many cities—either aging or postindustrial—that are experiencing population decline. They include Pittsburgh, Pennsylvania, and Cleveland and Youngstown in Ohio. Even within the same state, there can be large variations in growth among individual cities. In Texas, for instance, Austin's population grew by 2.2 percent a year between 2000 and 2014, while Beaumont added just 0.3 percent to its population.

Western Europe

Urban population growth in Western Europe was 0.7 percent annually between 1990 and 2015 (see infographic, “Western Europe”). It is projected to decline to 0.5 percent to 2025 and to 0.4 percent between 2025 and 2035. This trend is primarily driven by a decline in total population growth, which is projected to go from 0.4 percent annually between 1990 and 2015 to 0.2 percent between 2015 and 2025.

Western Europe is aging unevenly and is likely to experience more differentiation in the future. Cities vary widely in their age profile and fertility rates. In the United Kingdom, for example, the cities of Blackburn and Bradford are believed to be among the youngest cities in Western Europe with 22 percent of the population younger than 15 years of age. These cities also have among the highest fertility rates in the United Kingdom at 2.2 births per woman. In contrast, cities like Genoa in Italy and Salamanca in Spain have only 12 percent of their population younger than 15 years of age, and fertility rates between 1.1 and 1.3.

Population growth in Western Europe has been slow since the 1990s, but intra-European migration has increased as the continent's economies have integrated and barriers to people flows have fallen. On average, Western European cities' birthrates are higher than Japan's and lower than in the United States, but there are huge variations among cities. In Europe as a whole, birthrates range from 5.6 per 1,000 residents in Cagliari, Italy, to 31.8 per 1,000 in Ioannina, Greece; death rates range from 3.6 per 1,000 residents in Fuenlabrada, a city in the Madrid metropolitan area of Spain, to 15.3 per 1,000 in Görlitz, a town in eastern Germany. Even though the level of mobility among cities has traditionally been lower than in the United States, it tends to be a big factor differentiating the growth of individual cities. Reflecting the uneven impact of the latest downturn, one study finds that the percentage of

cities in Europe with negative net migration increased from 23 percent in 2007 to 34 percent in 2012.²³

A number of Western Europe's large cities have posted robust GDP growth rates because, like US growth hot spots, they benefit from all sources of population growth. These cities tend to be largely in France, Scandinavia, and the United Kingdom, where birthrates are higher than in the rest of the region. The capital cities of Berlin, London, Oslo, Paris, and Stockholm are among the Western Europe cities that are experiencing growing populations. Others include Bedford and Bristol, in the United Kingdom; Bordeaux, Montpellier, and Toulouse in France; and Oresund (the Copenhagen-Malmö metropolitan area) and Trondheim in Scandinavia. These cities have had roughly 1 percent or higher urban population growth per year, about double the average of cities we looked at in Western Europe.

Some of Western Europe's cities are receiving large influxes of migrants from other places in the region. Many of these are in Spain's sunbelt region and in Switzerland; they include Málaga in Spain, and Bern and Zurich in Switzerland.²⁴ Swiss cities have been able to attract significant numbers of migrants because of their high standard of living and the relocation of numerous multinational corporations to Switzerland.²⁵

At the same time, Western Europe has cities experiencing declining populations. These are largely cities in Atlantic Spain and Portugal, eastern Germany, and parts of Italy. These cities have low birthrates, high outward migration, or a combination of these, and some have suffered badly from the economic crises since 2008. They include Salamanca, León, and Valladolid in Spain; Lisbon and Porto in Portugal; Chemnitz, Gera, and Saarbrücken in Germany; and Genoa and Venice in Italy. In Italy, the number of women choosing not to have children has risen by 40 percent over the past decade, while the age of having a first child has risen to 31.5 years from 30.8 during the same period. In Spain, the number of marriages declined by about 50 percent between 1970 and 2014.²⁶ According to the World Bank, the national fertility rate in Spain more than halved between 1974 and 2014, from 2.9 to 1.3.

²³ Elzbieta Antczak and Karolina Lewandowska-Gwarda, "Migration processes in European cities: A spatio-temporal analysis using different spatial weights matrices," *Estudios de Economía Aplicada*, volume 33, number 1, April 2015.

²⁴ We note that growth in these cities was rapid in the period after 2000 until the recession hit in 2007. Spain experienced a real estate and construction boom driven by the cheap cost of living, good weather, a deregulated mortgage market, and investor speculation. From 1998 to 2009, Spain was building half as many houses as the entire United States though its population was only 15 percent that of the US population.

²⁵ ACE Limited, AGCO, Agility, Cadbury Schweppes, Citrix Systems, McDonald's, Nissan, Nycomed, Rusal, Transocean, and Yahoo are some of the multinational corporations that have moved their global, European, or Europe, Middle East, and Africa headquarters to Switzerland over the past decade.

²⁶ A 2013 Eurostat report found a correlation between the recent recession and falling birthrates in Europe. The number of countries in Europe with falling birthrates increased from one to 27 (out of 31 countries) between 2008 and 2011. Changes in fertility followed changes in economic conditions with a lag of two years on average. According to Eurostat, fertility among immigrants declined more than that of native-born populations during times when economic conditions were difficult. See Giampaolo Lanzieri, "Towards a 'baby recession' in Europe? Differential fertility trends during the economic crisis," *Eurostat Statistics in Focus*, number 13/2013, 2013.

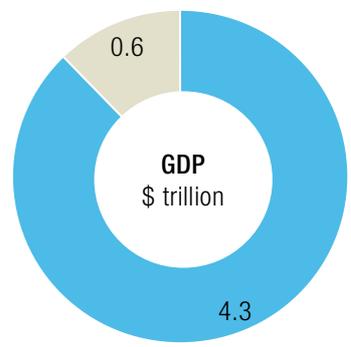


Japan

GDP statistics for Japan, 2015

Large cities¹ Other areas

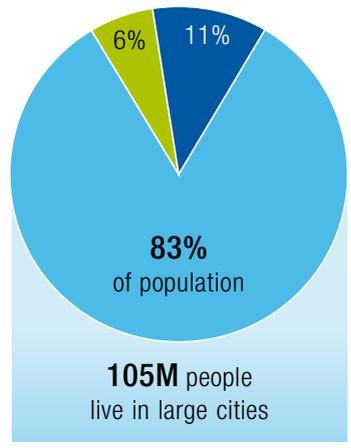
Per capita GDP
\$ thousand



Population statistics for Japan, 2015²

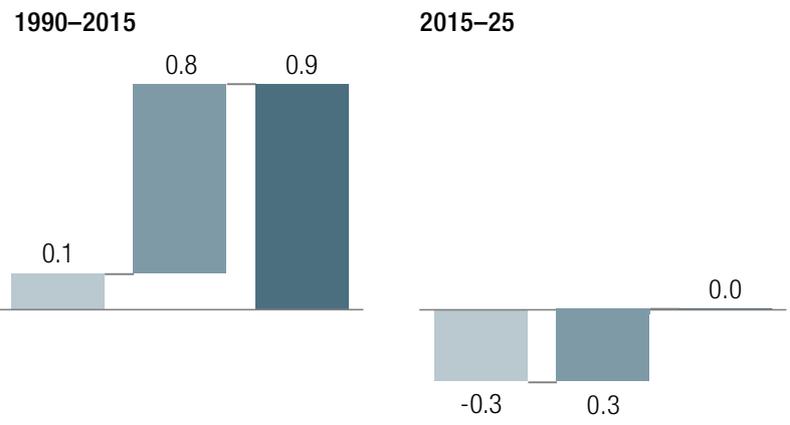
Share of total population
%; people

Rural areas 8M Other urban areas 14M



Urban population growth
%

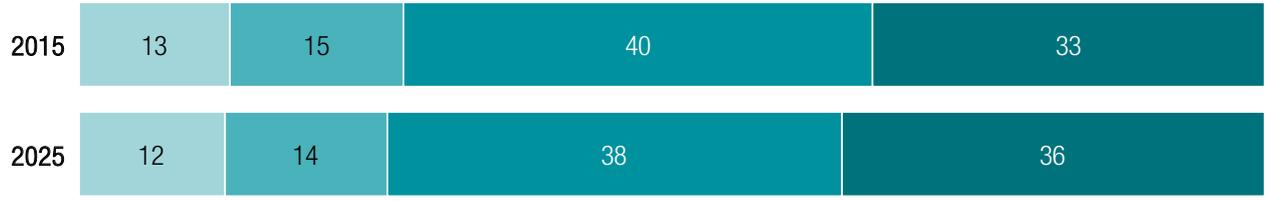
Total population growth rate Impact of urbanization Urban population growth rate



