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Cities of Opportunity 6: We the urban people

Cities of Opportunity 6: We the urban people investigates demographics in 30 of the world's capitals of finance, commerce, and culture. By doing so, we take the shape of city populations and the priorities of city people in the midst of an urban demographic megatrend. We also add a human complement to the quantitative, comparative story in Cities of Opportunity 6. Both studies can be found at www.pwc.com/cities with additional information and interactive tools.

Cover image: Two schoolgirls chat next to a businessman on the Yamanote Line train in Tokyo.

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Examining an urban demographic megatrend by population patterns and community needs

The idea of *Cities of Opportunity* has always been to look closely and carefully at a small, representative group of the world's leading centers of business, finance, and culture. We assess their standing on a balanced scorecard of social and economic qualities to develop a comprehensive profile of city life.

In a sense, we have been trying to open a window and share the lessons of the world's big, churning centers of business, finance, innovation, and entrepreneurship—and do so with equal attention to tangible foundations in infrastructure, economics, and education, among others, as well as the intangible qualities like cultural vibrancy, livability, green space, and the comfort of knowing the roof is sound, the train gets us to work on time, and our water and other natural resources are ample and clean.

The thoughts of city people and the shape of urban populations have always been included in the *Cities of Opportunity* mix but never as a discrete examination of the demographic factors at work in city life—ages, densities, dependencies, even the preferences of the people who make cities live today and thrive tomorrow. *Cities of Opportunity 6: We the urban people* complements our comparative approach in *Cities of Opportunity 6* with an entirely human analysis.

We're in the midst of an urban demographic megatrend: Over half of us (53.4%) live in cities today and many more will in the future, according to the United Nations.¹ An important story lies in the demographic patterns, critical needs, and challenges of the people who live in and build large, sophisticated cities.

Do demographics—the mix of ages in a city, the density of population, and the direction of growth—determine urban destiny? What do urban demographic patterns mean to the people living in cities and their policymakers in terms of understanding future

directions—a static fact to face or a dynamic process to manage? How should we interpret the demographic trends we read about?

What do urban people care about most—especially those talented professionals in their most productive working years that cities need in order to continue building prosperity? And what about the increasing proportion of older citizens as we live longer or slow our rate of natural population growth? Does a rising percentage of people in their 70s, 80s, and 90s pose a threat to urban social and health services and city growth? Or does the very density of city life suggest a pathway into dealing with aging naturally and logically? And will longevity turn into value potential as elder citizens continue their vital engagement in city life?

To answer these questions, *Cities of Opportunity 6: We the urban people* looks through a number of lenses at the demographics of our 30 cities.

First we develop a foundation to understand the demographic shape of things as they are in the 30 cities and as they are projected to be in 2025. The study compares population statistics overall by the averages, segmented into six age groups: youth, young workers, prime age workers, seasoned workers, retirees (including a share for those still working among this increasingly healthy age group), and the elderly over age 75. We examine the ratio of economic dependency among young and old on the working-age population. We note the city's geographic area and density—big or small, sprawling or packed. The study projects population growth components to 2025, summing up natural increase and net migration. And we offer a scorecard that establishes a sense of direction, not judgment, on the demographic path of our 30 cities. That ranking allows us to compare the nuances of city demographics as we move toward quarter century and reflect on the different trajectories of illustrative pairs of our 30 cities.

Demographics are a knowledge tool around which policymakers in business, government, and education can understand the flow of emerging needs and can develop strategies to advance the wellbeing of urban people and communities.

¹ Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2011 Revision*. 2014 interpolated by Oxford Economics.

Urban professionals in the prime of their careers are drawn to relocate to or remain living in those cities with the strongest intellectual capital and technology readiness—and many roads seem to lead to London and New York.

What does it all tell us? Primarily, demographics are not destiny. They are a knowledge tool around which policymakers in business, government, and education can craft strategies. The perceived ticking time bomb of an aging world may not go off after all if we more fully value and better engage older citizens in city life and modify approaches to living accommodations and care. In fact, the aging megatrend could pay dividends if people, cities, and organizations adapt to the potential, as well as needs, of a growing older demographic. Similarly, urban densities that might seem tight from the outside can lend themselves to efficiency. More spread-out cities can be managed effectively when they start to sprawl. And migration adds another element to the flow of urban population patterns. Demographics clearly are fluid.

Second, PwC's own people told us the world is getting smaller; urban values are a common denominator, and opportunity is the key word. We consulted with our own professionals on city life because they offer a broad proxy for the educated, globally mobile service sector of engineers, technicians, skilled trade workers, and others upon which cities depend for growth. We also recognized PwC is among the world's most urban and globalized businesses, organized in strategic cities to reflect the needs and footprint of our clients. Many of our almost 190,000 people work in the very cities we study in *Cities of Opportunity*.

From September to December 2013, we asked our professionals in 30 center-city offices to tell us what they find most critical and most want fixed in their city, where they would want to relocate among the 30 cities if they could, how their commute goes each day, and how they would describe their town. An average of 20% in each of the 30 cities responded to a five-minute survey—15,000 people in all with nearly half in their prime working years from ages 30 to 49.

PwC people want opportunity foremost, and they're willing to fight the challenges of keen competition and big city life to get it. One in five (20%) picked London as their first choice if they were to move to another of the 30 cities, with New York not far behind at 18%. Clearly, a large number of our urban professionals are driven to test themselves in the most demanding work environments; take part in the amazing energy and freedom of a great city; and battle high costs, crowded subways, tight living spaces, or long commutes to do so. (The attraction of our two largest offices looks even more dramatic when measured by the 47% and 41% who selected relocation to London and New York, respectively, among their top three choices.)

Not that the charms of city life are lost on our urban professionals. The livability and beaches of sunny Sydney, the least dense of our cities, lures 10% of respondents, saying it's their top choice for relocation. San Francisco—our smallest city with a sophistication, natural beauty, and innovative sensibility all its own—attracts 9%. Despite these charms, neither city lacks urban challenges: Nearly all respondents in Sydney and San Francisco (93% and 95%, respectively) cite affordability among the top three problems they would like to see fixed. Nearly four out of five in both cities say the city is “expensive” when choosing top three words to describe it.

Taking a step back and correlating the results of our survey in *Cities of Opportunity 6: We the urban people* with the performance in our 10 indicator categories in *Cities of Opportunity 6* (www.pwc.com/cities), we also discover that PwC urban professionals are drawn to relocate to or remain living in those cities with the best scores in intellectual capital and innovation, as well as technology readiness. Both indicator categories are in the top three most positive correlations in relocation desirability, as well as likelihood of staying in a city. Meantime, a city performing well in demographics and livability proves the

second strongest draw for relocation. And good health, safety, and security posts the third highest positive correlation with those who plan to put down long-term roots in a city. All this seems natural for skilled professionals in the prime of their career working in a knowledge-based economy.

These and other findings support the *Cities of Opportunity* hypothesis that socioeconomic balance is key to a thriving city. Consider that friends and family and employment prospects are the first and second most critical priorities to have in a city for our professionals, with 29% and 23%, respectively, choosing them as the top “must have” trait. Affordability (28%) and transportation and infrastructure (24%) are our most critical areas to improve. A balance of heart and mind is at work when we think about what we need in a city.

Following on that, we see that love/hate relationships often characterize the bond between a great city and its citizens. For instance, many of the city slogans suggested by our 15,000 respondents give voice to the dualism so many of us feel in city life. We love the electricity; we hate the never-ending uphill battle. From London we’re told: “Best culture, sport, and vibe. But it’s over-crowded.” From New York we hear: “The city that doesn’t sleep because it can’t afford to.” That crescendo of being pulled in by energy and opportunity yet pushed back by urban challenges echoes worldwide among our 30 cities, from smallest to largest, emerging or developed.

Finally, we look at an aging population and see that cities may provide one of the best solutions to this demographic megatrend with their density, possibilities for “naturally occurring retirement communities,” and centralized provision of social and health services. In terms of understanding the implications of aging populations—a major issue as demographics shift and traditional family bonds are tested by migration and work pressures—we examine a few cities that have been working

hard to pull the elderly in from the sidelines to the center of city life. Seoul, Stockholm, and Tokyo each in its own way is turning what may have been lonely old age into greater longevity potential for the elderly and their cities.

This potential may be grasped most quickly when we see the continuing contribution of elder doctors, teachers, public servants, and businesspersons (from CEOs to small shop owners) who remain vitally engaged in city life. But it also takes shape in new demand for an array of products and services that an aging population requires.

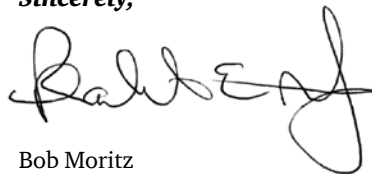
In closing, the demographic issues covered here are only a few of the many that affect cities; for instance, managing class sizes or excess school capacity as birth rates fluctuate, or trying to get city living right for urban families. However, we have attempted to cover some of the most pressing areas of urban demographics and to offer a foundation for thought.

We would like to thank all those who helped us in cities around the world, including the PwC people who took the time to tell us about the human issues, problems, and solutions an urban world shares.

We hope this study is of interest to the many cities with issues similar to our 30 Cities of Opportunity, the businesses that depend on urban economies for success, and, of course, the city people who invest themselves in the continuing vitality of their urban communities.

Cities may provide one of the best solutions to an aging world with their density and ability to centralize provision of services. And some cities are working hard to pull the elderly from the sidelines to the center of urban life.

Sincerely,



Bob Moritz
US Chairman and Senior Partner
PricewaterhouseCoopers LLP

Tracking the arc of urban demographics

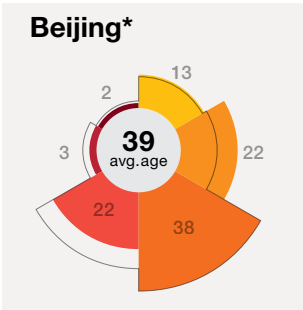
If “a great city is an inventory of the possible,” as René Descartes said about 17th century Amsterdam, people themselves give life to a city and turn dreams into possibilities—whether schools or businesses, parks or theatres, roadways or hospitals. Demography provides a statistical portrait of the people in fine detail and broader trends on ages, densities, dependencies, and more, applying statistics to the study of human population. Here, we examine the population patterns of the 30 cities included in *Cities of Opportunity 6* and take a closer look at two important demographic groups. First, global cities all require highly skilled, working-age people to build the future. Insight into urban professionals comes from 15,000 at PwC who took five minutes to tell us their city story. Second, an increasingly elderly world population calls for wise approaches to urban aging. Solutions being developed in Seoul, Stockholm, and Tokyo show cities working hard to turn lonely old age into a longevity dividend.

The big city picture leads to a focus on two critical groups.

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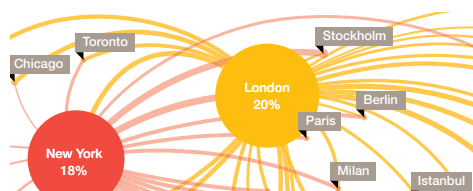


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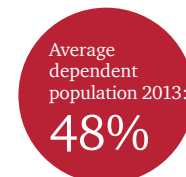


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On the web

See www.pwc.com/cities for interactive tools, videos, and our complementary urban benchmarking study—*Cities of Opportunity 6*



Are demographics destiny?





Teen spirit brings new life to a monument at Plaza General San Martín in Buenos Aires.

What we talk about when we talk about demography

Density, dependency, growth, and urban policymaking

The notion of “human capital” has, since the days of Adam Smith, always been a richer description of the human nature of “economics” than that of a more utilitarian concept such as “human resources.” Human capital defines an *active* engagement with the world: “the acquisition of...talents,” in Smith’s famous formulation, which “not only make a part of [one’s] fortune,” but “likewise that of...society.”² Human capital, in other words, “ventures” much more so than most other forms of capital. It continually explores, discovers, invents—in contemporary terms, innovates—and, in so doing, multiplies its worth many times over.

Human capital is not just a qualitative description, however. It is also a quantitative metric. That is to say, as it refers to *numbers* of people, it is also a demographic measure.

In *Cities of Opportunity 6: We the urban people*, we add a new element to the socioeconomic benchmarking in its companion volume, *Cities of Opportunity 6* (www.pwc.com/cities). Here, we concentrate on the overall demographic profiles of our 30 cities and project them into 2025. Presenting various demographic patterns, from age breakdowns to net migration, as well as comparisons of city pairs, we highlight the most obvious urban challenges and anticipated trends of the next decade.

Top among the demographic issues a number of cities face are high percentages of old and/or young people theoretically placing an economic burden on a relatively small number of working-age citizens, calculated here as a dependency ratio of active workers in an

economy providing for everyone above age 66 and below age 20. (See “How to read the tiles” on page 9 for a discussion of “modernized” age bands.) Another issue for urban planners is managing density at a time when cities are sprawling outward rather than concentrating into the dense metropolises we traditionally associate with city living. How does a city determine what makes most sense? Is it tightly packed urban spaces, loosely flowing outward growth, or a combination of the two?

The information “tiles” in the “Vital statistics” section represent not only snapshots that condense, summarize, and illustrate the current demographic reality of each city—they also project every city’s population changes (if any) into 2025, both in total numbers and in the respective age groups. While the key on page 9 explains how to read the tiles, illustrative examples in the text that follows, and the comparison of city pairs that begins on page 17, show us the many ways they can be interpreted.

The demographic time bomb

Perhaps the key story that emerges from our tiles directly addresses what is generally considered to be the most critical demographic issue in the world today: the “graying” of the planet. Throughout the last few years of financial crises, the most prominent issue for governments, whether national or municipal, has been the so-called “demographic time bomb”: the aging population of the world as a whole and of individual countries in particular.³ Indeed, in the euro-zone, much of the debate around necessary

² See Adam Smith, *An inquiry into the nature and causes of the wealth of nations*, Book II, *Of the nature, accumulation, and employment of stock*, Chapter I, “Of the division of stock,” at <http://www.gutenberg.org/files/3300/3300-h/3300-h.htm>. The full quote reads: “The acquisition of such talents [i.e., ‘the acquired and useful abilities of all the inhabitants and members of the society’], by the maintenance of the acquirer during his education, study, or apprenticeship, always costs a real expense, which is a capital fixed and realized, as it were, in his person. Those talents, as they make a part of his fortune, so do they likewise that of the society to which he belongs.”

³ The phrase itself has become a cliché. Journalistic examples abound in the hundreds of thousands; for just three cases of use by scholars and researchers in three different contexts (i.e., three different countries), see Michel Andrieu, “China, a demographic time bomb,” *OECD Observer*, pp. 217–218, summer 1999, at http://www.oecdobserver.org/news/archivestory.php/aid/40/China_a_demographic_time_bomb.html; “Defusing the demographic ‘time-bomb’ in Germany,” *Bulletin of the World Health Organization*, 90:1, January 2012, at <http://www.who.int/bulletin/volumes/90/1/12-020112/en/>; and “Tick, tick, tick: the demographic time bomb,” a panel discussion at the University of Cambridge, November 3, 2012, at <http://www.cam.ac.uk/research/news/tick-tick-tick-the-demographic-time-bomb>.

The problem with demography is that it is often misunderstood as a static fact rather than as a dynamic process. Demographics describe; they do not prescribe.

structural reforms has centered on the issue of the sustainability of current retirement (and labor) policies, given the demographic realities of an aging Europe. In the event, some of our “vital statistics” are genuinely—and, often, surprisingly—illuminating.

Let us begin with Milan. Having the highest dependency ratio of all 30 cities in our report almost makes it a poster child of “old” and economically weakened Europe. But things are not as simple as they seem.

Mumbai has the second highest dependency ratio; Nairobi, an urban emblem during the last few years of current (and future) African economic dynamism, has the third highest; and it isn’t until we get to #7 on the list, Madrid, that we encounter another supposedly old, graying, and increasingly enfeebled European city. In fact, a closer look at dependency ratios reveals a much subtler image of present conditions and future prospects.