Age distribution for large cities in Japan

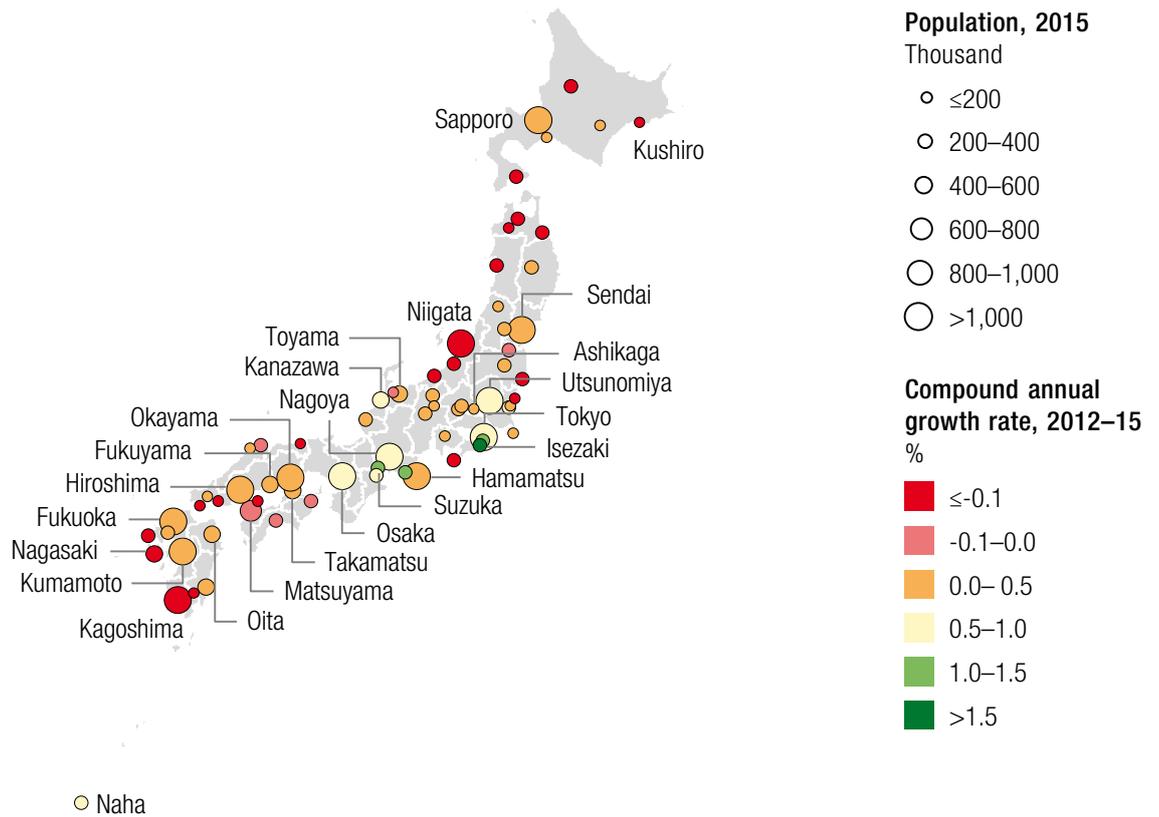
Share by age group
%

0-14 15-29 30-60 60+



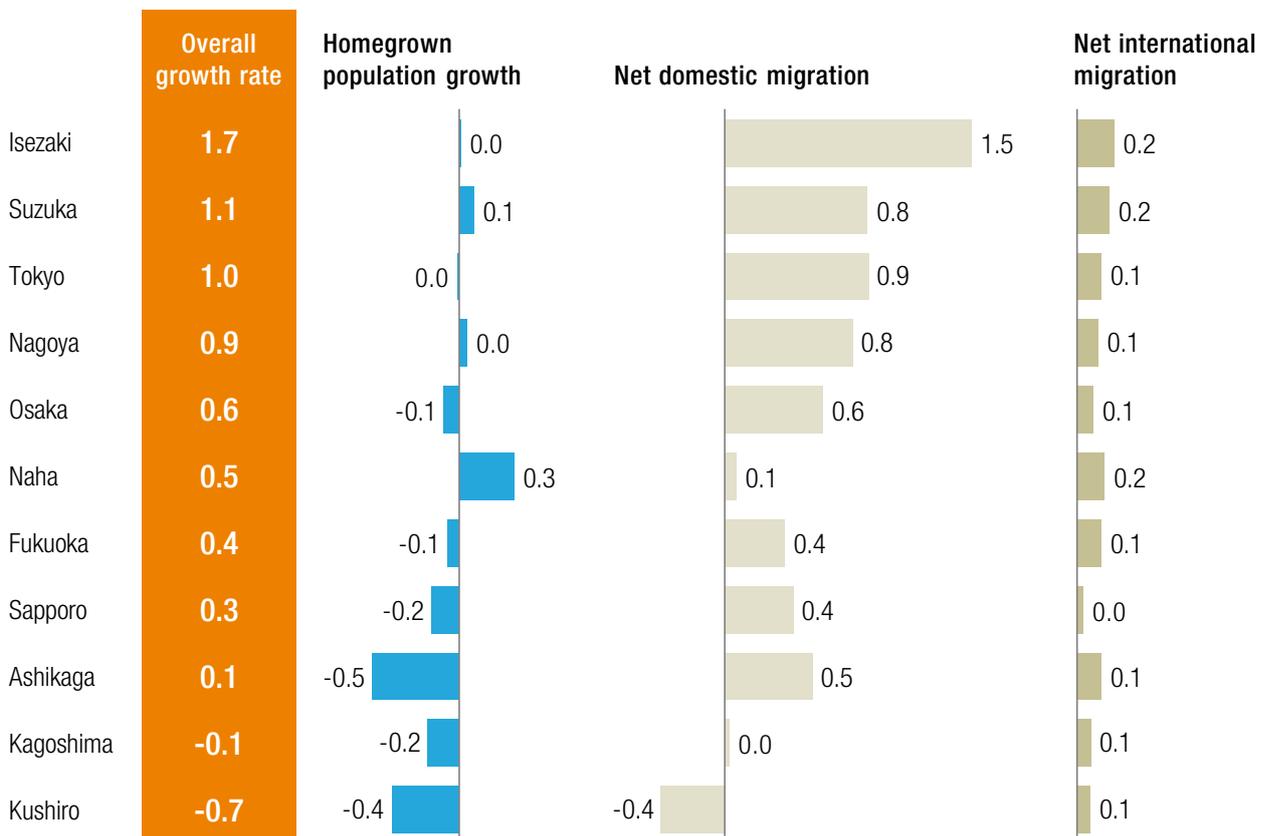
1 Large cities derived from McKinsey Global Institute Cityscope data and defined as cities with population exceeding 150,000.
 2 Total population and total urban population based on UN Population Division's *World urbanization prospects: The 2014 revision*.
 NOTE: Numbers may not sum due to rounding.
 SOURCE: McKinsey Global Institute analysis

Japan population growth rate



Japan population growth rate and key driving factors

Compound annual growth rate (%)



NOTE: Numbers may not sum due to rounding.

SOURCE: Statistics Bureau (Japan); McKinsey Global Institute analysis



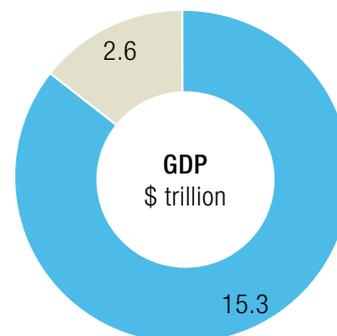
United States

GDP statistics for the United States, 2015

Large cities¹ Other areas

Per capita GDP

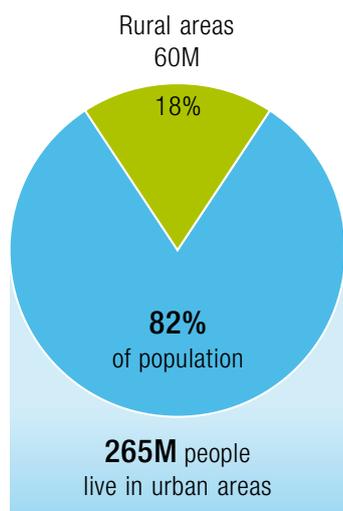
\$ thousand



Population statistics for the United States, 2015²

Share of total population

%; people

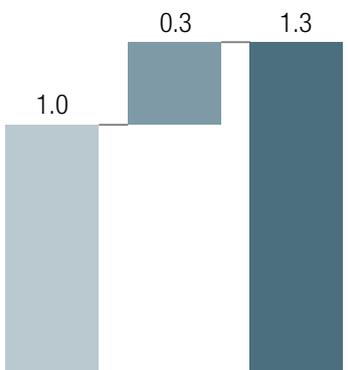


Urban population growth

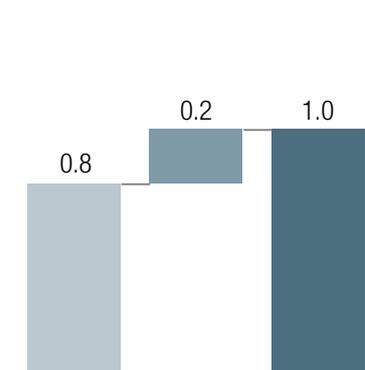
%

Total population growth rate Impact of urbanization Urban population growth rate

1990–2015



2015–25



Age distribution for large cities in United States

Share by age group

%



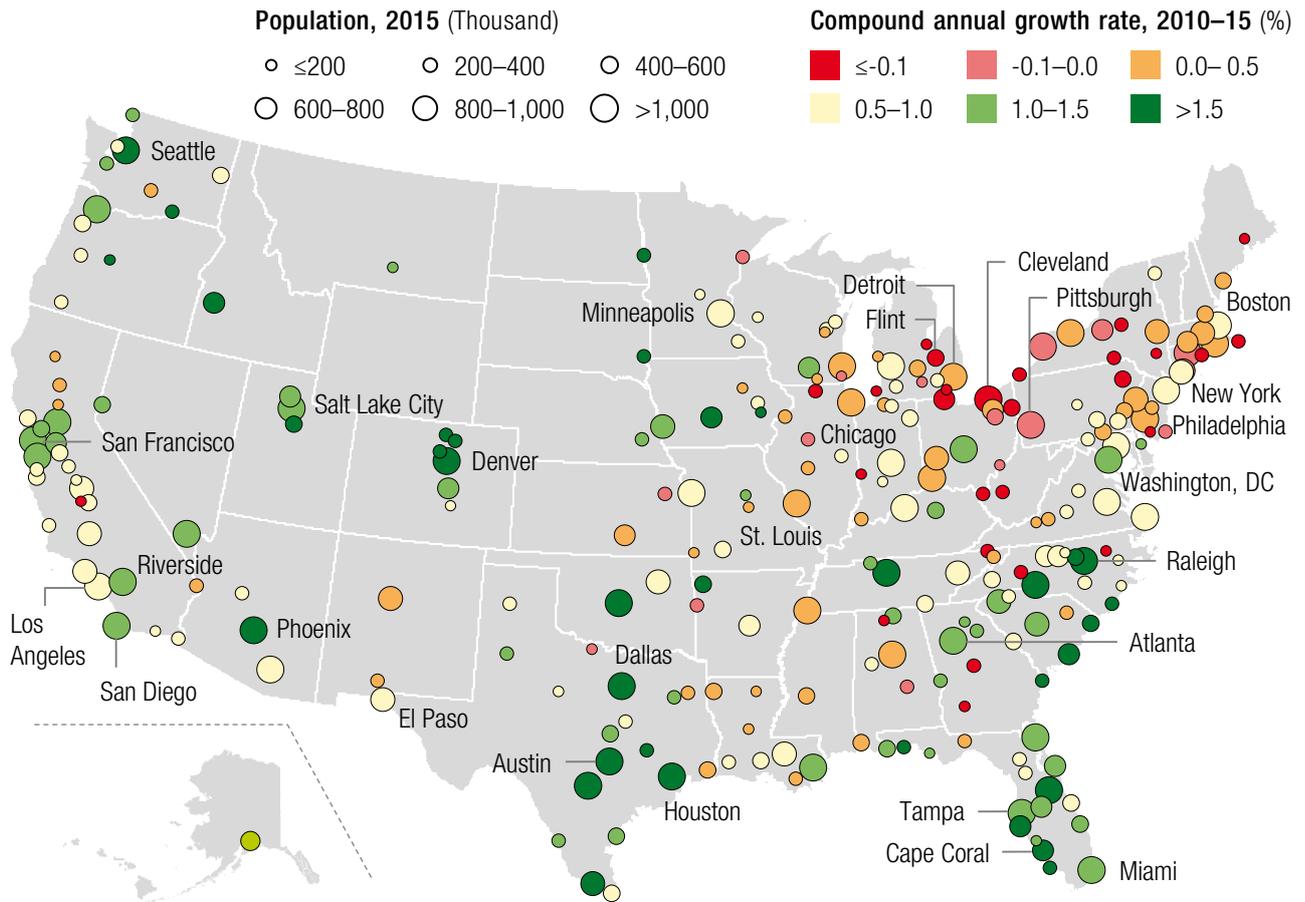
¹ Large cities derived from McKinsey Global Institute Cityscope data and defined as cities with population exceeding 150,000.

² Total population and total urban population based on UN Population Division's *World urbanization prospects: The 2014 revision*.

NOTE: Numbers may not sum due to rounding.

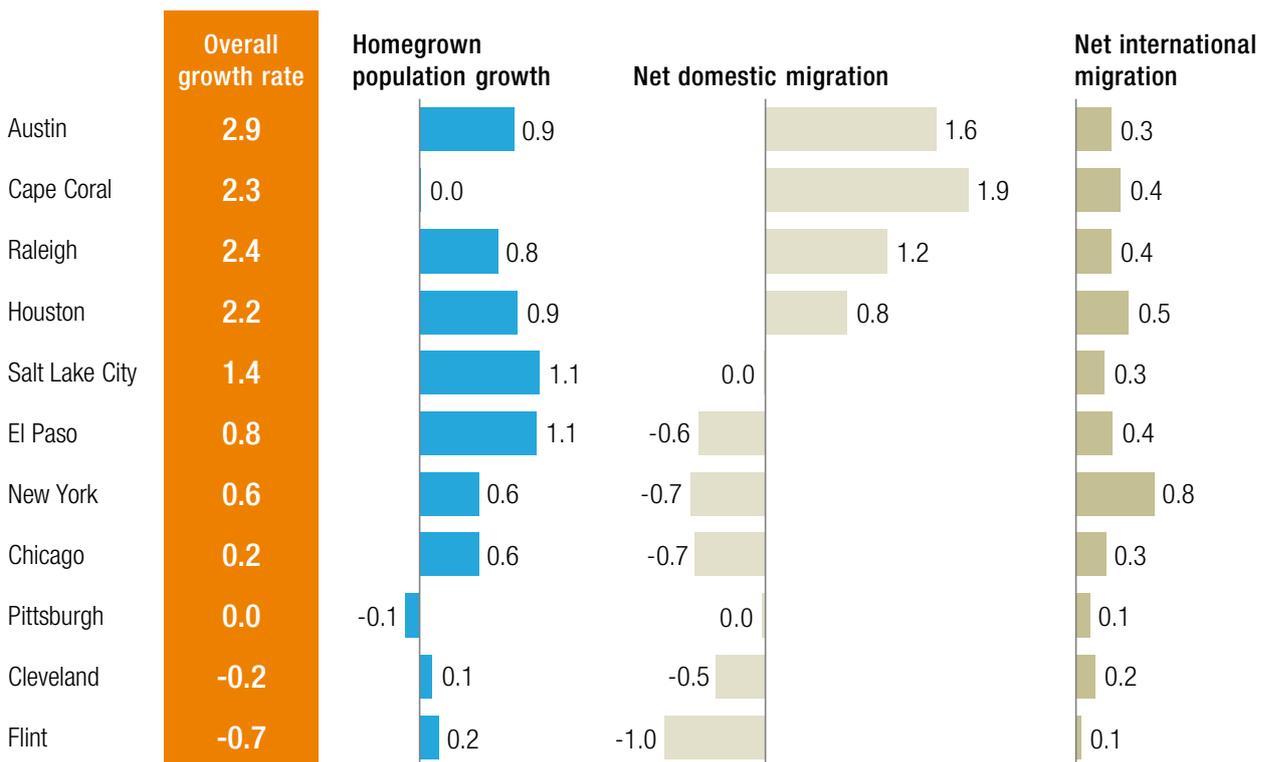
SOURCE: McKinsey Global Institute analysis

United States population growth rate



United States population growth rate and key driving factors

Compound annual growth rate (%)



NOTE: Numbers may not sum due to rounding.

SOURCE: US Census Bureau; McKinsey Global Institute analysis

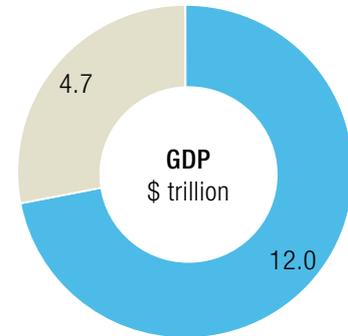


Western Europe

GDP statistics for Western Europe, 2015

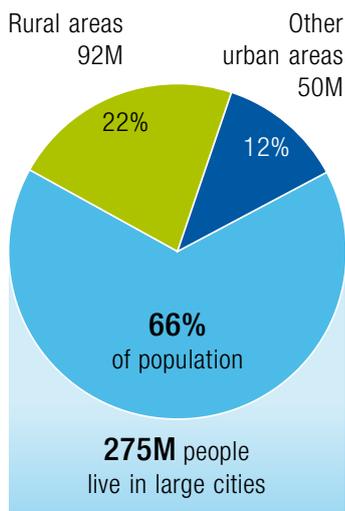
Large cities¹ Other areas

Per capita GDP
\$ thousand



Population statistics for Western Europe, 2015²

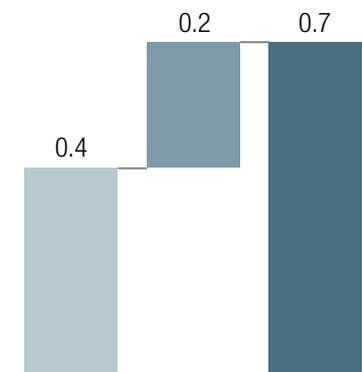
Share of total population
%; people



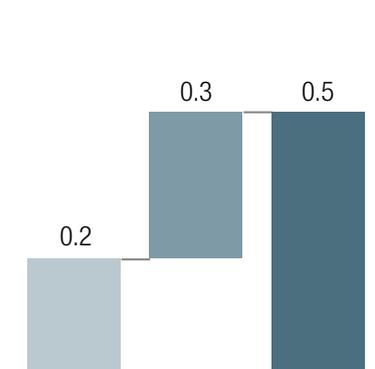
Urban population growth
%

Total population growth rate Impact of urbanization Urban population growth rate

1990–2015

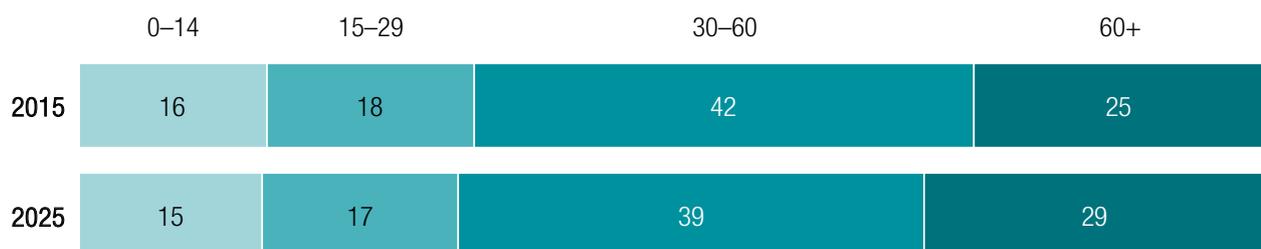


2015–25



Age distribution for large cities in Western Europe

Share by age group
%



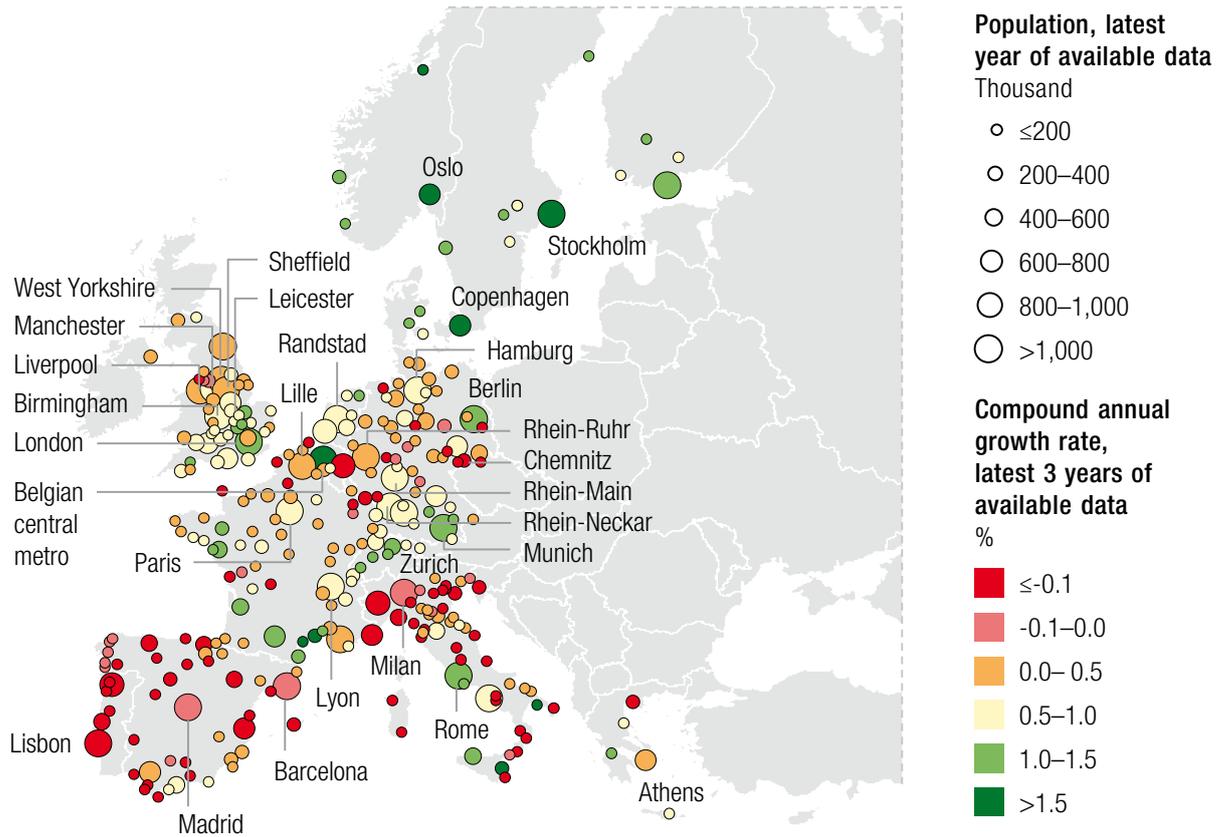
¹ Large cities derived from McKinsey Global Institute Cityscope data and defined as cities with population exceeding 150,000.