The fact is that, although the present discussion in most parts of the world concerning dependency rates is directed at one end of the relationship between work and dependency—that is, pensions and care for the elderly—both young and old are dependents of working-age populations that not only pay the pensions of retired workers but also build the schools and universities of those who have not yet graduated into the workforce. In both cases, simple numbers fail to tell the story: Are the young prepared for careers, and do jobs await them? Are the old extending their healthy, spending—and possibly even working—years into their late 60s and 70s or just enjoying the fruit of their past labors?

To move to specific examples among our cities, only one has a robust—that is, extremely low—percentage of dependents to working-age population: Dubai, at 17%. Two Chinese cities in our study, Beijing and Shanghai, also have vigorous percentages—22% and 27%, respectively—which means that Beijing has just over, and Shanghai just under, four people working for each dependent (under working age, retired, or elderly).

But after these three cities, a sharp drop in active working populations occurs; or put differently, there is a sharp increase in dependency ratios. Mexico City’s ratio translates into about 2.7 people per dependent, while those of San Francisco, Moscow, and Hong Kong come to about 2.5 people (39%–41%), followed by Berlin and Singapore at just over two people (46%).

At this point, the figures become even more interesting, since the next 21 cities, or 70% of the total, essentially find themselves in the same demographic pool, with ratios of about two or less workers per dependent (or

49%–63%). What is even more telling is that these cities span the globe and are almost evenly matched between mature (11) and emerging (10): from Europe to Asia to Africa to Latin America to Australia, they all seem to have dependency issues in less or more acute form.

Moreover, we can only project eight cities—Istanbul, Jakarta, Kuala Lumpur, Mexico City, Mumbai, Nairobi, São Paulo, and Singapore—with lower dependency in 2025 (ranging from 1% to 9%), while Buenos Aires, Johannesburg, and Shanghai will all remain stable. That means that the other 19 cities will have higher percentages of dependents in a decade’s time—contributing to that ostensibly deadly “demographic time bomb” ticking away at the heart of urban civilization.

An urban paradox: The longer you’re around, the better you age

Actually, however, there is another, much more astute—and certainly much more historically reliable—way of reading the data. Again, look at our cities: from Beijing to Berlin, Madrid to Mumbai, San Francisco to Shanghai and Stockholm, and Tokyo to Toronto. Ten of them are former imperial capitals. Another 11 (six in Asia) are a thousand years old or more, while 10 more go back at least to the 16th century and, in Mexico City’s case, to the 13th. Only nine cities (Johannesburg, Kuala Lumpur, Nairobi, Sydney, and the five in North America) are relatively “new,” sharing an average age of under 200 years (except for New York, which celebrates its 390th anniversary this year)—but, again, that fact belies their staying power, and their extraordinary durability and growth, given that they all originated as colonial outposts, trading towns, or even border garrisons.

The problem with demography, therefore, is that it is often misunderstood as a static fact rather than as a dynamic process. In addition, demographics are descriptive, not prescriptive. They measure fertility and mortality rates and statistical ranges of ages and gender; they do not judge them. And that is because population, like economics, is a cyclical ecology; more accurately, it proceeds in waves of excess and balance—hence, for example, that most characteristic of all generational tags, baby boomers.

Above all, human populations are as receptive to, and enhanced by, innovation—technological, cultural, or sociopolitical—as are human economies. Healthier aging, for example, profits from contemporary medicine and nutrition, with lifestyles that stress wellbeing and longer years of active physical and intellectual engagement. Education can now also be accessed through the Internet by far greater numbers of people, whether poor or rich.

In the end, a city of opportunity is thus best described as one of profound resiliency. By definition, it is a city of *options*, of multiple choices, and of multiple paths to follow, whether economic, social, environmental, or demographic. It is never static or passive. It is a city that responds to challenges and, most important of all, anticipates them before they become truly problematic.

Rising to the urban occasion: Expansion vs. sprawl

One of the most widely disseminated visual clichés about emerging cities is their supposedly “teeming” quality. How many photographs, and how many movies have conveyed the unvarying image(s) of Latin American, Asian, or African cities as straitened sites of human congestion bursting at their civic seams? Our demographic breakdowns in the tiles tell us a much more nuanced story, however.

It is true that Mumbai’s density is 20,864 people per square kilometer, Seoul’s is 17,248, and Jakarta, Buenos Aires, and Beijing register a density well above 14,000. The city with the highest density among all our 30 cities, however, is Paris, at 21,549 people per square kilometer. Moreover, while the five emerging cities above are relatively dense, they are not representative of our emerging cities as a group. (Densities are based on city boundaries and populations from national statistics websites and projections by Oxford Economics.)

Our other 11 emerging cities (or two-thirds of the total 15) have an average density of just 4,268 (with a high of 7,573 for São Paulo and an extremely low 521 for Dubai). Meanwhile, the densest mature cities after Paris—New York, Singapore, and Milan—register an average of 8,387 people per square kilometer, over 95% larger than that of the 11 emerging cities. New York itself has a density of 10,694, while even “laid-back” San Francisco (global icon of tension-free urban life)⁴ has a density of 6,853, higher than both of our African cities (and almost three times that of Johannesburg). So, what do these figures mean?

Mainly that, as Sri Mulyani Indrawati, managing director of the World Bank, told a conference in Beijing in March of this year, urban sprawl is leading to cities growing “outward rather than upward.”⁵ According to the World Bank, for example, while Paris

Continued on page 13

4 When PwC’s people in San Francisco were asked in a survey done for this study to choose words or phrases that best described their city, “stressful” was selected fewer times than in any of our 30 cities.

5 In the words of correspondent Charles Clover; see his “World Bank urges China to reform urban development,” *Financial Times*, March 25, 2014.

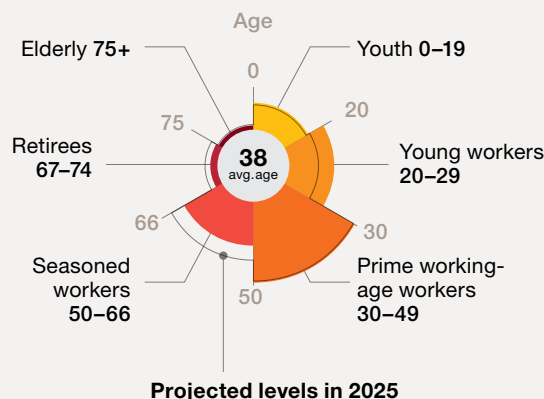
Vital statistics

How to read the “tiles”

Following, on the next three pages, are 30 “tiles”—graphic representations of data sets—regarding each of our Cities of Opportunity, arranged by 2013 population, from largest to smallest. For each city, we have included several demographic data points to illustrate its current profile.

Population percentage of each age group, 2013–2025

The colored segments below represent each age group’s percentage of a city’s overall population: Shown on the right are people under age 50; on the left, over age 50. The gray arc circumscribing each segment of the schematic depicts the projection of the respective age group’s percentage in 2025.



Summary figures on the charts are rounded for ease of comparison; however, the calculations themselves for population density, dependency, and age group percentages are based on actual figures for the 30 cities.

Our working-age definition (20–66) begins and ends working years later than standard definitions (15–64) to recognize two emerging trends: extended education and, therefore, delayed participation in the workforce for the young; and increased retirement ages in many countries, along with longer and healthier working years. By setting retirement at age 67, we consequently include everyone of age 65 and age 66 in our workforce for reasons of determining dependency rates in order to factor in a share for all those working through their 60s.

Population density, 2013



1 dot = 1,000 people per square kilometer (ppl/km²)

$$\text{Density} = \frac{\text{total population}}{\text{total land area}}$$

Dependency, 2013



Each city’s “dependent” population in 2013 is shown in two ways. We first give the sum of everyone above age 66 and below age 20 as a total percentage of the working-age population (22%, for example, in Beijing). We then illustrate it graphically (below the percentage) as a “dependency ratio,” the measure universally used by demographers to indicate the ratio of workers in an economy providing for all dependents.

Baby icon = 1 dependent (young or old)

$$\text{Dependency \%} = \frac{\text{Dependents (population aged 0–19 and 67+)}}{\text{Working age population (aged 20–66)}} \times 100$$

$$\text{Dependency ratio} = \frac{\text{Working age population (aged 20–66)}}{\text{Dependents (population aged 0–19 and 67+)}}$$

Land area, 2013

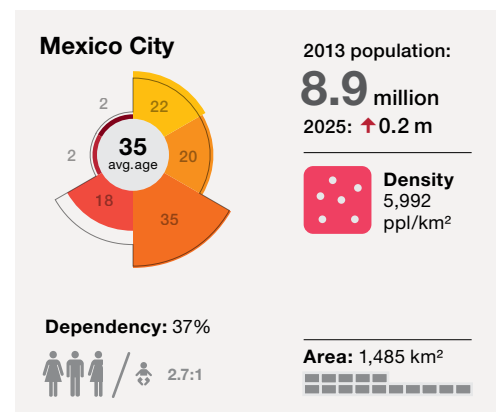
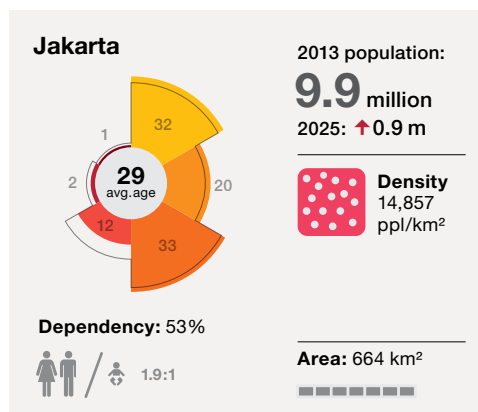
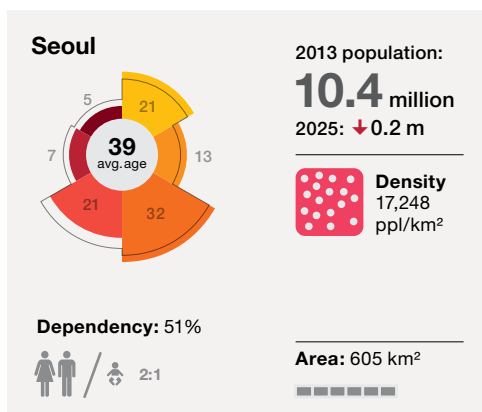
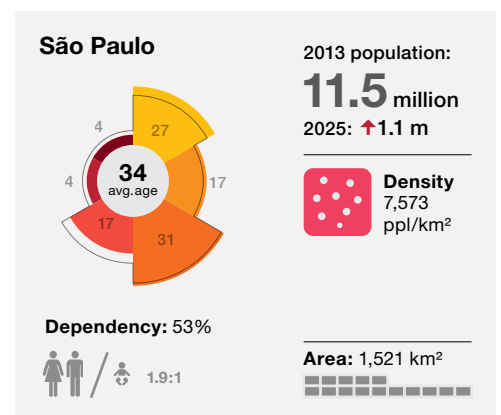
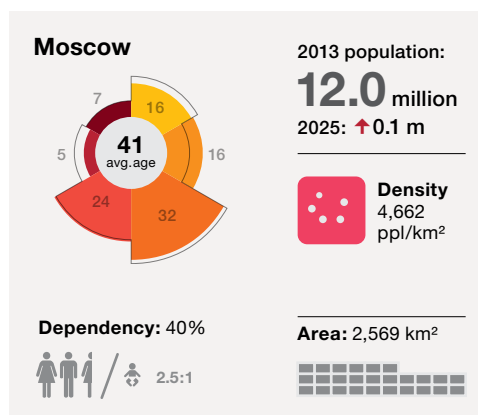
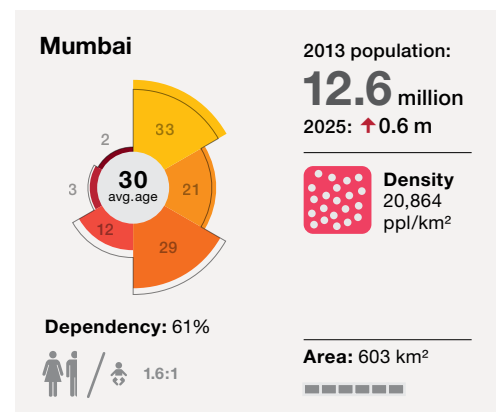
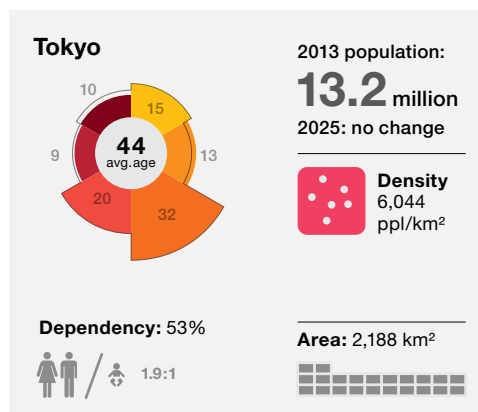
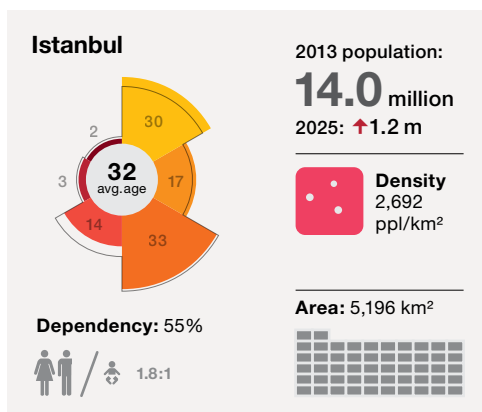
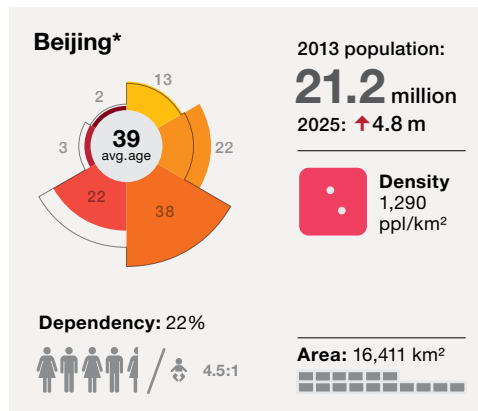
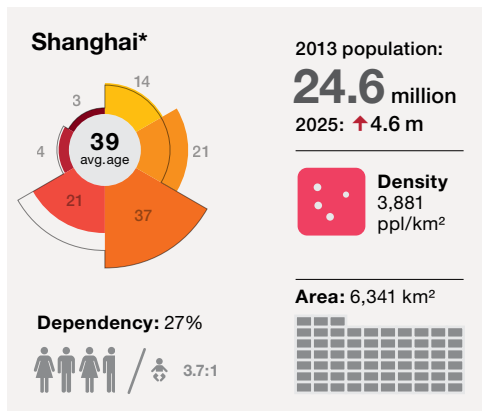


1 brick = 100 km²

In regard to land area, *Cities of Opportunity* uses each city’s own strict definition of its respective municipal jurisdiction, not its metropolitan region. So, for example, New York is limited to its five boroughs, as opposed to its greater metropolitan area; Paris is defined by its 20 *arrondissements*, not the wider Île-de-France region; and Shanghai is defined as its 16 districts and one county.

Demographic breakdowns and projections have been developed by Oxford Economics based on *Cities of Opportunity* jurisdictions.

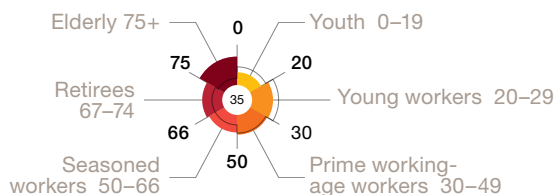
Vital statistics



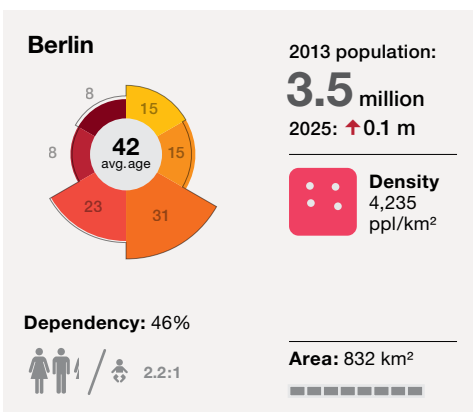
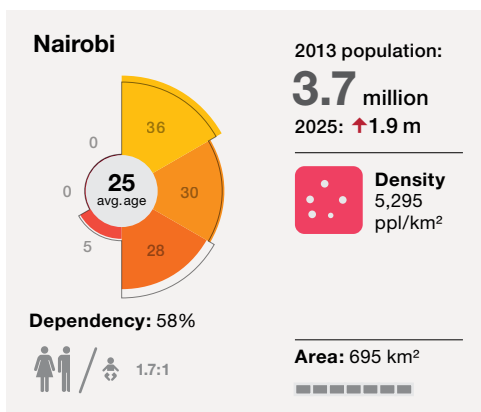
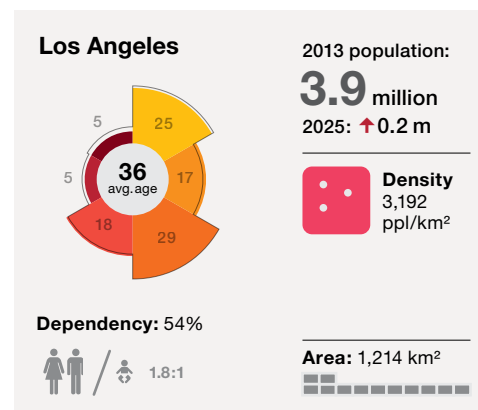
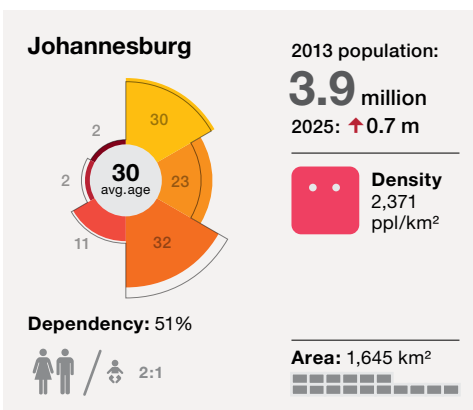
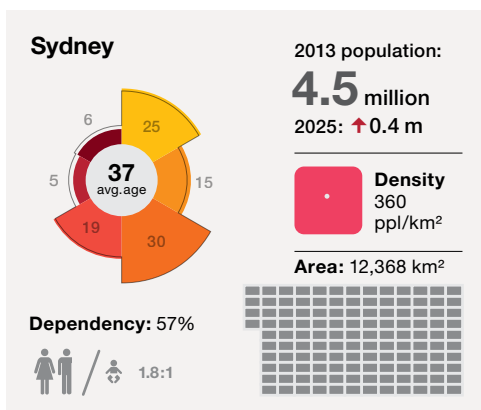
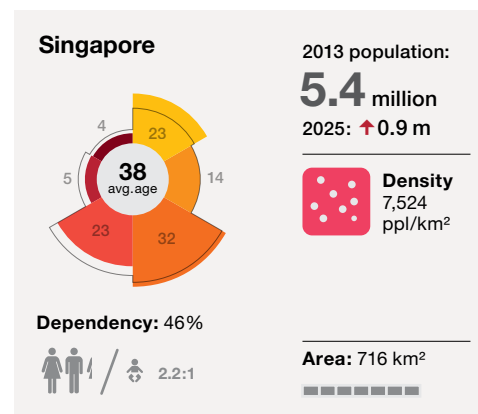
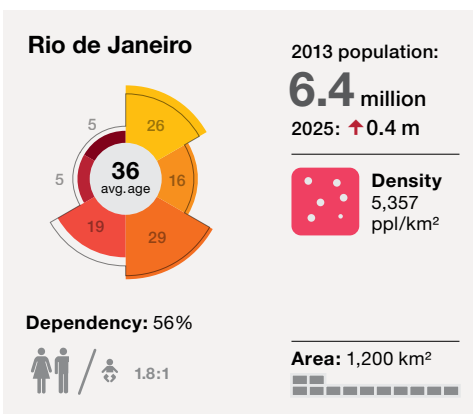
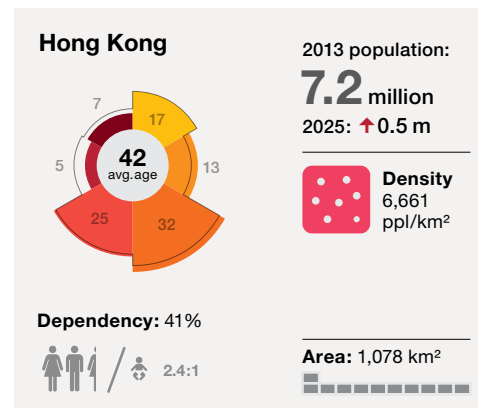
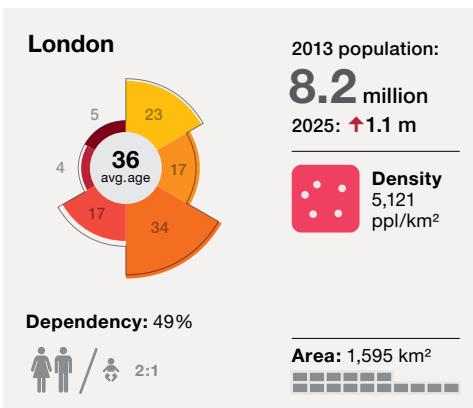
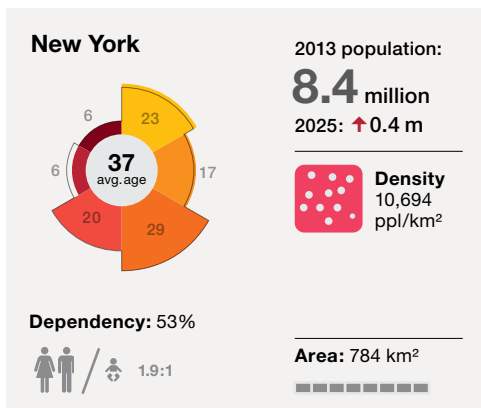
*Population includes the entire permanent population provided by the city statistics bureau, embracing both permanent households and permanent migrants.
Source: PwC Cities of Opportunity 6: We the urban people, Oxford Economics

% of population by age group, 2013

Gray line shows projected levels in 2025

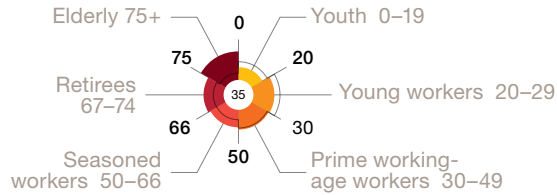


See how to read these charts on page 9.



% of population by age group, 2013

Gray line shows projected levels in 2025



See how to read these charts on page 9.

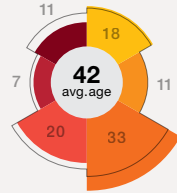


Madrid

2013 population:

3.2 million

2025: **↑** 0.3 m

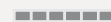


Density
5,299 ppl/km²

Dependency: 55%



Area: 606 km²

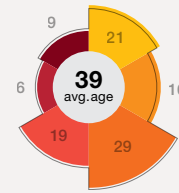


Buenos Aires

2013 population:

2.9 million

2025: **↑** 0.1 m



Density
14,542 ppl/km²

Dependency: 57%



Area: 200 km²

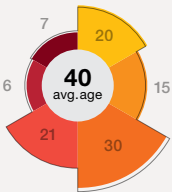


Toronto

2013 population:

2.7 million

2025: **↑** 0.6 m

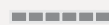


Density
4,294 ppl/km²

Dependency: 49%



Area: 630 km²

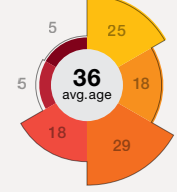


Chicago

2013 population:

2.7 million

2025: **↓** 0.2 m



Density
4,402 ppl/km²

Dependency: 53%



Area: 614 km²

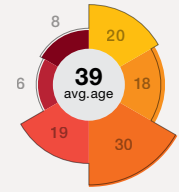


Paris

2013 population:

2.3 million

2025: **↑** 0.1 m



Density
21,549 ppl/km²

Dependency: 49%



Area: 105 km²

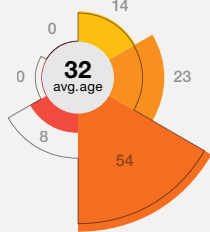


Dubai

2013 population:

2.1 million

2025: **↑** 0.7 m



Density
521 ppl/km²

Dependency: 17%



Area: 4,114 km²

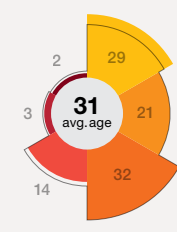


Kuala Lumpur

2013 population:

1.8 million

2025: **↑** 0.1 m



Density
7,311 ppl/km²

Dependency: 49%



Area: 243 km²

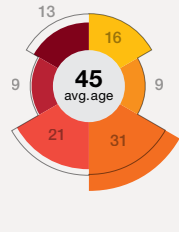


Milan

2013 population:

1.3 million

2025: no change



Density
6,944 ppl/km²

Dependency: 63%



Area: 182 km²

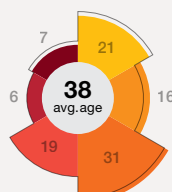


Stockholm

2013 population:

890 thousand

2025: **↑** 0.1 m



Density
4,755 ppl/km²

Dependency: 52%



Area: 187 km²



San Francisco

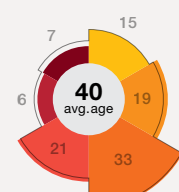


San Francisco

2013 population:

832 thousand

2025: **↑** 0.1 m



Density
6,853 ppl/km²

Dependency: 39%



Area: 121 km²



Continued from page 9

has 133 intersections per square kilometer and Tokyo has 211, the Pudong district of Shanghai has 17.⁶

The problem with many cities, therefore, is not high but, actually, *low* density—and the resultant urban sprawl it generates. This is not to say that a real expansion *per se* is bad or that it automatically leads to sprawl. Nobody has ever accused Sydney, the least dense of our cities, of being ugly, let alone of suffering from lack of municipal planning. In the case of emerging cities, however, Paris and New York might be better models to emulate, as they are both extremely dense but also extremely livable. Put another way, the classic definition of urban life is extreme density—the timeless images of crowded sidewalks and jammed streets—which is why sprawl is not an inherently urban phenomenon but, rather, as urban specialists continually point out, a suburban one.⁷

Three rules of the road in urban demographics

For public policy, demographics are a tool that allows cities to reform, and if necessary restructure, their urban ecology in order to continue to advance and prosper. For the private sector, they are a guide to basic business decisions—in investment, sales, or advertising—whether the object of those decisions is a 67-year-old (female) investment banker or a 25-year-old (male) chef. For both the public and private sectors, it is important to keep three points in mind when considering demographic analysis:

1. “Young” and “old” are neither good nor bad; they’re just policy figures

As we saw above, “dependency” is not a synonym for pensions, let alone for those above a certain age. While it is true that Milan, for example, has the highest dependency ratio of our 30 cities because of its high number of residents above the age of 66 (22% of the total), Mumbai and Nairobi follow Milan, not because they, too, have a large number of “over-66s,” but because they

have so many young people under age 20 (33% and 36%, respectively). So, daycare centers, primary and secondary schools, and universities are as much a part of a “dependency” infrastructure as are services for the elderly. Furthermore, there is the matter of the “youth bulge,” that demographic-sociological theory regarding young males’ responsibility for increased civil conflict, social unrest, and even basic criminality. The argument is not only that war-torn continents such as Africa or tumultuous regions such as the Middle East suffer more violence because of younger male populations, but that advanced cities such as New York undergo a radical drop in crime when there is a radical drop in the criminal habits of young males.⁸

Whatever the value of the theory—which remains intensely debated by scholars, as it seems to validate the notion of demographic destiny—the wider truth is that there is no such thing as a “good” or “bad” demographic category. What is true in every case, and in all combinations of age and gender, is that prudent and far-seeing public policy can mitigate any demographic challenge—which is precisely what we’ve seen in most of our cities of opportunity through the many, *many* years they’ve witnessed demographic ups and downs.

2. Vital maturity is on our doorstep (or a “longevity dividend” is a dividend regardless of age)

The moment that an economy moves from high fertility and mortality to low fertility and mortality is called the “demographic dividend,” a transition that is accompanied by longer life expectancy and, therefore, increases in the numbers of people of working age.⁹

Naturally, all dividends are subject to revision. A demographic dividend is, in fact, produced by a classic youth bulge, which results from the lag from high to low fertility/mortality. Ultimately, of course, this socioeconomic dividend (a large and productive workforce) has to age in turn. When it does, the dividend theoretically should expire. But in the contemporary world, it doesn’t. Rather, it leads to another dividend.

Prudent and far-seeing public policy can mitigate any demographic challenge—which is precisely what we’ve seen in most of our cities of opportunity through the many, many years they’ve witnessed demographic ups and downs.

6 *Ibid.*

7 The most recent and best-known reiteration of that fact is, of course, Edward Glaeser’s *Triumph of the City*, The Penguin Press, New York, 2011.