² Total population and total urban population based on UN Population Division's *World urbanization prospects: The 2014 revision*.

NOTE: Numbers may not sum due to rounding.

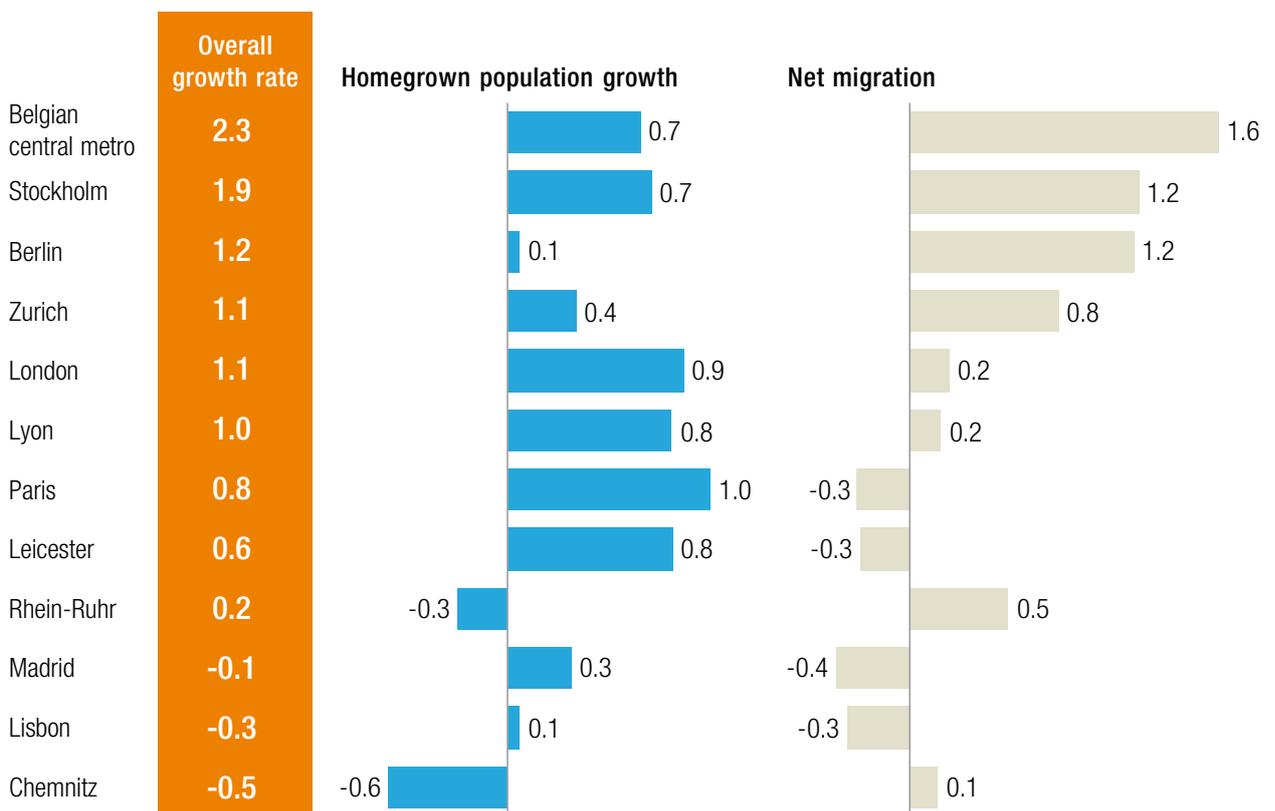
SOURCE: McKinsey Global Institute analysis

Western Europe population growth rate



Western Europe population growth rate and key driving factors

Compound annual growth rate (%)



NOTE: Numbers may not sum due to rounding.

SOURCE: Eurostat; McKinsey Global Institute analysis

CITIES NEED TO TAILOR SURVIVE-AND-THRIVE STRATEGIES TO THEIR PARTICULAR DEMOGRAPHIC REALITIES

Is the demographic challenge an inevitable drag on urban economic growth? We don't think so. Cities, their citizens, their host nations, and the global economy can thrive in the face of demographic change as long as they sustain growth in per capita GDP and maintain a high quality of life for their citizens. Even in a slower-growing world, cities that maintain their dynamism and vibrancy will attract talented workers and successful businesses. Each city needs to tailor its strategy according to its particular demographic realities. What works for Austin won't necessarily work for London or Dresden. But all cities need to meet two imperatives in the face of challenging demographics: ensure that they are attractive to current and potential citizens, and develop a relentless focus on productivity (see Box 2, "Two imperatives for cities negotiating the demographic shift").

Box 2. Two imperatives for cities negotiating the demographic shift

As the power of population growth wanes as a source of urban growth, cities need to meet two broad imperatives to prosper.

Put citizens first to win the urban competition for people. As competition for attracting people is heating up among urban areas, local jurisdictions will need to make their city more appealing to current and potential citizens.¹ As birthrates decline and migration from rural areas slows, city-to-city migration will become an increasingly important differentiator of urban population growth. Cities need to develop a deep and nuanced understanding of flows of people within their region in order to craft strategies to keep people from leaving for other cities and to attract new residents.²

We are already seeing people making choices among cities. In the United States, Bill Bishop has described what he calls "the big sort" in which Americans have been grouping themselves over the past few decades into homogenous communities of like-minded people who share a certain way of life.³ Also in the United States, Jed Kolko has described how younger, richer, childless citizens are now moving to dense urban centers. His analysis finds that seniors—the fastest-growing age group—and the poor have become less concentrated in urban centers as the young and educated have moved in.⁴

In the modern digital era, this fluid situation poses a different type of challenge for urban leaders. Economic development policies tended to focus on attracting businesses to create the jobs that would encourage people to stay in or relocate to a city. Today, jobs are increasingly likely to follow people rather than the other way around. Manufacturing jobs tied to a factory location now account for less than one in ten jobs across developed regions; many retail and service-sector jobs, the largest and fastest-growing job categories, tend

to follow people. A rising number of digital jobs can be performed at a distance, and older knowledge workers may choose more flexible work arrangements in their jobs as they approach retirement. With digital global labor markets, it is easier to work across national borders. Digital platforms enable people to be matched to jobs wherever they are.⁵ This means that cities today need to focus on attracting talent rather than attracting jobs.

Focus on productivity. As the demographic boost to city expansion slows, economic growth will need to come more from the second component of GDP growth: rising productivity.⁶ This means performing better with fewer resources at a time when demands on cities' infrastructure and services will grow faster than ever.⁷ Cities that are more productive tend to be more successful in achieving robust growth in local per capita GDP, derive greater benefits for the money they invest and spend, and are more appealing to current and potential citizens as competition for attracting people among urban areas heats up.⁸

Cities can improve productivity by focusing on the range of factors underpinning a robust local economy. Cities that are able to educate, train, and attract skilled workers are better positioned to draw in and foster the growth of productive companies. Cities that create reliable digital and electric utilities, cut red tape, and reduce traffic congestion help raise the productivity of their businesses and labor force across sectors. Cities that use their resources wisely—from land and water to clean air—will save money, improve environmental quality, and reduce the risk of running into constraints to growth.⁹ And cities that are able to raise the incomes of all their citizens, from city employees to health-care, restaurant, retail, and construction workers, are more likely to post robust growth as raising incomes of all citizens will help fuel local demand even in the face of slowing population growth.¹⁰

Bigger can still be better

Larger cities have many advantages. Their vibrant urban economy and plentiful job opportunities persuade citizens to move in and stay. Some of the world's iconic metropolises benefit from the scale and visibility that come with concentrated economic and cultural power. Megacities with a population of ten million or more, such as London, Los Angeles, New York, Paris, and Tokyo, have per capita incomes that are typically up to one-third higher than elsewhere in their nations, and their urban economies are comparable to the size of small nations.²⁷ They attract a disproportionately high share of international

²⁷ In 2010, Tokyo had per capita GDP of \$40,600, which was 19 percent above the national average that year. New York had per capita GDP of \$62,400, 33 percent above the US average. Paris and London had even higher premiums, with per capita GDP of 159 percent and 144 percent, respectively, compared with the Western European average. For more detail, see *Urban America: US cities in the global economy*, McKinsey Global Institute, April 2012.

Box 2. Two imperatives for cities negotiating the demographic shift (continued)