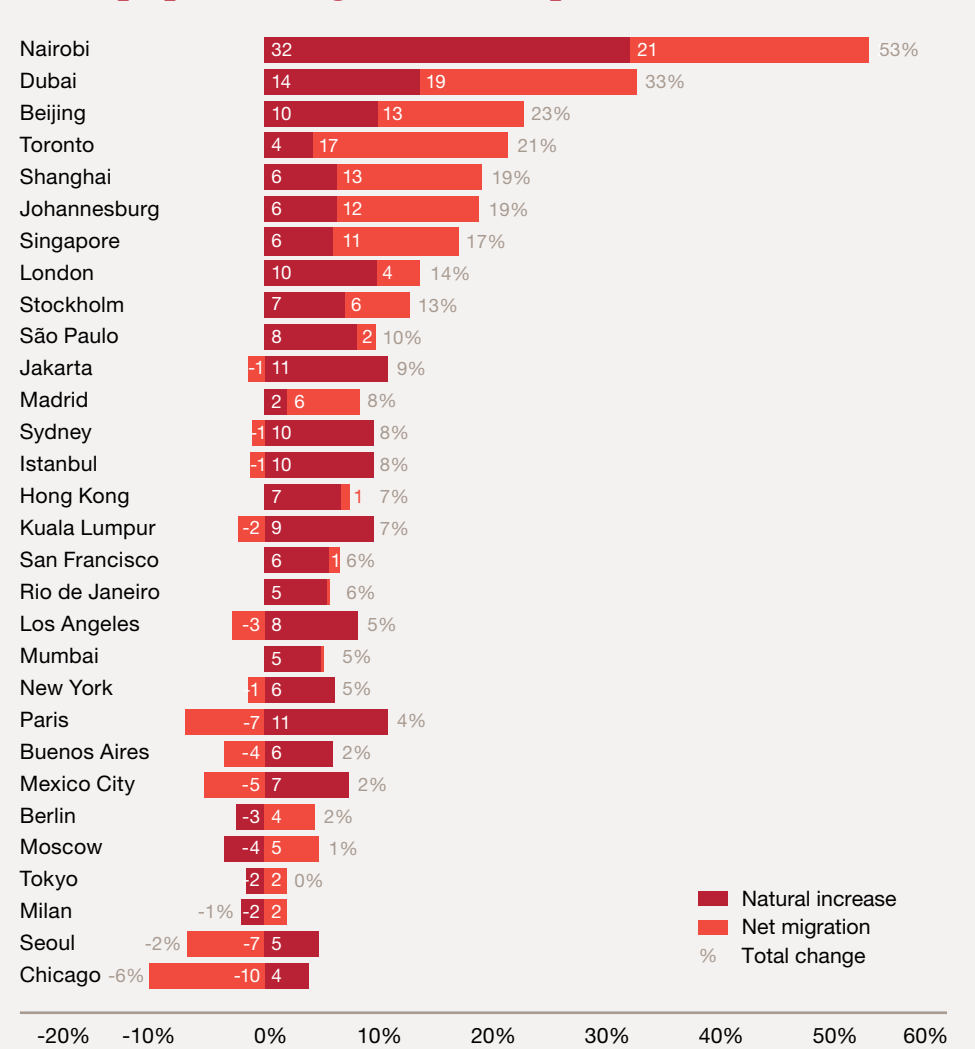
8 The literature on the “youth bulge,” pro and con, is extensive. For a succinct view of the notion of “younger populations... [being] especially prone to civil unrest,” see Jack A. Goldstone, “The New Population Bomb: The Four Megatrends That Will Change the World,” *Foreign Affairs*, January/February 2010, 89:1. A particularly influential report, *The Shape of Things to Come: Why Age Structure Matters to a Safer, More Equitable World*, was issued in 2007 by Population Action International (see also Lionel Beehner’s “Background” on that report, “The Effects of ‘Youth Bulge’ on Civil Conflicts,” Council on Foreign Relations, April 27, 2007, at <http://www.cfr.org/world/effects-youth-bulge-civil-conflicts/p13093>). See, too, the paper by Henrik Urdal, “A Clash of Generations? Youth Bulges and Political Violence,” published by the United Nations Expert Group Meeting on Adolescents, Youth and Development, 2011, at http://www.un.org/esa/population/meetings/egm-adolescents/p10_urdal.pdf; the concise

contribution by the World Bank’s former chief economist, Justin Yifu Lin, “Youth Bulge: A Demographic Dividend or a Demographic Bomb in Developing Countries,” January 5, 2012, at <https://blogs.worldbank.org/developmenttalk/youth-bulge-a-demographic-dividend-or-a-demographic-bomb-in-developing-countries>; and the recent reportage (along with a “youth heat map of the world”) by Patrick Kingsley, “Does a growing global youth population fuel political unrest?” *The Guardian*, March 19, 2014, at <http://www.theguardian.com/world/2014/mar/19/growing-youth-population-fuel-political-unrest-middle-east-south-america>. Finally, for antisocial and criminal behavior among youth, see the data published by the World Health Organization, *Youth Violence*, fact sheet #356, August 2011, at <http://www.who.int/mediacentre/factsheets/fs356/en/>; and for the drop in crime in New York as a result of the drop in use by young people of hard drugs, see Bruce D. Johnson, Andrew Golub, and Eloise Dunlap’s, “The Rise and Decline of Hard Drugs, Drug Markets, and Violence in Inner-City New York,” Chapter Six, *The Crime Drop in America*, edited by Alfred Blumstein and Joel Wallman, Cambridge University Press, Cambridge, 2000.

9 The discussion normally revolves around national economies, but urban ones follow the same patterns (although they have the advantage of maximizing immigration). See David E. Bloom, David Canning, and Jaypee Sevilla, who coined the term, in *The Demographic Dividend: A New Perspective on the Economic Consequences of Economic Change*, Rand, 2003. As much of the debate about demographic dividends during the last few years has concerned Africa, see also David E. Bloom, David Canning, Günther Fink, and Jocelyn Finlay, *Realizing the Demographic Dividend: Is Africa Any Different?* Program on the Global Demography of Aging, Harvard University, May 2007; and United Nations Economic Commission for Africa and African Union Commission, *Creating and Capitalizing on the Demographic Dividend for Africa*, March 2013. See also the concise “Briefing” in *The Economist*, “Africa’s population: The baby bonanza,” August 29, 2009.

Demography is not destiny—especially today, in our globalized world of relatively open borders for many human beings and, even more important, enlightened governance in many more countries. Public policy is in most cases the cure for demographic ills.

Total population growth components, 2013–2025



Source: PwC Cities of Opportunity 6: We the urban people, Oxford Economics

The “longevity dividend” is the term given by epidemiologist S. Jay Olshansky and three colleagues to what today’s marketers have dubbed “vital maturity.” In 2006, they wrote that, “The science of aging has the potential to produce what we refer to as a ‘Longevity Dividend’ in the form of social, economic, and health bonuses both for individuals and entire populations—a dividend that would begin with generations currently alive and continue for all that follow.”¹⁰ Recently, Olshansky and another team calculated the economic activity that would result from stretching

healthy middle age by merely 2.2 years to be worth \$7.1 trillion over 50 years to the US economy.¹¹

The point here is simple. In the developed world, and increasingly among the growing middle classes of the developing one, it is irrelevant whether age 50 is the new 30 or age 60 is the new 40: The fact is—as most people can see just by looking in the mirror and at those around them—age is no longer the determinant of physical or mental debility or ill health as it was just a couple of generations ago. And while, of course, that is still not true of all people—and primarily not those in difficult or unhealthy labor—it is true of very many people. (For more on the “longevity dividend” and urban aging, see “Cities as a solution to an aging world,” page 40.)

In this light, it is simply incorrect (and counter to all social and economic data) to consider an average age of 45, 44, and 42—which are the three *oldest* average ages among our cities, in Milan, Tokyo,

10 S. Jay Olshansky, Daniel Perry, Richard A. Miller, and Robert N. Butler, “In Pursuit of the Longevity Dividend,” *The Scientist*, March 2006.

11 “One way to think about the future gains,” said the report, “is to look at the present discounted value of all the additional quality-adjusted life-years that would arise from delayed aging relative to the status quo. These life-years can then be valued using a conservative metric, such as \$100,000 per life-year. Doing so yields a social benefit of approximately \$7.1 trillion.” Dana P. Goldman, David Cutler, John W. Rowe, Pierre-Carl Michaud, Jeffrey Sullivan, Desi Peneva, and S. Jay Olshansky, “Substantial Health and Economic Returns From Delayed Aging May Warrant A New Focus For Medical Research,” *Health Affairs*, 32:10, October 2013.

and Madrid, Hong Kong, and Berlin—to be forbidding markers of “old age.” In the contemporary context of health, wellbeing, and fitness throughout the world, including in those parts of it that are developing at a historically unprecedented pace, it is neither accurate nor even demographically tenable to consider healthy human beings in their early 40s as socially problematic. Twenty-eight of our 30 cities have an average age of 30 or above. But that is not a problem. That is a global sign of how far modern society has advanced in extending human life spans.

In the event, as an exhaustive study by the World Economic Forum (WEF) published in 2011 puts it: “[W]hen people expect to live longer, they have an incentive to save more for the years after they are no longer working. In economic terms, savings translates into investment, which fuels the accumulation of physical and human capital and technological progress, the classic drivers of economic growth.”¹²

3. The welcoming door of immigration

“Without immigration, some of the world’s ageing cities will be unprepared to meet future labour-market needs,” according to the Toronto-based Global City Indicators Facility.¹³ Nonetheless, immigration is not a magic bullet. The WEF believes that depending on immigration to relieve dependency ratios is a “false hope,”¹⁴ mostly because “huge numbers of immigrants would be necessary...and...would likely face enormous political and social opposition” in Europe and the US, as well as, arguably, elsewhere in the world.¹⁵ The UN concurs. In a report issued when these discussions were first gaining prominence at the turn of this century, it concluded that the “levels of migration needed to offset population ageing...are extremely high, and in all cases

entail vastly more immigration than has occurred in the past.”¹⁶

Everyone agrees, however, that immigration can alleviate specific demographic pressures in specific parts of the world. The WEF, for example, points to Japan as an interesting case of a country that, despite previous policies, now has “a consensus...in favour of greater immigration of skilled foreign workers.”¹⁷ And to take one example from our own cities, while we project Milan to have the lowest percentage (58%) of working-age population in 2025, Berlin will be at 68%, Istanbul will be at 67%, and Moscow and London will be tied at 66% with six other cities. It does not take a lot of imagination, therefore, to project a more viable future for Milan if it can convince just some residents to relocate from these four European cities—two of which are also in the European Union and, consequently, are free of immigration restrictions. (Certainly, the food, fashion, and architecture are more than competitive.)

So, while immigration cannot cure every demographic ill, history reminds us that doors that are open in welcome are as valuable to those already behind them in cities and towns as to those newly crossing their thresholds.

Given awareness and effective policies, demography is hardly destiny

Two last points need to be made. The first is, by far, the most important. Demography is *not* destiny. Especially today, in our globalized world of relatively open borders for many human beings and, even more important, relatively enlightened governance in many more countries than was the case even a couple of generations ago, demographic imbalance is not, and certainly should never

be, a debilitating condition. Public policy is by definition the cure for demographic ills in many cases.

The second point leads directly from the first: There is not one city in our report that is not already very well aware of whatever demographic issues it faces, and what needs to be done to address them.

Both points were reinforced recently by two noted scholars. Writing in *The New York Times*, Harvard demographer Michael Teitelbaum and Yale historian Jay Winter stated that “dark prophecies” regarding demography have a long history, and while recent “dire Malthusian projections” have been discredited, the “march of fear” never seems to end. “Population doom of one kind or another is a recurring fad.”

Teitelbaum and Winter explain this “hand-wringing” by what they see as a fundamental “misunderstanding” of the “glacial” nature of population change; furthermore, they argue, although declining fertility does pose challenges, it also provides important benefits that are often ignored. In any case, they are not worried. While humanity does have many legitimate issues with which it must contend in the future, they conclude that “falling fertility is not one of them.”¹⁸

Cities are increasingly recognized as the social space in which enlightened policy-making advances the common good.¹⁹ Awareness of demographic trends offers neither a glimpse into a crystal ball of doom nor of impending boom. Demography is simply another tool for planners as they develop policies to enhance the education, transportation, health, sustainability, cultural vitality, and economic strength of a viable urban society.

12 “Introduction,” p. 5, John R. Beard, Simon Biggs, David E. Bloom, Linda P. Fried, Paul Hogan, Alexandre Kalache, and S. Jay Olshansky, editors, *Global Population Ageing: Peril or Promise*, Geneva: World Economic Forum, 2011.

13 See *Cities and Ageing*, Global City Indicators Facility (GCIF), Policy Snapshot No. 2, September 2013, p. 23, at http://www.cityindicators.org/Deliverables/Cities%20and%20Ageing%20Policy%20Snapshot%20-%20GCIF%20and%20Philips%20-%20Sept%202013_9-30-2013-1145908.pdf.

14 Beard et al., *Global Population Ageing*, WEF, p. 51.

15 *Ibid.*, p. 37.

16 Population Division, Department of Economic and Social Affairs, United Nations Secretariat, *Replacement Migration: Is It a Solution to Declining and Ageing Populations?* “Executive Summary,” p. 4, 2001, at <https://www.un.org/en/development/desa/population/publications/ageing/replacement-migration.shtml>.

17 Beard et al., *Global Population Ageing*, WEF, p. 37.

18 Michael S. Teitelbaum and Jay M. Winter, “Bye-Bye, Baby,” *The Sunday New York Times*, Sunday Review, April 4, 2014. The article was based on the authors’ *The Global Spread of Fertility Decline: Population, Fear, and Uncertainty*, Yale University Press, New Haven, 2013.

19 In addition to *Triumph of the City*, mentioned above, see the work of Richard Florida—including, most recently, *The Great Reset: How the Post-Crash Economy Will Change the Way We Live and Work*, HarperCollins, New York, 2010—and Bruce Katz and Jennifer Bradley, *The Metropolitan Revolution: How Cities and Metros Are Fixing Our Broken Politics and Fragile Economy*, Brookings Institution Press, Washington, D.C., 2013.

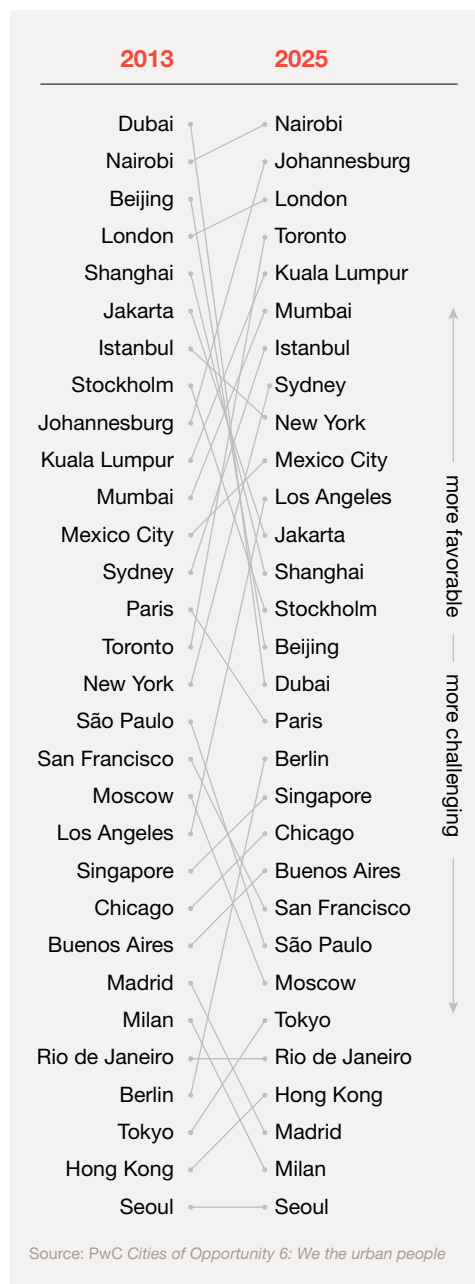
Establishing a sense of demographic direction

Nothing about demographics, and no projections about them, is written in stone. Population growth and migration can change a demographic picture relatively quickly. Yet, it's useful to establish a sense of demographic direction based on reasoned projections of both existing trends and economic conditions.

The results presented here use practical judgment based on demographic direction.

They blend the various factors influencing a city's demographic profile and create a loose, relative rating system. A value for each demographic variable is either positively or negatively correlated with the overall demographic score. For instance, a high share or fast growth in young workers is classified as a positive demographic characteristic. The opposite is true for a high share of elderly or a high dependency ratio. But these are not scores depicting "achievement," let alone projections of a city's success, despite one city appearing on top in 2025 and another at the bottom (in this case, Nairobi and Seoul, respectively). The scoring here is purely indicative and only represents a particular window on urban demographics: just one aspect of a discussion on urban trends. There is *no* causal relationship that links a city's score with overall social or economic success—and, as we've repeatedly stated above, certainly none that can't be alleviated or even completely overcome by public policy. Individual cities have always managed their demographic balances in different ways. And one city's positive traits might take on different, less positive features in another, or even in the same, city.

Rapid growth in urban Africa's youth and young workers, for instance, can provide Nairobi and Johannesburg with a demographic gift if job opportunities are created; on the other hand, lack of employment can generate social unrest. Meanwhile, aging demographics in Seoul, Hong Kong, or Milan can lead to opportunities if seniors remain integrated into the community, stay healthy, work longer (if they want to), and continue to consume (see "Cities as a solution to an aging world," page 40). Cities with declining labor resources might also develop strategies to increase productivity (and, therefore, innovation) and generate more wealth per worker, thus, in the end, raising living standards. Not all cities want more people putting pressure on land, property prices, and the natural environment. Many European and North American cities are obvious examples of urban communities that have decided that more or less stable, or even shrinking, populations are preferable to continually expanding ones.



Finally, age bands can differ depending on a city's economy, development, and life expectancies. For instance, our working-age band begins at age 20, which in many cities might be an advanced age to begin employment. In the end, the ratings here are simply meant to provide some sense of direction and a context for further research. They are also meant to serve as a basis for further analysis of each city's trajectory and for a comprehensive discussion of policies for enhanced quality of life and economic wellbeing. As in *Cities of Opportunity*, this study is scored with 30 as most favorable and 1 as most challenging.