- ¹ Aamer Baig, Andre Dua, and Vivian Riefberg, *Putting citizens first: How to improve citizens' experience and satisfaction with government services*, McKinsey Center for Government, November 2014.
- ² One study of labor migration in Germany found that although labor market conditions are important, the amenities such as the cultural infrastructure a city offers also have a significant role to play in attracting people to live there. The study concluded that urban policy aimed at enhancing the attractiveness of cities should consider not only measures to boost the local economy but also measures to improve citizens' quality of life. See Tanja Buch et al., "What makes cities attractive? The determinants of urban labour migration in Germany," *Urban Studies*, volume 51, issue 9, July 2014.
- ³ Bill Bishop, *The big sort: Why the clustering of like-minded America is tearing us apart*, Houghton Mifflin, 2008.
- ⁴ Jed Kolko, "Urban revival? Not for most Americans," jedkolko.com, March 30, 2016.
- ⁵ *A labor market that works: Connecting talent with opportunity in the digital age*, McKinsey Global Institute, June 2015.
- ⁶ Productivity, defined as GDP per worker, is one of the twin engines of GDP growth; the other is an expanding pool of workers as populations grow. Many cities, as we have noted, are now rapidly losing the power of the second engine. If productivity does not rise to compensate, cities will experience a decline in the rate of their GDP growth. Previous MGI research found that over the past 50 years, half of global GDP growth—1.7 percent a year—came from an expanding labor pool, but that over the next half century that expansion is set to drop to 0.3 percent a year, less than one-fifth of its previous rate. Even if productivity were to grow at its previous rapid rate, this shift alone would lead to a 40 percent decline in the rate of global annual GDP growth, from 3.6 percent to 2.1 percent. See *Global growth: Can productivity save the day in an aging world?* McKinsey Global Institute, January 2015.
- ⁷ *Better for less: Improving public sector performance on a tight budget*, McKinsey & Company, July 2011.
- ⁸ Boosting urban productivity is challenging. McKinsey research has found that successful cities tend to get three things right. They grow "smartly" with good infrastructural bone structure that encourages dense living with minimal congestion and the flexibility to enable businesses to grow and to create opportunities for citizens to earn a livelihood and enjoy a high quality of life. They also do more with less: many cities are experiencing an erosion of their tax base even while demands from citizens for services increase. Finally, successful cities govern as meritocracies—attracting high-performing public servants to run key departments and building a consensus among stakeholders and citizens on the strategic direction that the city is taking. As Fiorello LaGuardia, New York's mayor during the 1930s and 1940s, famously declared, "There is no Republican or Democratic way to pick up the garbage." For more detail, see *How to make a city great*, McKinsey & Company, September 2013. In addition, MGI has examined strategies and measures that cities should take to improve urban productivity and the lives of their citizens in a number of regions. See, for instance, *Preparing for China's urban billion*, March 2009; *India's urban awakening: Building inclusive cities, sustaining economic growth*, April 2010; *Urban world: Mapping the economic power of cities*, March 2011; *Building globally competitive cities: The key to Latin American growth*, August 2011; and *Urban America: US cities in the world economy*, April 2012.
- ⁹ MGI has developed an Urban Performance Index that benchmarks cities using 100 quantitative indicators on four dimensions that interact to deliver sustained urban economic growth: economic performance, social conditions, the sustainable use of resources, and finance and governance. As an example of the aspects covered, urban economic performance is an aggregate measure of three subcomponents: the capacity for wealth creation, the business environment, and strength in research and development. For more detail on the index, see *Building globally competitive cities: The key to Latin American growth*, McKinsey Global Institute, August 2011. McKinsey has helped develop city performance indexes in other regions as well, with the goal of developing an integrated diagnostic tool for cities across the globe. For example, the Urban China Initiative, a think tank founded by McKinsey, Columbia University, and Tsinghua University's School of Public Policy and Management in 2010, recently published an Urban Sustainability Index (USI), the first index for measuring and comparing urban sustainability across China. For detail, see Jonathan Woetzel, Geng Xiao, and Lan Xue, *The Urban Sustainability Index: A new tool for measuring China's cities*, Urban China Initiative, November 2010.
- ¹⁰ *Urban world: The global consumers to watch*, McKinsey Global Institute, April 2016.

immigrants. Newcomers to these cities tend to be young, and these cities have a higher share of working-age population than other large cities in their nations. More than two-thirds of New York's Manhattan residents, for example, are in the 20- to 64-year-old age group, and roughly half are in the prime working-age group of 25 to 54. Educational attainment is high. In Boston, San Francisco, and Washington, DC, more than 40 percent of adult residents had a college degree in 2010. These cities are also very well connected to both their domestic regions and other global cities. Not only are there frequent flight connections, but people who can afford to live in one "global gateway" city are more likely to move to another, creating global network effects. The scale of these cities means that they are able to offer much broader business and cultural and social amenities—all magnets to an increasingly mobile global population. Other cities that have not yet attained megacity status but are growing fast can share in the scale benefits.

But there is no room for complacency as population growth slows and competition for people heats up. Even Tokyo's population is expected to decline as inward migration slows, for instance.

One of the key factors behind this loss of citizens is cost—and specifically the cost of housing (see Box 3, "How housing helps to determine where people choose to live").²⁸ In most of these cities, housing has not expanded at the rate of their past population growth, which has translated into rapidly rising housing costs. In the United States, the median single-family home price in the coastal Metropolitan Statistical Areas of Boston-Cambridge-Newton, New York-Jersey City, San Francisco-Oakland-Hayward and Seattle-Tacoma-Bellevue was in excess of \$350,000 in 2014, compared with the \$224,000 median across US metropolitan areas.²⁹ In Switzerland, real estate prices have soared in Geneva and Zurich as large numbers of international migrants have arrived along with the many multinational corporations relocating there. If such cities are to continue to thrive, they need to pay close attention to their affordability.

But small—and medium sized—can be beautiful, too

Urban size still matters, but it is not the only arbiter of success as the urban world diverges and differentiates. Previous MGI research noted that middleweight cities are set to contribute half of global GDP growth to 2025 and that 75 percent of the advantage in per capita GDP that the United States has over Western Europe comes from the fact that the former has such a broad landscape of cities including many middleweights (and large middleweights).³⁰ It is important, therefore, that they thrive.

We see very different types of cities do this by appealing to distinct demographic groups including families, students, and the elderly. We are likely to see many more cities look to sharpen their focus and offer a particular menu of attractions. Making informed trade-offs between competing priorities is an increasingly necessary skill for cities to master. The essence of cities is that they bring people together and are stronger for their diversity, but unfortunately no city can be all things to all people.

²⁸ For a perspective on the economic implications, see Chang-Tai Hsieh and Enrico Moretti, *Why do cities matter? Local growth and aggregate growth*, Kreisman working paper number 30, University of Chicago Law School, May 2015.

²⁹ National Association of Realtors data.

³⁰ See *Urban world: Mapping the economic power of cities*, McKinsey Global Institute, March 2011; and *Urban America: US cities in the world economy*, McKinsey Global Institute, April 2012.

Box 3. How housing helps to determine where people choose to live

The cost of housing is one of the key factors influencing where people choose to live. In most countries, income inequality has risen, and the cost of housing has risen faster than income, particularly in big cities where many people want to live.¹ This means that housing is exceedingly tiered with high-cost cities and neighborhoods, often with more amenities or better access to jobs, and lower-cost areas with fewer services and longer commutes.

Academic literature shows that the availability and regulation of land is a key factor affecting cost of housing.² In thriving metropolises such as global gateway cities, the value of land can be more than 40 percent of the total cost of a property; in San Francisco, that figure rises as high as 80 percent.³ While natural boundaries can be a factor (think of river and sea barriers in Manhattan or San Francisco), restrictive zoning and other policies often exacerbate land shortage. We found that these very large cities have among the highest gaps in housing affordability. As a result, many citizens are prompted to move elsewhere as housing costs have become prohibitively high.⁴

Other cities can take advantage of rising housing costs elsewhere by proactively making themselves attractive as affordable and livable. In the United States, Columbus, Ohio, for instance, has actively targeted young people of working age living in cities such as Washington, DC, through advertising campaigns highlighting the city's affordability.

Aspects that matter most are the provision of housing at the right prices and in the right places with access to jobs and services such as education, health care, and sports and recreation facilities. The definition of affordability and the preferred mix of urban amenities and services vary widely by the age, composition, and other household characteristics—fewer and fewer households these days fit the description “average family.”⁵

¹ For further discussion, see *Poorer than their parents? Flat or falling incomes in advanced economies*, McKinsey Global Institute, July 2016; *Urban world: The global consumers to watch*, McKinsey Global Institute, April 2016; and *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute, October 2014.

² For further discussion, see Edward L. Glaeser, Joseph Gyourko, and Raven Saks, “Why is Manhattan so expensive? Regulation and the rise in house prices,” *Journal of Law and Economics*, volume 48, number 2, October 2005; Edward L. Glaeser and Bryce A. Ward, “The causes and consequences of land use regulation: Evidence from Greater Boston,” *Journal of Urban Economics*, volume 65, number 3, May 2009; Edward L. Glaeser and Joseph Gyourko, “The impact of building restrictions on housing affordability,” *Economic Policy Review*, June 2003; and Vicki Been et al., *Preserving history or hindering growth? The heterogeneous effects of historic districts on local housing markets in New York City*, NBER working paper number 20446, September 2014.

³ See our extensive discussion on the relationship between policy and affordable housing in *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute, October 2014.

⁴ Expensive housing means a drain of citizens to other cities as well as a diversion of household spending from other goods and services. Housing and associated utilities now account for around one-quarter of global household spending. The cost has been rising sharply not only in the United States and Western Europe, but also in many large cities in emerging economies. In the United States, for instance, the share of income spent on housing has risen from 28 percent to 32 percent over the past 30 years.

⁵ The divergence of income and changing characteristics leads to increasingly diverse household preferences of the retiring and elderly consumers in developed regions, among others. For more insights on these shifts, see *Urban world: The global consumers to watch*, McKinsey Global Institute, April 2016.

Some cities continue to benefit from robust population growth because they have a younger population and higher birthrates. In the United States, cities such as Brownsville and El Paso in Texas, and Bakersfield and Fresno in California, had average population growth of 1.3 percent a year or higher—more than one-third higher than the national average—between 2000 and 2014. Many of these cities are home to relatively recent waves of immigration. There is a particularly high concentration of these family hubs in southern border states with large Hispanic populations. For now, these cities tend to be affordable, particularly in the case of housing. In El Paso, for instance, the median price for an existing single-family home was about \$142,000 in 2015, well below the average of US Metropolitan Statistical Areas of about \$224,000.³¹ The long-term challenge for these cities is to educate the next generation and provide attractive employment opportunities. In the United States, these cities have higher unemployment than the US average; 36 percent of outward migrants from such cities go to growth hot spots, an indication that there is a shortage of job opportunities at home.

Some of the approaches taken by one of the most successful US cities for many families with children—Salt Lake City—are worth considering. Salt Lake has the third-highest social mobility of any US city, according to the Equality of Opportunity Project.³² Children from low-income families can expect 9.2 percent higher future income than children in the average US city.³³ The Utah Foundation finds that income inequality is near the lowest in the nation, which appears to reflect the city’s high-quality public education system, the fact that planning caters for mixed-income groups, and the fact that neighborhoods are more integrated than in many other US cities.³⁴ Even in Salt Lake, there is no room for complacency. The Utah Foundation says that economic mobility decreased between 2003 and 2011 compared with the previous nine years.³⁵ The share of people who were “downwardly mobile” increased by 11 percentage points between the two time periods, increasing to 39 percent of the population.

As populations age in developed economies, one increasingly prominent type of “niche” city catering to a particular demographic group is the retirement hub. Their success suggests that more—and increasingly diverse—cities catering to older citizens may emerge in the future as a response to demographic trends. In the United States, retirement hubs such as Lake Havasu City, Palm Bay, Deltona, and Myrtle Beach recorded above-average population growth of 1.5 percent a year or more between 2000 and 2014, due to an influx not only of the over-60s but also people of working age filling the service-sector jobs created to serve them.³⁶ Only about 15 percent of the population in these cities is aged below 15 compared with a US urban average of 20 percent. A high number of these retirement hubs are on the southeastern coast of the United States where the weather is warm; almost all of them offer mountains or water. Another factor encouraging retirees to move to these cities is new construction that favors single-story smaller houses designed with the elderly in mind and for sale at affordable prices. This may well pay off for such cities because average household spending in retirement hubs is above the national mean.

³¹ National Association of Realtors data.

³² *Causal effects of the 100 largest commuting zones on household income in adulthood*, city rankings, The Equality of Opportunity Project.