London

Urban snapshots

Five city pairs highlight differences and affinities of demographic context and development

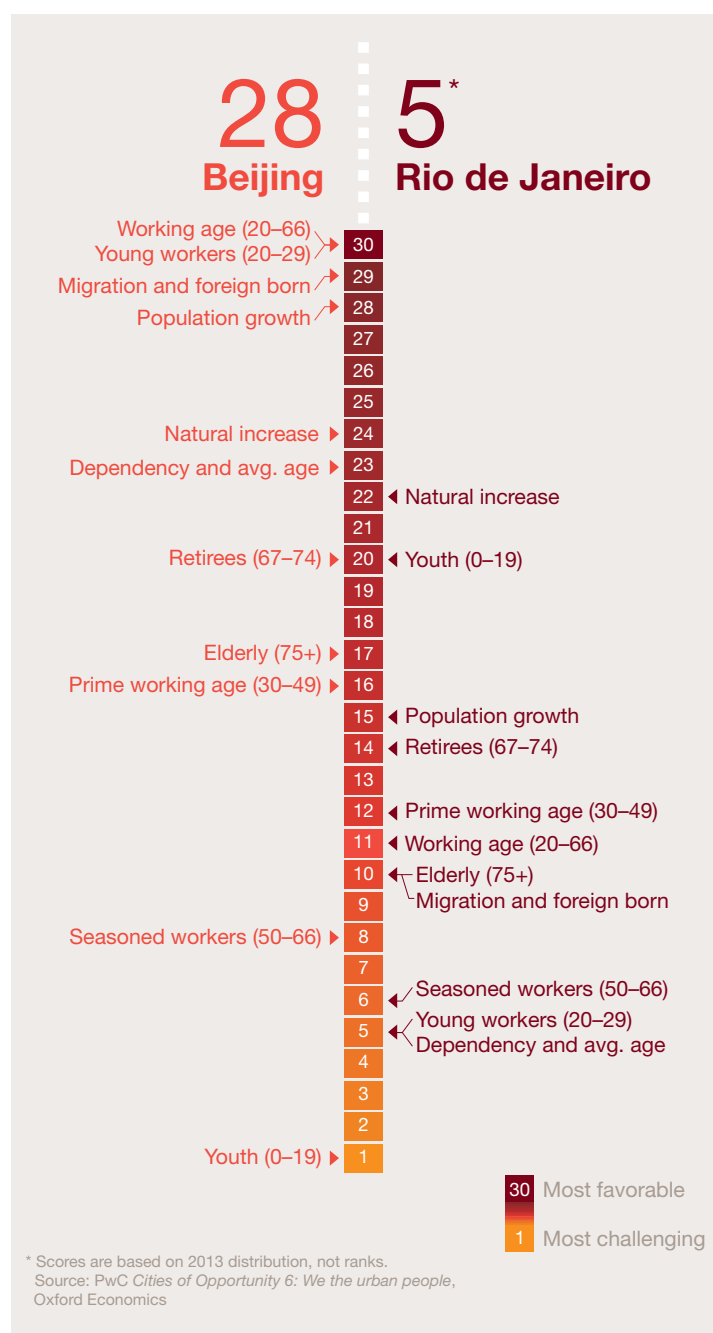
In order to determine what “works” in urban centers, *Cities of Opportunity* continually applies different comparative analyses. On the next three pages, we take a one-on-one approach that spotlights the specific nature of each city’s demographics.

For example, we paired two dynamic cities of the BRICS, Beijing and Rio de Janeiro, as well as two Northern European capitals, Stockholm and Berlin. We also juxtaposed London with Tokyo in one case and with New York in another. Finally, we paired San Francisco with Seoul.

The reason for all of these pairings is not so much to emphasize distinctions as to point to similarities and, therefore, to ways cities can adapt the demographic successes of other, similar cities. Consequently, it is no accident that most of our pairs display “elective affinities”: two from the BRICS, two Northern cities, three global powerhouses, four from the Pacific Rim. This is not to say that there are no differences, especially in land area where our cities range from traditional center cities to effective metropolitan areas: As we point out below, Berlin is almost four times larger than Stockholm, and Seoul is about 13 times the size of San Francisco, just to mention the most obvious disparities.

We could have devised many more pairs, but on the basis of these five, the reader can extrapolate others that would be equally germane. In any case, we believe that the examples that follow are a good place to start.

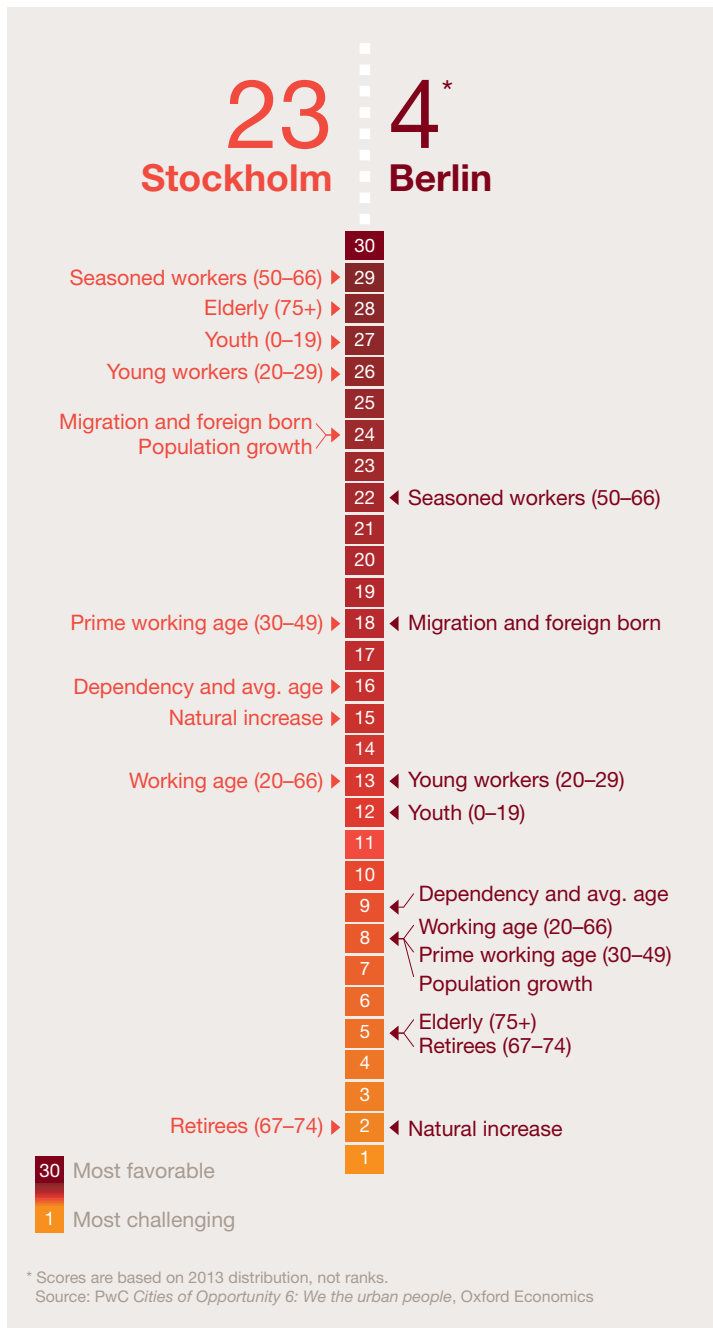
Two emerging giants diverge...



Generalizations are, of course, dangerous analytically. Economists and social scientists as a whole speak of emerging and developed economies, and emerging and developed cities. But the reality is that each community, large and small, has its own characteristics and developmental arc. The BRICS, for example, have long proven that they are not an indistinguishable amalgam but five separate countries, with five discrete historical frameworks, and, therefore, five different future developmental paths.

The graphic above, comparing Beijing and Rio de Janeiro, shows how two equally dynamic cities of two very dynamic BRICS fare at the moment in our demographic categories. Beijing clearly has the “edge,” but Rio also needs to develop policy options that will allow it to meet the demographic challenges it faces in the next decade.

...As do two Northern European capitals

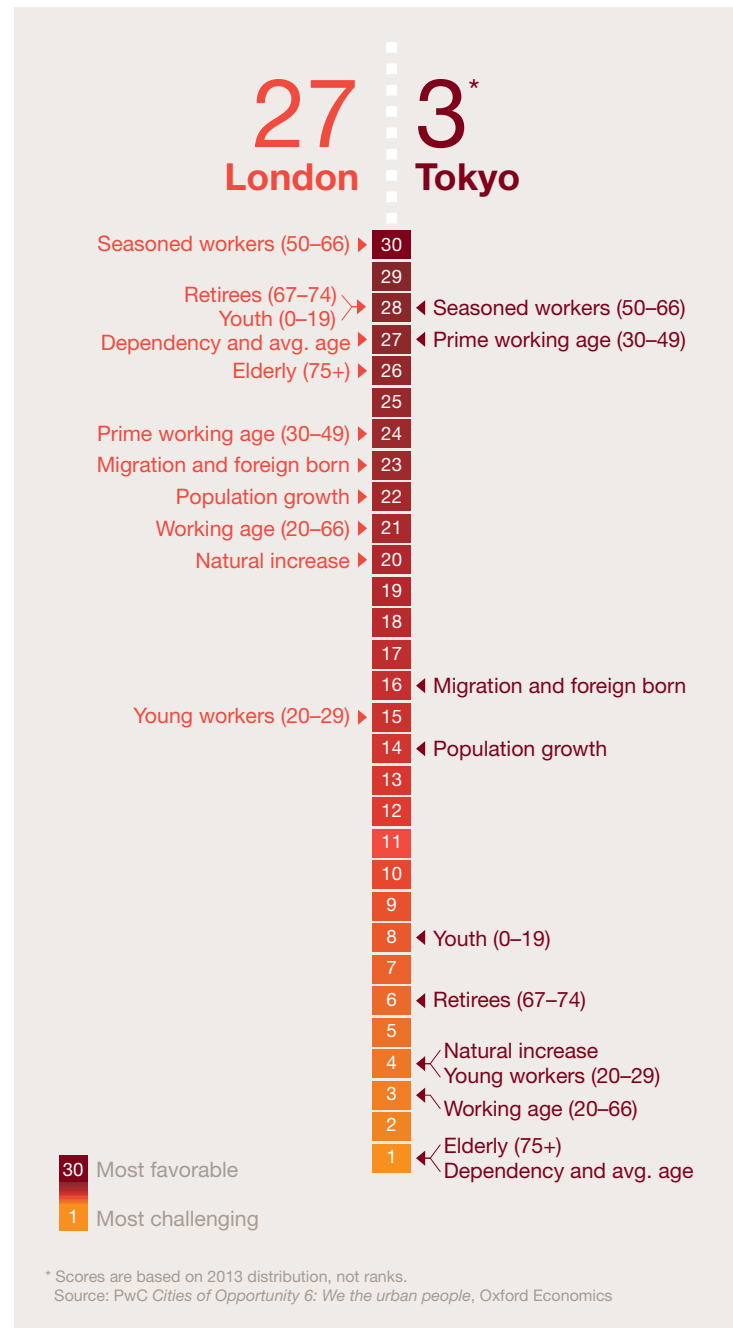


One advantage to this kind of one-on-one analysis is that the issues become immediately clear. In this case, we see almost precisely the same comparative (im)balance as in the contrast between Beijing and Rio. Still, there are some striking differences here, which also point to possible solutions for other European cities with comparable demographic concerns.

Four categories seem to be critical. Stockholm is significantly ahead of Germany's capital in young workers, youth (which points to a classic bulge and, ultimately, a demographic dividend), population growth, and migration with the connection between migration and population growth self-evident.

In the end, however, it is important to note that, with a population almost four times that of Stockholm, Berlin's challenges—above all, combining growth with social stability—are obviously more difficult. But such a vital and globally attractive city as Berlin should be able to devise policy options and summon resources to address its demographic issues.

Two oceans, two powerhouses



The conclusions of this city pair, contrasting two urban giants on the Atlantic and Pacific rims, are so straightforward as to be unambiguous. While there are several interesting points of comparison, two categories tell us most of what we need to know: London scores 22 places ahead of Tokyo in retirees and 26 places ahead in its dependency ratio.

London's results in youth (20 places ahead of Tokyo and, again, indicative of a future demographic dividend), working age (18 places ahead), and natural increase (16 places ahead), confirm the respective outcomes in retirees and dependency ratios. Nevertheless, Tokyo scores relatively well in migration (mostly Japanese moving to the center city) and very well (ahead of London) in prime working-age population. Both results point to a possible future demographic upturn if policies are adopted to reinforce them.

PwC's urban anthropology





PwC people in London, Toronto, New York, Shanghai, Stockholm, Johannesburg, Mexico City, Rio de Janeiro, São Paulo, Istanbul, Madrid, and Dubai.

Professionals seek urban opportunity and quality of life, and they're ready to battle affordability, traffic, and tension to get it

What is it about cities that draws people and holds them to build lives and communities? Do educated working professionals want beauty and quality of life utmost in their city? Or do they want opportunity? What are they willing to put up with, and what do they expect in return for fighting the everyday hubbub of big city life?

To answer these questions, we looked inward at PwC's own urban anthropology. PwC offices are based mainly in the central business districts of those cities worldwide that serve as regional or global hubs of our economy and culture—of course, including the 30 cities we study in *Cities of Opportunity* 6. This is only natural as “a network of firms in 157 countries with more than 184,000 people who are committed to delivering quality in assurance, tax, and advisory services” and dedicated to helping “organizations and individuals create the value they're looking for.” Our clients are often based in cities. Global connections radiate from cities. Education, governance, markets, and commerce are anchored there.

PwC people also serve as a good proxy for the skilled, highly educated professional demographic that cities seek to attract—the globally mobile service sector of engineers, technicians, skilled trade workers, and others that urban economies depend on for growth. From September to December 2013, we asked our people to tell us about life in their city. In a five-minute survey, 15,000 PwC people did just that—on average 20% of staff in each of our 30 Cities of Opportunity.

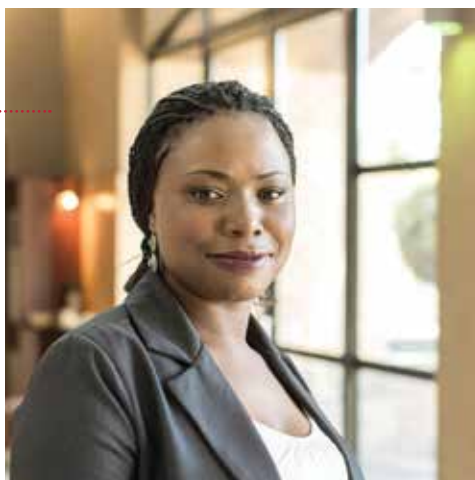
The survey provides an up-close and personal look at: what our professionals find most critical for their city to have and what is most in need of improvement; the cities to which they would choose to relocate and how likely they are to stay in their current city; how our people feel about their city ranging from inspired to stressed; the mode, time, and ease of their commute; how they spend their discretionary income; and, in 10 words or less, what slogan they would choose to hang over the city gates. Every category is telling.

Overall, the survey shows the world is getting smaller for the types of people who work at PwC. Cities look more alike than apart in terms of city dwellers' desires for today and aspirations for tomorrow. PwC professionals told us:

They want opportunity foremost in a city, and they're willing to brave the scrum and cost of London and New York to get it. People in every one of our cities, no matter how far away and often in good number (averaging 20% for London and 18% for New York as their first choice relocation) are ready to seek their fortune in the two world centers of capital markets, commerce, communications, and culture. However, the beauties of Sydney, San Francisco, and Paris are not lost on us, attracting 10%, 9%, and 5% of the survey sample, respectively.