³³ Ibid. See also Nancy Cook, “Why low-income kids thrive in Salt Lake City,” *The Atlantic*, April 29, 2014.

³⁴ A decade ago, the University of Utah put in place a program to develop partnerships with businesses, non-profit organizations, and schools to find ways to better serve those with low incomes. One of these programs—the Westside Leadership Institute—trains residents to become more politically active in their neighborhoods and how to access decision makers. The city is also opening community centers that offer medical and dental care, mental health counseling, and educational classes.

³⁵ Utah Foundation, *Climbing toward the American dream: A second analysis of economic mobility in Utah*, research report number 715, August 2013.

³⁶ For a description of the role seniors can play in revitalizing urban centers, see Peter Karl Kresl and Daniele Iettri, *The aging population and the competitiveness of cities: Benefits to the urban economy*, Edward Elgar Publishing, 2010.

As Europe ages, many cities, including Alicante, Málaga, Murcia, Valencia, and others on Spain's Mediterranean coast, have marketed themselves as retirement hubs and have experienced the development of significant expatriate retirement communities. Other Spanish retirement hubs away from the Mediterranean coast include Seville and Tarragona, where real estate development seeking to attract Europe's retirees to a sunny climate fueled a growth boom in the 2000s. These cities not only attracted international retirees into expat communities but also created many new jobs in the construction and service industries. Since 2009, the recession and high unemployment have dampened rapid inward migration. Yet the US experience suggests that the lure of the warm, sunny climate will continue to make these cities attractive to the large cohorts of people who are retiring or retired.

High demand for tertiary education has created towns and small cities whose distinct selling point is their educational establishments. We have mentioned several college towns in the United States, but Europe also has many student cities including, for example, Montpellier, France; Heidelberg, Germany; and Uppsala, Sweden. These cities tend to have a high proportion of young people aged between 15 and 29 who, on average, make up roughly one-third of the population. These towns also tend to have low birthrates but high domestic migration, which has driven growth. Increased demand for tertiary education over the past decade has led to an overall increase in the population of college towns.

The economies of college towns have the advantage of jobs related to running educational institutions and can gain other benefits. Cities with colleges and universities are often less cyclical than other industries; in fact, enrollment often increases when the job market slackens. These urban areas are notable for their rich range of amenities from sporting facilities to entertainment hubs and hospitality services.

As cities find themselves having to compete with each other to attract people in an era of slowing population growth, we can observe a move to diversify the demographic base of these cities. In the United States, Athens has traditionally benefited from an influx of students to the University of Georgia; it is now attracting an increasing number of retirees who are choosing the city because of its cultural diversity, its temperate climate, and the high standard of health-care services offered by the university hospital. "Today's retirees and the baby boomer retirees want three things," says Andrew Carle, director of the Program in Assisted Living/Senior Housing Administration at George Mason University. "They want active, they want intellectually stimulating, and they want intergenerational retirement environments. Well, I've just described a college campus."³⁷ Cape Coral, too, is positioning itself as a diverse city and creating housing packages that appeal not only to older residents but also to young people.

³⁷ Molly Turner, "College towns: Consider these 16 communities for retirement," *Huffington Post*, May 29, 2012.

Cities with shrinking populations can redefine themselves

The demographic reality is that some cities are, as we have noted, already experiencing a decline in their population, and more are likely to follow. Aging is a key factor in many of the cities in developed economies that are experiencing stagnant or declining population and whose economies are therefore under pressure. And when local economic opportunities dry up, cities risk losing their young working people and finding themselves in a downward demographic spiral, accelerated by the costs of offering productive infrastructure and services. Many shrinking cities are postindustrial and face the imperative of either right-sizing infrastructure and services to ensure that life is good for the citizens who remain but also fiscally sustainable, or needing to reinvent themselves with new types of jobs that attract a new crowd.

One strategy for aging cities is to try to broaden their demographic base. Chemnitz had among the lowest birthrates in the world in 2005 at 7.3 births per 1,000 inhabitants. However, the eastern German city then implemented policies including child subsidies and state-funded day care, and the birthrate increased to 9.4 per 1,000 in 2015. At the same time, the city actively recruits international students to its Technological University, and city leaders are developing materials designed to help both attract and assimilate immigrants. Net immigration to the city has gone from zero in 2008 to 22 for every 1,000 inhabitants in 2013.

Another approach is for aging cities to embrace their demographic reality by ensuring that life is good for the elderly who already live there, and potentially attracting more. In Japan, the city of Toyama has focused on developing an attractive environment for older people over the past decade. Its efforts include building a compact city center, improving public transportation (increasing accessibility for aged residents with a light rail system), creating walking paths, and investing in elder-care facilities. Cities can enhance the quality of life of their elderly by, for instance, creating pedestrian-only zones with elderly walking aids, and subsidizing and improving accessibility to public transport for older residents. A number of cities have programs to manage their aging population. Examples include Belfast's Healthy Cities program and Brighton's Older Person's Services Strategy. Some cities, including Vienna and Helsingborg, are investing in empowering older citizens to remain more self-sufficient by providing them with the latest tools for education, health promotion, and social and physical activity. For instance, Udine in Italy has been developing neighborhood plans that promote socialization and intergenerational solidarity.³⁸

Aging cities can find themselves squeezed by declining tax revenue as their working-age population declines at the same time that the cost of providing health and social care to elderly citizens increases. In such cases, existing infrastructure and services can be directed toward older citizens. For instance, schools can be repurposed as day-care centers for the elderly. And since older people have much more time on their hands than younger people, a substantial part of that time could be spent improving the community through volunteering.

Many of the cities experiencing low or negative population growth are postindustrial urban areas that were once at the forefront of manufacturing but now belong to what is popularly known as the Rust Belt. In the United States, they include Buffalo, New York; Cleveland, Toledo, and Youngstown, Ohio; Detroit and Flint in Michigan; and Pittsburgh, Pennsylvania. Europe, too, has many postindustrial cities including, for instance, Belfast, Northern Ireland, whose shipbuilding industry went into decline, and Sheffield, England, which specialized in steel; and Torino (Turin), Italy, which had been reliant on the car industry.

Like aging cities, they have a choice of strategy. One approach is to right-size infrastructure and services to cater to a smaller population and improve productivity. Too much

³⁸ For a discussion of policy measures cities can undertake, see *Ageing in cities*, OECD, 2015. .

infrastructure and services designed for a larger population is a waste. A “build it and they will come” mentality—putting in place infrastructure in anticipation of future population growth—risks excess, underused, and expensive capacity. In the 1950s, courtesy of a thriving steel industry, Youngstown, Ohio, had a population of 170,000, making it the 57th most populous city in the United States. When the steel plants closed in the 1970s, the city’s population shrank to 85,000. The city reacted with a new strategic vision acknowledging that the city was now a “size-40 man wearing a size-60 suit” and aiming to stabilize the population at the current level but improve citizens’ quality of life. By pulling together around an explicit plan, the city was able to experiment with some tough initiatives including scaling back subsidies for refurbishing low-income houses in hollowed-out neighborhoods in a bid to encourage residents to move to more vibrant areas. The city quadrupled funds for tearing down decrepit buildings and waived back taxes on abandoned lots. A sign that the city’s efforts may be paying off was the fact that in 2009 *Entrepreneur* magazine listed Youngstown among the ten best US cities for startup businesses.³⁹ In eastern Germany, Leipzig recognized the challenge of population decline and developed a strategy at an urban workshop in 1996. Leipzig subsequently participated in the Federal Stadtumbau-Ost program of housing demolition and renovation.⁴⁰

Another option is reinvention, implementing policies that change a city’s demographic destiny. Postindustrial cities can diversify into new industries in an attempt to attract new migrants and international immigrants. The steel city of Sheffield today uses its advanced manufacturing skills and precision machine tooling to produce wind and nuclear power products. Belfast is using the dock where the ill-fated *Titanic* was built to engineer the world’s first commercial sea turbine. Turin has converted its old factory infrastructure to house the Torino Wireless ICT cluster.⁴¹ In the United States, Buffalo, whose population declined by 0.2 percent annually between 2000 and 2014, is trying to create more jobs in technology, provide more affordable housing, and encourage international migrants through refugee resettlement options. Detroit and Tampa rank 16th and 20th, respectively, for attracting international migrants. Both cities have a low cost of living and established migrant communities. In 2010, the *Global Detroit* study documented the impact of immigrants on the regional economy and identified 11 strategic initiatives to make the city and its region more attractive to international migrants.⁴² Reinvention has its risks, as the case of Flint, Michigan, illustrates. Flint, once a vibrant car manufacturing city, went into decline after its car plants closed, and tried tourism as a substitute economic activity. One scheme—the theme park Auto World—cost \$80 million but went bankrupt after only two years.⁴³

³⁹ Jason Daley, “Where to be an entrepreneur,” *Entrepreneur*, July 20, 2009. See also Thorsten Wiechmann and Katrina M. Pallagst, “Urban shrinkage in Germany and the USA: A comparison of transformational patterns and local strategies,” *International Journal of Urban and Regional Research*, volume 36.2, March 2012.

⁴⁰ Anne Power, Jörg Plöger, and Astrid Winkler, *Transforming cities across Europe: An interim report on problems and progress*, CASereport 49, Centre for Analysis of Social Exclusion, London School of Economics and Political Science, June 2008.

⁴¹ Anne Power, “How Europe’s industrial cities bounced back from the brink of ruin,” *Cityscope*, May 25, 2016.

⁴² As of 2014, more than \$7 million in philanthropic, corporate, government, and individual funding had been raised for initiatives identified in the study, including efforts to keep international students in Detroit, initiatives to welcome new arrivals, support for urban neighborhood microenterprise training and lending, and a range of social services. Proof of the success of this initiative lies in the growth in migrant microcommunities around the city such as the Bangladeshi community that has settled in the southwestern suburbs and built thriving food stores and retailers. Steve Tobocman, *Global Detroit*, New Economy Initiative of Southeast Michigan, Detroit Regional Chamber of Commerce, and Skillman Foundation, May 2010.

⁴³ J. Eyles, “Tourism in the rust belt: Using the past as an economic development strategy,” in *Sustainable Tourism III*, F. D. Pineda and C. A. Brebbia, eds., WIT Press, 2008.