The most desirable cities for relocation are those high in intellectual capital and innovation, technology readiness, and demographics and livability, as well as

As urban life grows more universal, the world gets smaller for educated, globally mobile workers. Many of us share preferences.



PwC Johannesburg



PwC Madrid

economic clout going by the 10 *Cities of Opportunity 6* indicator rankings. In a sense, skilled working professionals seem to be attracted to cities with strong social and economic attributes and, very likely, many others like themselves.

Friends and family take pride of place among the 29% who rate the human connection as most critical to them in city life. After that, we most want the promise of good employment prospects (23%) and reliable safety and security (14%).

They would like affordability eased, with 28% targeting it for improvement. At the same time, they are voting full speed ahead for relocation to five cities that rank in the top 10 most expensive in the *Cities of Opportunity 6* cost of living variable.

Transportation is a complaint in many corners of the world with 24% demanding better commuting. Even in those cities with the highest overall ratings in *Cities of Opportunity 6*, such as Toronto, citizens expect getting around the city to be easier: 41% of Torontonians chose “gridlocked” among the top three words that best describe their city.

When it’s time to relax, we favor vacations, restaurants, and entertainment as ways to spend our time and money—33%, 20%, and 14%, respectively. This also shows a critical foundation of city attractiveness—the people who build their lives and family in the world’s big, working cities want to enjoy life. There is time to smell the flowers as we scramble ahead.

We recognize the good and bad of urban life and love our cities nonetheless. Judging by the thousands of city mottos that our people chose, in every city at least some slogans touch on a dualistic relationship with urban life. From the mean streets of New York, at the most simple: “I hate it, but I love it!” And the Gothamites continue, “Not for the faint of heart, but the possibilities seem endless.” ... “Equal parts wonderful and stressful!” ... “Most amazing city in the world, at a cost.” ... “The city that doesn’t sleep because it can’t afford to.” ... “Takes your heart and soul, but there’s no city like it.” ... “Everything at your fingertips but not always within reach.” ... “Expensive, dirty, but so much fun.” Amazingly, these sentiments are reflected in the glimmering island city of Stockholm, where 92% of those surveyed associate the city with positive attributes. Nevertheless, Stockholmers cite “Clean, green, and expensive housing.” Or, “Really

beautiful but stressful city.” Farther afield in Jakarta and Nairobi, two new locations in *Cities of Opportunity 6*, residents respectively say of their towns: “Stepmothers are less cruel than capital cities”; and, “Innovative and resilient in the face of chaos.”

Clearly, there’s something magnetic in the urban condition that draws us in and keeps us here despite awareness of the cost, stress, and squeeze of city life. Maybe it has always been that way. After all, Descartes called a great city “an inventory of the possible” after moving to 17th century Amsterdam, a place where he could find solitude and peace “amidst this great mass of busy people.”

What has changed in the last few decades is the universality of the urban experience, especially for educated, globally mobile professionals like those who work at PwC. When Descartes moved from Paris to Amsterdam in 1629, the choices of a new city home must have appeared more limited. Today, the world is smaller. Urbanites speak about the same challenges, the same opportunities, and the same facts of life in cities the world over.

In that spirit, 15,000 PwC people put a finger on the broad, demographic pulse of what makes the professional urban world go round.

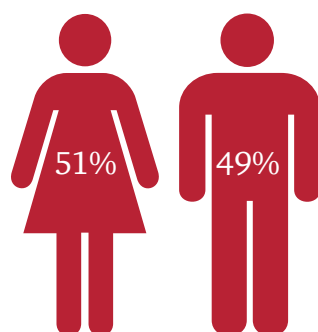
Vital Statistics

Who's who?

20% of staff on average in each of our 30 Cities of Opportunity took a five-minute survey. That's 15,000 professionals (or 8% of the firm) in every urban corner of the world.

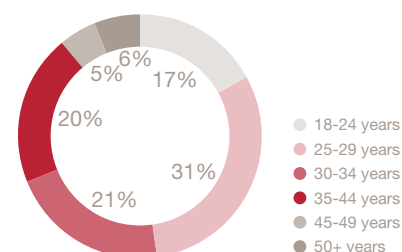


Respondents break down evenly by gender.



Prime working age

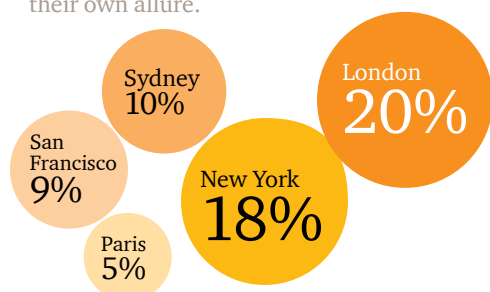
Nearly half of respondents (46%) are aged 30-49.



Preferences

Where to?

London and New York offer the opportunity to compete at the highest level and dominate the firm's relocation preferences. Then, the beauty and culture of Sydney, San Francisco, and Paris offer their own allure.



Most critical in a city:*



29%

Friends and family



23%

Employment prospects



14%

Safety and security

Most needs improvement:*

Affordability at 28%

most needs to be addressed. But transportation infrastructure is also a universal complaint at 24%.

*% of respondents reporting each factor as #1 most critical or #1 most needs improvement



On the move

65% commute daily

to the office. But there's a wide range from the average to Nairobi at 93% and to Los Angeles at 35%.



Quickest:

29 minutes
in Dubai

Average:

47 minutes
one way

Longest:

71 minutes
in Jakarta

Subways roar



39%

Ride metros, the top transit choice.

Cars roil



No joy in riding for the
26%
who drive.

Walking rules!



Happy feet reported by
17%
who shake a leg.

Source: PwC Cities of Opportunity 6: We the urban people

Telling us where they'd go

When voting with their feet, PwC people would relocate for a chance to advance and live a good city life

The top five cities PwC people select as their first choice to work in other than their current city, paint a clear picture of the urban qualities that globally mobile professionals want.

The powerful draw of London and New York is striking, with 20% and 18% choosing the cities, respectively. PwC's two largest global offices—and also #1 and #2 this year in *Cities of Opportunity 6* scoring (www.pwc.com/cities)—London and New York offer a wide range of career directions, as well as the chance to excel on the firm's, and the world's, largest business stages. Professionals from every one of our 30 cities are pulled toward London, often in good number. For instance, 30% from Mumbai would toddle off to London if they were to relocate; 28% from Kuala Lumpur; 27% from Singapore; 26% from New York, Chicago, and Mexico City; and 25% from Istanbul.

Londoners lead the charge to the Big Apple, with 37% happy to ditch their umbrellas to see what life is like in the city that never sleeps. “Fuhgettaboutit!,” as many New Yorkers told us when asked for a city motto. The attraction of New York extends to the farthest outposts in our urban world: 35% of Stockholmers, 30% of Nairobians and Sydneysiders; 29% of Milanese, Seoulites, and *cariocas* in Rio de Janeiro; and 21% of the Parisians. All of them are ready to dive into the New World's original and still percolating urban melting pot.

Interestingly, the march to London and New York occurs with eyes wide open despite the hurdles posed by those massive, competitive, relatively expensive cities. News reports abound about the cost of living in London and New York (such as renting walk-in closets as flats in London or being forced to share with a small army of strangers to live anywhere near Manhattan). Both cities finish in the top 10 most expensive in the *Cities of Opportunity 6* cost of living variable (although that doesn't include accommodation expenses for rent or mortgage). Moreover, 94% of New Yorkers

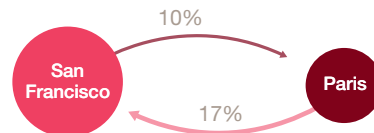
and 84% of Londoners in our survey mention “affordability” among the top three traits most in need of improvement. Half the New Yorkers (51%) cite “housing quality.” Three-quarters of New Yorkers (74%) select expensive among the top three words describing Gotham, and 36% say the city is “ambitious.”

But 39% of Londoners and 26% of New Yorkers also say they are “inspired” by their city. New York remains a “fun” city to 35%. **All in all, urban life unfolds as a dualistic picture**—“we love the energy and challenge; we hate what we have to pay for it.”

Continued on page 39

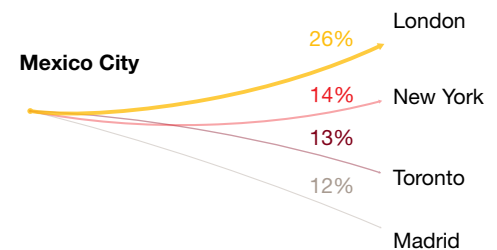
Good wine, good bread, and thou

San Francisco and Paris share a bond, with 10% Northern Californians choosing Paris, and 17% Parisians ready to climb the hills.



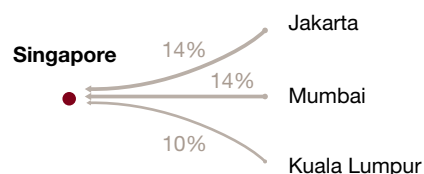
Cold comfort

Thirteen percent of Mexican *capitalinos* vault over all US cities except New York to get to Toronto's inclusive atmosphere and Canada's skilled worker immigration policies.



Asian allure

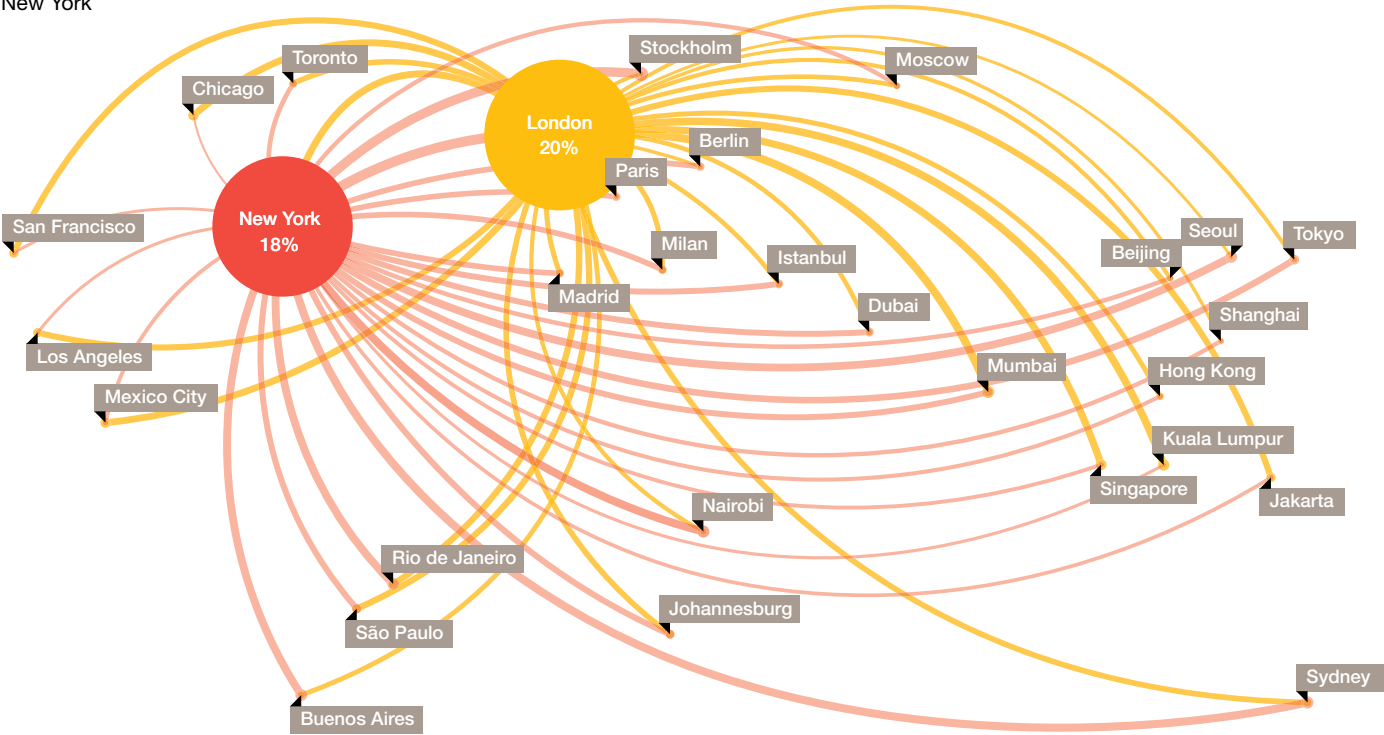
Singapore is the most attractive Asian city with 4% of PwC people in the sample wanting to move there. Highest flows are from Jakarta, Mumbai, and Kuala Lumpur.



PwC Toronto

Power couple: Many roads lead to London and New York, magnets for 20% and 18%, respectively, of our professionals worldwide

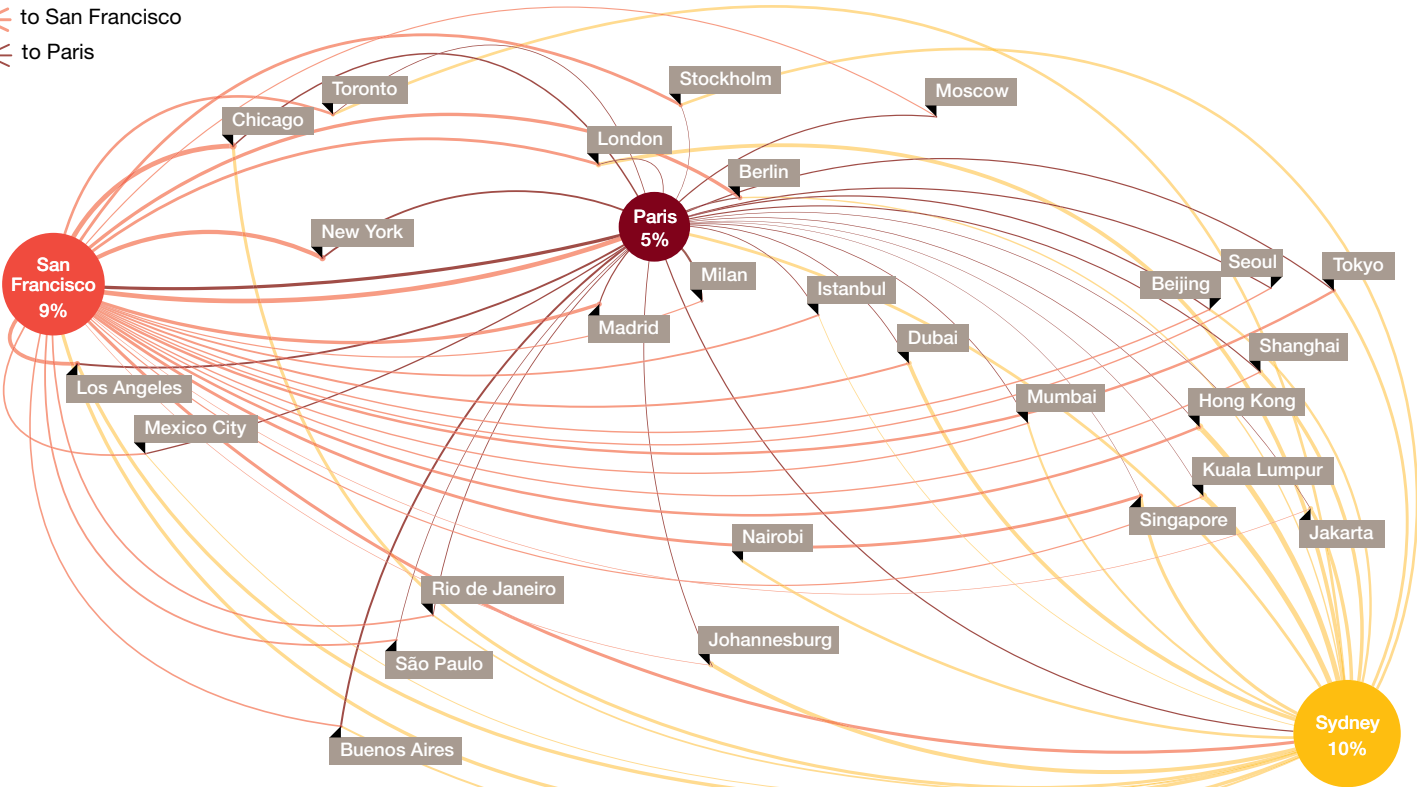
Size of circles indicates overall % of people who want to move to the top five cities: Line thickness indicates % of people of each origin city
to London
to New York



Respondents reporting #1 choice of city.
Source: PwC Cities of Opportunity 6: We the urban people

Three's a charm: Fans of Sydney, San Francisco, and Paris are drawn by urban strengths and beauties

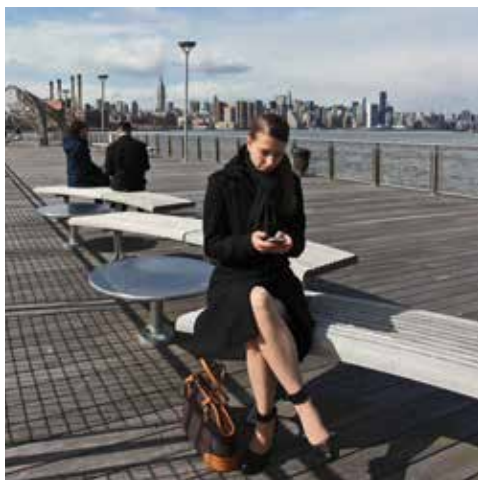
to Sydney
to San Francisco
to Paris



Source: PwC Cities of Opportunity 6: We the urban people

How we feel about our city:

There seems to be an urban intelligence and technology test



PwC New York

What attracts us to new cities? What keeps us where we are? To identify the significant traits that draw globally mobile professionals toward a city or keep them invested in a city to build a life, we correlated the 15,000 relocation preferences of PwC people and their stated likelihood of staying in a city with rankings of the 10 indicator categories in *Cities of Opportunity 6*. Doing so, an interesting pattern emerges.

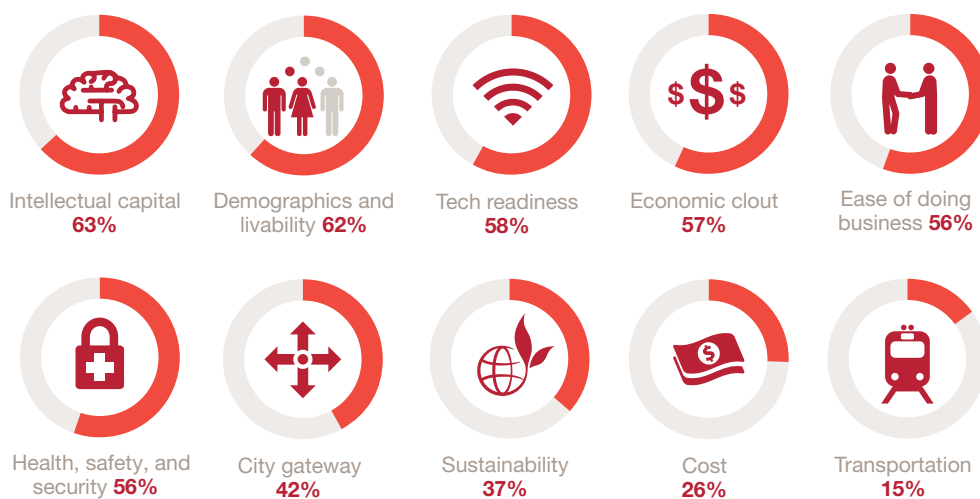
Intellectual capital and innovation has real pull, whether going to a new city or committing to stay in the city where we are. In the latter case, 79% of all respondents say they are not at all likely to leave a city with a good base of education and entrepreneurship. Technology readiness (76%) and health, safety, and security (73%) also show strong positive correlations with likelihood of staying in a city. Correlations on desirability for relocation as measured by stated survey preferences are not quite as strong with intellectual capital and innovation, demographics and livability, and technology readiness attracting 63%, 62%, and 58%, respectively.

Clearly, cities with good intellectual resources and comparable technology readiness appeal to the relatively young, globally mobile PwC demographic. At the same time, a city's attractiveness also rises when it offers an opportunity to live a good life on sound economic footing.

As for cities with the strongest holding power, London, Stockholm, Toronto, San Francisco, and Seoul post the highest percentage of professionals stating they are not at all likely to leave. This could be driven by local career opportunities, personal satisfaction and aspirations, cultural preferences, or elements of each. For instance, Torontonians and Stockholmers may live in cold climates, but they also embrace their town warmly: Both are toward the top of describing their city as "home." And Stockholmers lead the pack of 30 cities selecting "friends and family" as one of the three most critical qualities they want in a city.

We seek out cities that are smart, technology ready, and livable

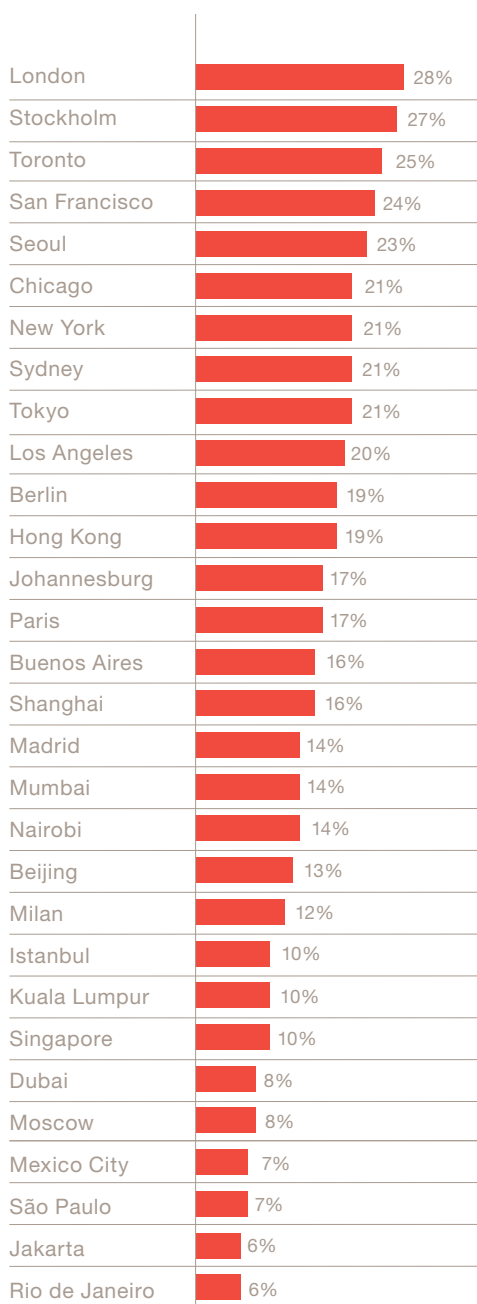
Correlation between *Cities of Opportunity 6* indicators and mean relocation desirability



Source: PwC *Cities of Opportunity 6*, Northern Ireland Centre for Economic Policy

Putting down roots

% stating "not at all likely to leave" within the next two years

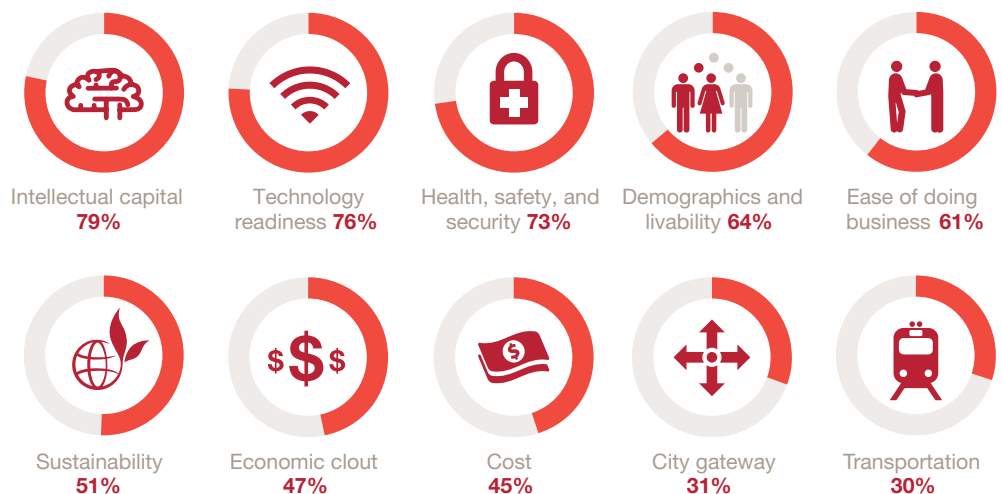


Source: PwC Cities of Opportunity 6: We the urban people

Intellectual capital and innovation and technology readiness rate high among those choosing to stay in a city, as well as those attracted to new ones.

Home is where education, technology, health, and safety are

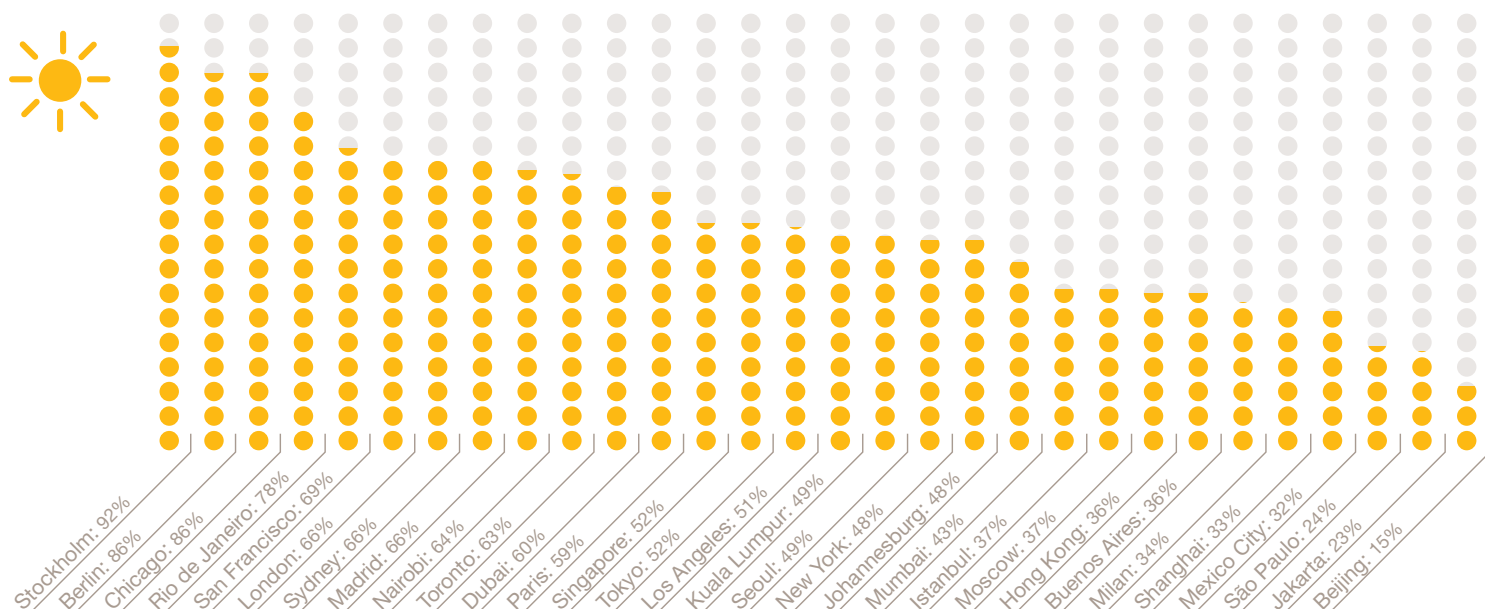
Correlation between Cities of Opportunity 6 indicators and those stating "not at all likely to leave"



Source: PwC Cities of Opportunity 6, Northern Ireland Centre for Economic Policy

Tracking the power of positive thinking

% choosing a positive word as #1 best to describe their city, including inspiring, beautiful, fun, well-managed, home, enjoyable



Source: PwC Cities of Opportunity 6: We the urban people, Northern Ireland Centre for Economic Policy

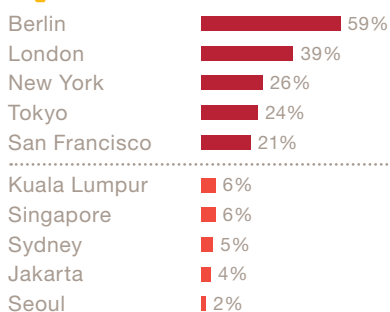
How people describe their city

% of respondents using word among top three to describe their city

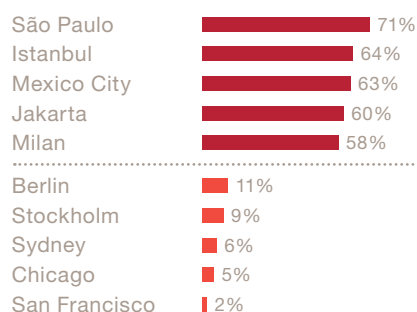
Source: PwC Cities of Opportunity 6: We the urban people



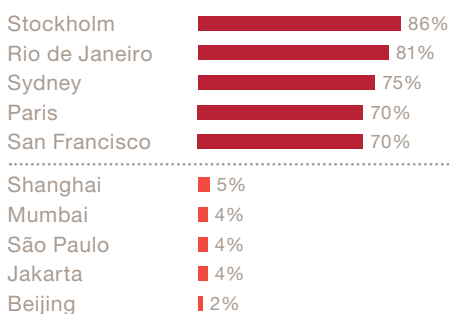
Inspiring



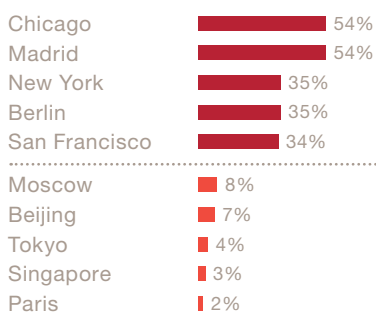
Stressful



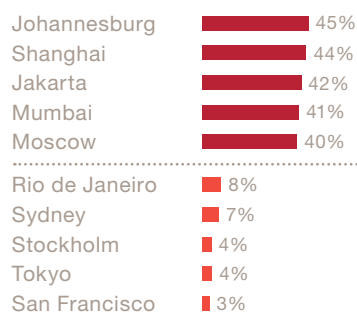
Beautiful



Fun



Challenging



Sunny side up or down and dirty: Do the city clouds hold a silver lining or just gray drizzle?

Striking patterns arise when we asked PwC people to pick the top three words among 13 that best describe their city. While we can't say whether the selections reflect tangible traits in a city or entrenched cultural feelings, the contrasts are notable.

Stockholm may be cold and dark for a good part of the year, but—as opposed to the traditional Ingmar Bergman image of a deep, troubled thinker—Nordics bring their own sunshine to the party 92% of the time, choosing a positive word as the top choice to describe the city. Stockholmers also lead the way in calling their city beautiful and complain the least about gridlock or a lack of control.

Across the Baltic, the German capital offers almost as rosy of a picture, with 86% of Berliners selecting a positive word as the first choice to describe their city. Berliners

also lead all 30 cities describing the town as inspiring, enjoyable and home. And why not, with only 2% calling the city expensive.

By contrast, the two Brazilian cities demonstrate far different degrees of optimism. Rio de Janeiro stands fourth from the happiest with 78% of *cariocas* picking positive words like beautiful to describe their city. São Paulo falls third to last on the chart opposite, with only 24% choosing positive words as the top descriptor. Instead, *paulistas* lead the list selecting “stressful” and come in fifth in “uncontrolled.” Even so, residents of both cities are closely aligned among the highest percentage of professionals stating they are “very likely to leave” the city to relocate.