Immigrants could help to arrest population decline in both aging and postindustrial cities, bringing valuable skills, boosting growth, and even raising the productivity of native-born workers.⁴⁴ A far greater share of immigrants is of working age than the native-born population, so their influx is helping to expand the labor force of the receiving city.⁴⁵ Economist David Card finds that immigration not only helps to bolster population growth but also has a positive impact on a region's wages, housing prices, rents, and cultural diversity.⁴⁶ The Brookings Institution similarly finds that immigration can reverse population losses in urban areas, expand their workforce, boost home values, reduce vacancy and foreclosure problems, and promote cultural diversity.⁴⁷ This is not surprising given the demographic profile of immigrants who tend to be both more educated than native-born Americans in aggregate and who are also largely of prime working age. Fifty-nine percent of immigrants to the United States were aged between 25 and 54 (prime working years), which is a much higher share than the 37 percent of native-born Americans who are in the same age group.

Integrating both migrants and immigrants is important.⁴⁸ Stuttgart, Germany, is a notable example of a city investing in holistic integration efforts. The city instituted a "Pact for Integration" designed to create a community accepting of the identities and histories of all its constituents. The effort included multilingual education and trained mediators on call to intervene in case of cultural conflict. Stuttgart also created an "international committee," a local consultative body that included elected immigrants, to provide immigrants with

⁴⁴ See, for example, Ethan Lewis and Giovanni Peri, "Immigration and the economy of cities and regions," in *Handbook of regional and urban economics, volume 5A*, Gilles Duranton, J. Vernon Henderson, and William C. Strange, eds., Elsevier, 2015, and *International migration outlook 2011*, OECD, July 2011. For a discussion of pro-growth immigration policy in Europe, see *A window of opportunity for Europe*, McKinsey Global Institute, June 2015. A paper from the Brookings Institution finds that the share of working-age immigrants in the United States who have a bachelor's degree has risen considerably since 1980 and is now higher than the share without a high school diploma. In 1980, only 19 percent of immigrants aged 25 to 64 held a bachelor's degree, and nearly 40 percent had not completed high school. By 2010, 30 percent of working-age immigrants had at least a college degree and 28 percent lacked a high school diploma. Furthermore, the paper found that 44 of the 100 largest US cities are high-skill immigrant destinations, in which college-educated immigrants outnumber immigrants without high school diplomas by at least 25 percent. See Matthew Hall et al., *The geography of immigrant skills: Educational profiles of metropolitan areas*, Brookings Metropolitan Policy Program, June 2011. One US study found that every one percentage point rise in the share of immigrant college graduates in the population increases patents per capita by 6 percent. See Jennifer Hunt and Marjolaine Gauthier-Loiselle, *How much does immigration boost innovation?* NBER working paper number 14312, September 2008. See also William R. Kerr, *US high-skilled immigration, innovation, and entrepreneurship: Empirical approaches and evidence*, NBER working paper number 19377, August 2013. In addition, research has found that flows of high-skilled migrants between countries and other types of cultural ties facilitate cross-border venture capital deals. See Sonal Pandya and David Leblang, *Deal or no deal: The growth of international venture capital investment*, University of Virginia, November 2011. Skilled migrants have been critical to the growth of some of the world's leading technology hubs. Recent research found that nearly half of the top US companies funded by venture capital had at least one immigrant founder. See Vivek Wadhwa, AnnaLee Saxenian, and F. Daniel Siciliano, *Then and now: America's new immigrant entrepreneurs*, Ewing Marion Kauffman Foundation, October 2012, and Stuart Anderson, *Immigrant founders and key personnel in America's top 50 venture-funded companies*, National Foundation for American Policy policy brief, December 2011.

⁴⁵ The populations of Australia, Canada, and the United States have more than doubled in the past 50 years as a result of higher migration and fertility rates. See *Global growth: Can productivity save the day in an aging world?* McKinsey Global Institute, January 2015. A review of academic research finds that immigration is associated with higher wages and higher productivity among native-born workers through innovation and possibly through entrepreneurship. See Ethan Lewis and Giovanni Peri, "Immigration and the economy of cities and regions," in *Handbook of regional and urban economics, volume 5A*, Gilles Duranton, J. Vernon Henderson, and William C. Strange, eds., Elsevier, 2015.

⁴⁶ David Card, *How immigration affects U.S. cities*, Centre for Research and Analysis of Migration discussion paper number 11/07, June 2007.

⁴⁷ Jill Wilson and Audrey Singer, *Immigrants in 2010 metropolitan America: A decade of change*, Brookings Institution, October 2011.

⁴⁸ Forthcoming analysis from MGI finds that international migrants overwhelmingly remain in cities: some 92 percent of immigrants in the United States, 95 percent in the United Kingdom and Canada, and 99 percent in Australia live in urban areas. Although extensive academic evidence shows that immigration does not harm the employment prospects and wages of native-born workers, it is also the case that short-term unemployment can be exacerbated by large inflows. It is vitally important that immigrants are effectively integrated if their influx is not to create stresses on the management of cities—and economies. Today, MGI finds that no country fares well on integration, and yet, improved integration could produce \$800 billion to \$1 trillion in annual global economic output.

a political and civic voice. Stuttgart boasts the lowest immigrant unemployment rates of any city in Germany. Following Stuttgart's model, a number of other cities in Germany and elsewhere around the world have crafted similar frameworks.



The demographic shifts that we are now observing are transforming the urban world. After a golden era of urban expansion—albeit a period that brought many challenges as cities expanded—cities are now entering a time in their lives when growth will not be so easy, competition among cities to attract the people they need to power economic growth will gather force, and the imperative to be as efficient and productive as possible in the management of cities is one that no urban leader can ignore. Today, we are seeing these pressures largely in developed economies but they will roll across the world and affect cities in the emerging world that today are still expanding rapidly, fueling economic growth.

The demographic footprints of cities are already vastly different even within the same country, and as competition for people grows, they could become more different still. The answer for cities searching to maintain growth in a more challenging era will vary; there is no single blueprint for the urban world. What is certain is that cities remain the lifeblood of the world economy, and how they react to changing demographics is critically important for the health of the global economy in coming years.

BIBLIOGRAPHY

A

Anderson, Stuart, *Immigrant founders and key personnel in America's top 50 venture-funded companies*, National Foundation for American Policy policy brief, December 2011.

Antczak, Elzbieta, and Karolina Lewandowska-Gwarda, "Migration processes in European cities: A spatio-temporal analysis using different spatial weights matrices," *Estudios de Economía Aplicada*, volume 33, number 1, April 2015.

B

Baig, Aamer, Andre Dua, and Vivian Riefberg, *Putting citizens first: How to improve citizens' experience and satisfaction with government services*, McKinsey Center for Government, November 2014.

Been, Vicki, Ingrid Gould Ellen, Michael Gedal, Edward Glaeser, and Brian J. McCabe, *Preserving history or hindering growth? The heterogeneous effects of historic districts on local housing markets in New York City*, NBER working paper number 20446, September 2014.

Bernt, Matthias, Annagret Haase, Katrin Grobmann, Matthew Cocks, Chris Couch, Caterina Cortese, and Robert Krzysztófik, "How does(n't) urban shrinkage get into the agenda? Experiences from Leipzig, Liverpool, Genoa, and Bytom," *International Journal of Urban and Regional Research*, volume 38.5, September 2014.

Bettencourt, Luís M. A., José Lobo, Dirk Helbing, Christian Kühnert, and Geoffrey B. West, "Growth, innovation, scaling, and the pace of life in cities," *Proceedings of the National Academy of Sciences, United States*, volume 104, number 17, April 2007.

Bettencourt, Luís M. A., José Lobo, Deborah Strumsky, and Geoffrey B. West, *Urban scaling and its deviations: Revealing the structure of wealth, innovation, and crime across cities*, PLoS ONE, volume 5, issue 11, November 2010.

Bishop, Bill, *The big sort: Why the clustering of like-minded America is tearing us apart*, Houghton Mifflin, 2008.

Buch, Tanja, Silke Hamann, Annkatrin Niebuhr, and Anja Rossen, "What makes cities attractive? The determinants of urban labour migration in Germany," *Urban Studies*, volume 51, issue 9, July 2014.

C

Cadena, Andrés, Richard Dobbs, and Jaana Remes, "The growing economic power of cities," *Journal of International Affairs*, volume 65, number 2, spring/summer 2012.

Card, David, *How immigration affects U.S. cities*, Centre for Research and Analysis of Migration discussion paper number 11/07, June 2007.

D

Daley, Jason, "Where to be an entrepreneur," *Entrepreneur*, July 20, 2009.

E

Eyles, J, "Tourism in the rust belt: Using the past as an economic development strategy," in *Sustainable Tourism III*, F. D. Pineda and C. A. Brebbia, eds., WIT Press, 2008.

The Equality of Opportunity Project, *Causal effects of the 100 largest commuting zones on household income in adulthood*, city rankings.

F

Federal Office for Building and Regional Planning of Germany, "Where Europe is growing and where it is shrinking (map)," Federal Institute for Research on Building, Urban Affairs and Spatial Development, 2015.

G

Gill, Indermit S., and Chor-Ching Goh, "Scale economies and cities," *World Bank Research Observer*, volume 25, number 2, August 2010.

Glaeser, Edward L., and Joshua D. Gottlieb, *The wealth of cities: Agglomeration economies and spatial equilibrium in the United States*, NBER working paper number 14806, March 2009.

Glaeser, Edward L., and Joseph Gyourko, "The impact of building restrictions on housing affordability," *Economic Policy Review*, June 2003.

Glaeser, Edward L., Joseph Gyourko, and Raven Saks, "Why is Manhattan so expensive? Regulation and the rise in house prices," *Journal of Law and Economics*, volume 48, number 2, October 2005.

Glaeser, Edward L. and Bryce A. Ward, "The causes and consequences of land use regulation: Evidence from Greater Boston," *Journal of Urban Economics*, volume 65, number 3, May 2009.

H

Hall, Matthew, Audrey Singer, Gordon F. De Jong, and Deborah Roempke Graefe, *The geography of immigrant skills: Educational profiles of metropolitan areas*, Brookings Metropolitan Policy Program, June 2011.

Hsieh, Chang-Tai, and Enrico Moretti, *Why do cities matter? Local growth and aggregate growth*, Kreisman working paper number 30, University of Chicago Law School, May 2015.

Hunt, Jennifer, and Marjolaine Gauthier-Loiselle, *How much does immigration boost innovation?* NBER working paper number 14312, September 2008.

I

IMF, *World economic outlook: Too slow for too long*, April 2016.

K

Keith, Michael, *The great migration: Urban aspirations*, World Bank policy research working paper number 6879, May 2014.

Kerr, William R., *US high-skilled immigration, innovation, and entrepreneurship: Empirical approaches and evidence*, NBER working paper number 19377, August 2013.

Kolko, Jed, "Urban revival? Not for most Americans," jedkolko.com, March 30, 2016.

Kresl, Peter Karl, and Daniele Ietri, *The aging population and the competitiveness of cities: Benefits to the urban economy*, Edward Elgar Publishing, 2010.

L

Lanzieri, Giampaolo, "Towards a 'baby recession' in Europe? Differential fertility trends during the economic crisis," *Eurostat Statistics in Focus*, number 13/2013, 2013.

Lee, Ronald, and Andrew Mason, eds., *Population aging and the generational economy: A global perspective*, Edward Elgar Publishing, 2011.

Lewis, Ethan, and Giovanni Peri, "Immigration and the economy of cities and regions," in *Handbook of regional and urban economics, volume 5A*, Gilles Duranton, J. Vernon Henderson, and William C. Strange, eds., Elsevier, 2015.

M

McKinsey & Company, *Better for less: Improving public sector performance on a tight budget*, July 2011.

McKinsey & Company, *How to make a city great*, September 2013.

McKinsey Global Institute, *A blueprint for addressing the global affordable housing challenge*, October 2014.

McKinsey Global Institute, *Building globally competitive cities: The key to Latin American growth*, August 2011.

McKinsey Global Institute, *Global growth: Can productivity save the day in an aging world?* January 2015.

McKinsey Global Institute, *India's urban awakening: Building inclusive cities, sustaining economic growth*, April 2010.

McKinsey Global Institute, *A labor market that works: Connecting talent with opportunity in the digital age*, June 2015.

McKinsey Global Institute, *Lions on the move II: Realizing the potential of Africa's economies*, September 2016.

McKinsey Global Institute, *Poorer than their parents? Flat or falling incomes in advanced economies*, July 2016.

McKinsey Global Institute, *Preparing for China's urban billion*, March 2009.

McKinsey Global Institute, *Urban America: US cities in the world economy*, April 2012.

McKinsey Global Institute, *Urban world: Cities and the rise of the consuming class*, June 2012.

McKinsey Global Institute, *Urban world: The global consumers to watch*, April 2016.

McKinsey Global Institute, *Urban world: Mapping the economic power of cities*, March 2011.

McKinsey Global Institute, *Urban World: A new app for exploring an unprecedented wave of urbanization*, September 2013.

McKinsey Global Institute, *A window of opportunity for Europe*, June 2015.

Moller, Lars Christian, *Ethiopia's great run: The growth acceleration and how to pace it*, World Bank working paper number 99399, November 2015.

O

OECD, *International migration outlook 2011*, July 2011.

OECD, *Ageing in cities*, 2015.

P

Pandya, Sonal, and David Leblang, *Deal or no deal: The growth of international venture capital investment*, University of Virginia, November 2011.

Power, Anne, Jörg Plöger, and Astrid Winkler, *Transforming cities across Europe: An interim report on problems and progress*, CASEreport 49, Centre for Analysis of Social Exclusion, London School of Economics and Political Science, June 2008.

T

Tobocman, Steve, *Global Detroit*, New Economy Initiative of Southeast Michigan, Detroit Regional Chamber of Commerce, and Skillman Foundation, May 2010.

U

United Nations, *International migration report 2015: Highlights*, Population Division, 2016.

United Nations, *World population prospects: The 2015 revision*, Population Division, July 2015.

United Nations, *World urbanization prospects: The 2014 revision*, Population Division, July 2014.

W

Wadhwa, Vivek, AnnaLee Saxenian, and F. Daniel Siciliano, *Then and now: America's new immigrant entrepreneurs*, Ewing Marion Kauffman Foundation, October 2012.

Wiechmann, Thorsten, and Katrina M. Pallagst, "Urban shrinkage in Germany and the USA: A comparison of transformational patterns and local strategies," *International Journal of Urban and Regional Research*, volume 36.2, March 2012.

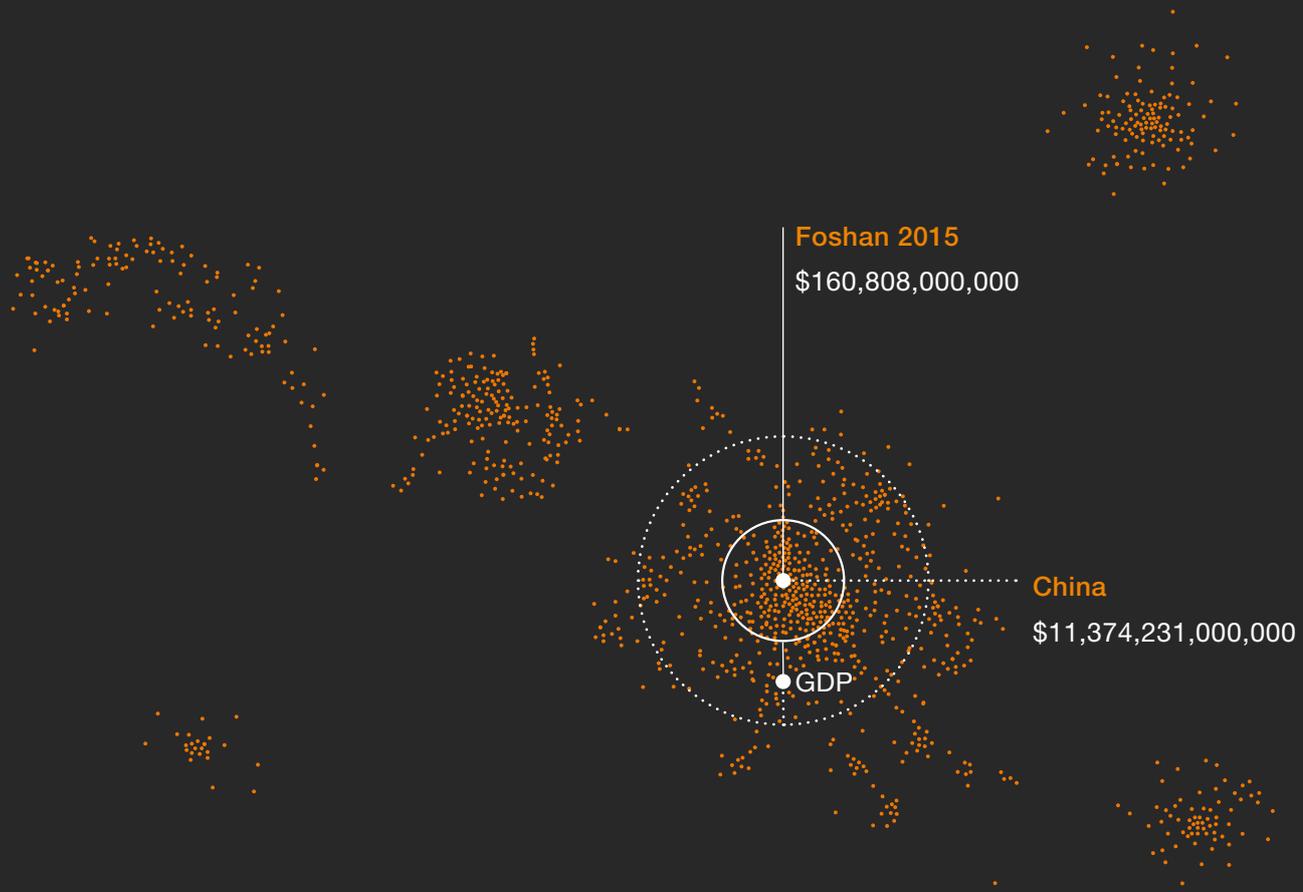
Wilson, Jill, and Audrey Singer, *Immigrants in 2010 metropolitan America: A decade of change*, Brookings Institution, October 2011.

Wilson, Jill, Cathy Sun, and David Raglin, *State of metropolitan America: On the front lines of demographic transformation*, Metropolitan Policy Program at Brookings, 2010.

Woetzel, Jonathan, Geng Xiao, and Lan Xue, *The Urban Sustainability Index: A new tool for measuring China's cities*, Urban China Initiative, November 2010.

World Bank, *World development report 2009: Reshaping economic geography*, November 2008.

World Health Organization, *Global age-friendly cities: A guide*, 2007.



86%
GLOBAL GDP
GROWTH IS
GENERATED
IN CITIES



WHAT HAPPENS WHEN URBAN POPULATION GROWTH DECLINES?

Are cities ready for the demographic challenge that faces so many of them? For more than a decade now, McKinsey Global Institute has been studying the unprecedented global wave of urbanization and the impact of changing demographics. As the business and economics research arm of McKinsey, we provide leaders in the commercial, public, and social sectors with the facts and insights on which to base management and policy decisions.

[Download the Urban World App](#)

Build your understanding of how the urban world is changing by exploring data on GDP, population, and demographics from 3,000 cities.



RELATED MGI RESEARCH



Urban world: The global consumers to watch (April 2016)

Dramatic demographic shifts are transforming the world's consumer landscape. Just three groups of consumers are set to generate half of global urban consumption growth from 2015 to 2030, and have the power to reshape global consumer markets.



Urban world: Cities and the rise of the consuming class (June 2012)

The speed and scale of urban growth today is astounding. MGI explores the urbanization phenomenon and the impact of the one billion people in rapidly growing emerging-market cities who will become consumers by 2025.



Global growth: Can productivity save the day in an aging world? (January 2015)

Without action, global economic growth will almost halve in the next 50 years. Global employment growth has been slowing for more than two decades, leaving the onus on accelerating productivity growth to power the world's economic engine.



Urban America: US cities in the global economy (April 2012)

In a world of rising urbanization, the degree of economic vigor that the economy of the United States derives from its cities is unmatched by any other region of the globe. Large US cities, defined here as those with 150,000 or more inhabitants, generated almost 85 percent of the country's GDP in 2010, compared with 78 percent for large cities in China and just under 65 percent for those in Western Europe during the same period. In the next 15 years, the 259 large US cities are expected to generate more than 10 percent of global GDP growth—a share bigger than that of all such cities in other developed countries combined.



Urban world: The shifting global business landscape (October 2013)

By 2025, almost half of the world's biggest companies will probably be based in emerging markets, profoundly altering global competitive dynamics.



Urban world: Mapping the economic power of cities (March 2011)

Six hundred cities—the City 600—are projected to generate more than 60 percent of global growth to 2025. Within this group, companies need to adjust their strategy to include the 577 fast-growing “middleweight cities.”

www.mckinsey.com/mgi

E-book versions of selected MGI reports are available at MGI's website, Amazon's Kindle bookstore, and Apple's iBooks Store.

Download and listen to MGI podcasts on iTunes or at www.mckinsey.com/mgi/publications/multimedia/

Cover image: © Imagewerks/Getty Images.



McKinsey Global Institute
October 2016
Copyright © McKinsey & Company
www.mckinsey.com/mgi

 @McKinsey_MGI
 McKinseyGlobalInstitute