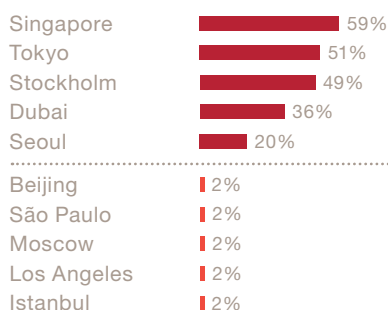
Chicago, America's second city, also kicks up its heels with happiness a good deal more of the time than the original fun city, New York. Chicago ranks third among all 30 cities, with

86% picking positive descriptors as the top choice. And the “city of broad shoulders,” as Carl Sandburg called it 100 years ago, can still let out a good, healthy laugh. Chicago is first in having fun and second only to Berlin in the ability to enjoy life.

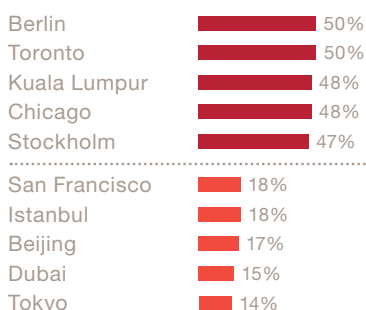
Taking a step back, a sensible pattern emerges when we correlate the 10 *Cities of Opportunity 6* indicator categories with the descriptive words. For instance, the word “challenging” correlates in a highly negative way with strong intellectual capital and innovation and health, safety, and security categories in *Cities of Opportunity 6*. “Beautiful” positively correlates with sustainability rankings. And cities seen by their people as well-managed correlate positively with good transportation and infrastructure scores in *Cities of Opportunity 6*.



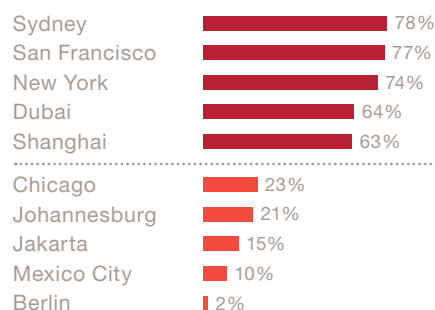
Well-managed



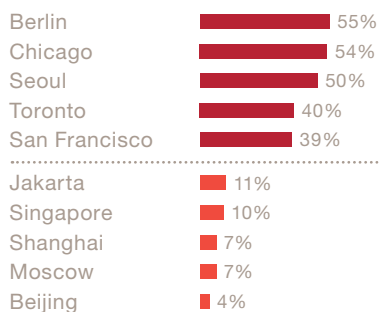
Home



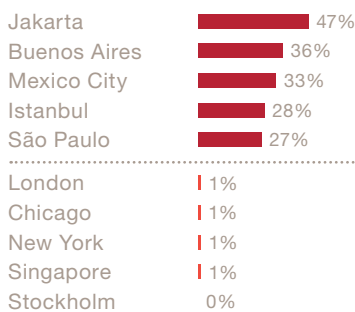
Expensive



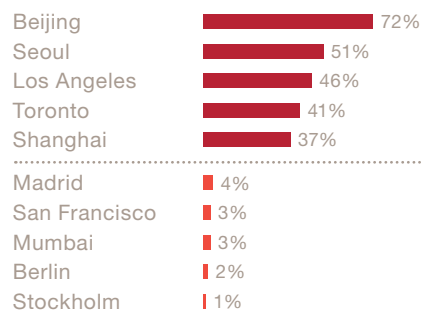
Enjoyable



Uncontrolled



Gridlocked



What we want in our city

...and what we want fixed

It's no surprise that local conditions drive the top priorities city dwellers say they need in their town, as well as the areas they single out for improvement. But at a time of virtual realities and distant dialogues on street corners worldwide, it provides welcome comfort that PwC people still deeply depend on human connections: 29% say friends and family are #1 most critical to have in their city. At least a third of PwC people in every city cite friends and family among their top three most critical factors.

Combining desire for friends and family with the fact that 23% of the PwC professionals name job prospects as their utmost urban priority, over half of the respondents use equal measures of heart and mind to judge their cities—in line with the *Cities of Opportunity 6* hypothesis that a healthy city requires balanced social and economic strengths. At the same time, the nature of our respondents may under-emphasize qualities like water and energy, healthcare, and education compared with the general population because our demographic is young, educated, and employed, often relatively privileged in their city.

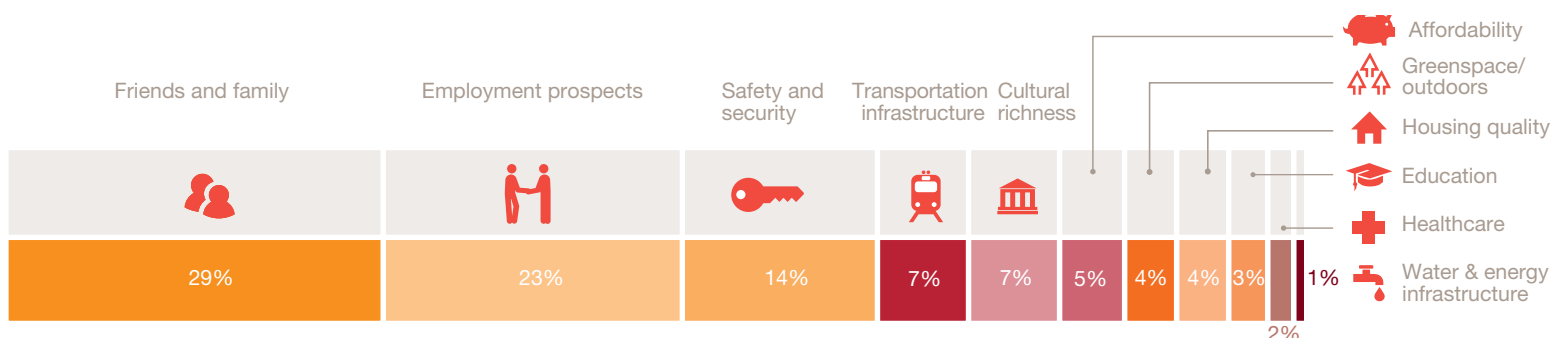
What we prioritize as “must haves” in a city varies widely on a local basis. Water and energy ranks high in developing cities or those, like Tokyo, with targeted local concerns after the Fukushima accident. Education is a major priority to have in Latin America. Improving employment prospects are top of mind in post-crisis Europe, particularly Berlin and Madrid. Culture feeds our urban souls as a critical priority to have in rich, advanced cities with high expectations like San Francisco, as well as cities with a rich cultural heritage like Istanbul and Moscow.

Turning to the factors most in need of improvement, results follow a sensible pattern if correlated against results in the 10 indicator categories in *Cities of Opportunity 6*. Cities with high economic clout care strongly about addressing affordability and housing quality (or availability) issues, confirming the widely reported middle-class squeeze in economic powerhouses like London and New York. Similarly, those cities that are major global gateways want affordability and housing, as well as friends and family improved—the latter perhaps touching on the transience of urban life in a modern, highly connected metropolis.

Going city by city, the top three factors most needing improvement paint a localized picture of perceived shortcomings. Transport naturally concerns Jakartans where 20 days a year are lost in commuting (see page 33), as well as citizens of Los Angeles and Toronto, advanced cities with higher expectations of their infrastructure. Water rises as an issue in Johannesburg and Nairobi. Safety concerns polarize the 30 cities, with a group led by Buenos Aires caring strongly about improvement but another group led by Asia showing little urgency. Education seems a surprise issue in Berlin, our second most positive and #1 most enjoyable city, but not as much so when concern with job prospects is added to the mix as the restored German capital builds an urban economy to equal its rich cultural vitality. Similarly, a year after a major school strike, Chicagoans still think of education in terms of the need for improvement. Healthcare concerns in Rio de Janeiro and São Paulo track closely with last year's protests from Brazil.

Most critical worldwide: Human connections and good work

% of respondents reporting each factor as #1 most critical to have in their city



Total does not sum to 100% due to rounding.

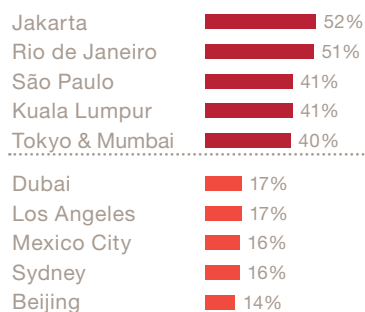
Source: PwC *Cities of Opportunity 6: We the urban people*

Most critical city by city: Thinking global but focusing local

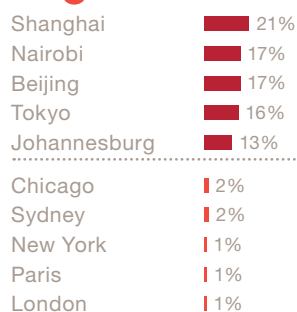
% of respondents citing factors among top three most critical to have in their city



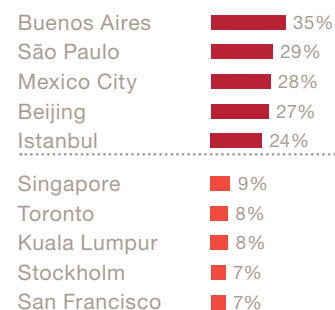
Transport



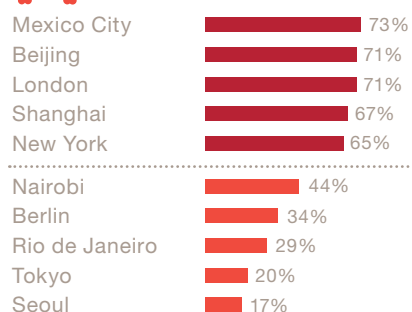
Water and energy



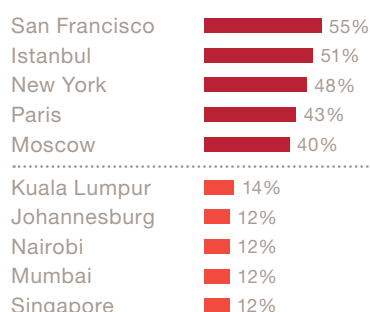
Education



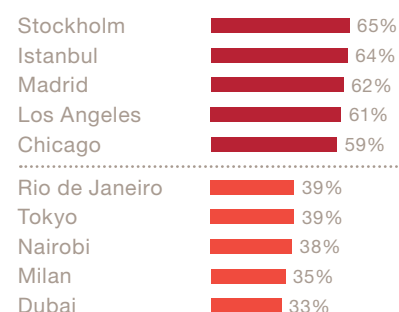
Employment prospects



Culture



Friends and family



Source: PwC Cities of Opportunity 6: We the urban people



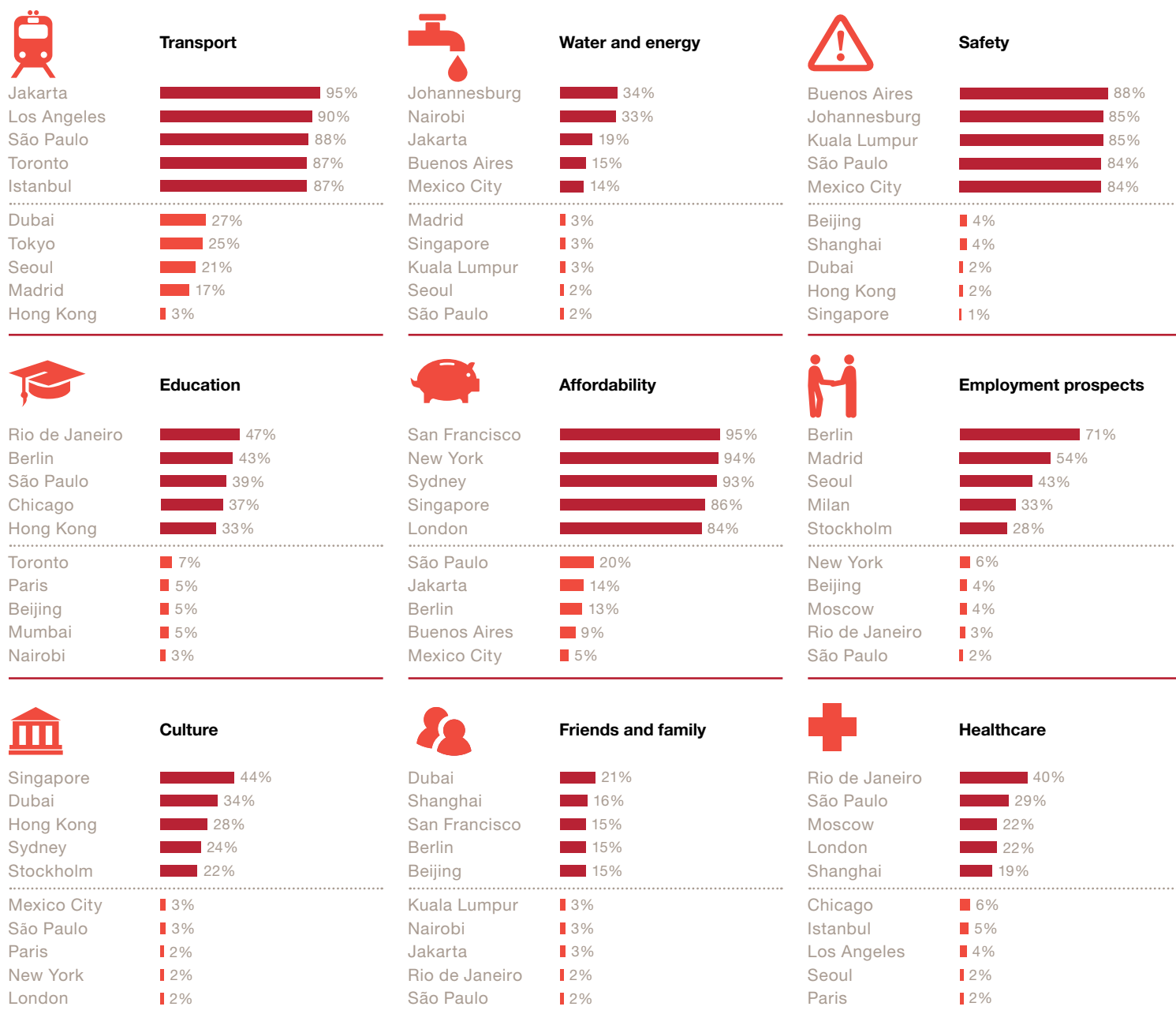
PwC Dubai



PwC London

What most needs improvement: The fix is in transport, safety, cost, and jobs

% of respondents citing factor among top three to improve in their city



Source: PwC Cities of Opportunity 6: We the urban people

How we roll:

Commutes range from pain behind the wheel to pleasure walking and biking



PwC Toronto

We asked PwC people to tell us about their commute: how far they travel, how often they go to the office, what methods they use in the journey, and how easy or hard the travel is. Responses reflect adequacy of urban infrastructure, cultural patterns, and geographic differences among the cities.

While 65% of workers go in to their central business district office on a daily basis (rather than working at client locations, in travel, or at home), Nairobi, Jakarta, Stockholm, Moscow, and London are among the most dedicated to their downtown desks. In the case of Jakarta, that comes at a cost of 20 days lost in commuting annually. That's 16 days lost in London and 14 in Moscow. Angelenos go in to the office least, which may or may not be tied to the #3 difficulty of the commute, #2 longest average distance of the journey, or, much less likely in a very hard-working firm, the beautiful beaches surrounding the city.

Stockholmers and San Franciscans rate their commute as easiest. This may be natural for our two smallest and most

sustainable cities. Stockholm also posts the second highest percentage of walkers and bikers (30% and 16%, respectively)—judged the easiest modes of transport by far among our people, 60% and 57% of whom, respectively, are glad to smell the flowers as they stroll or feel the breeze as they roll along the bike paths.

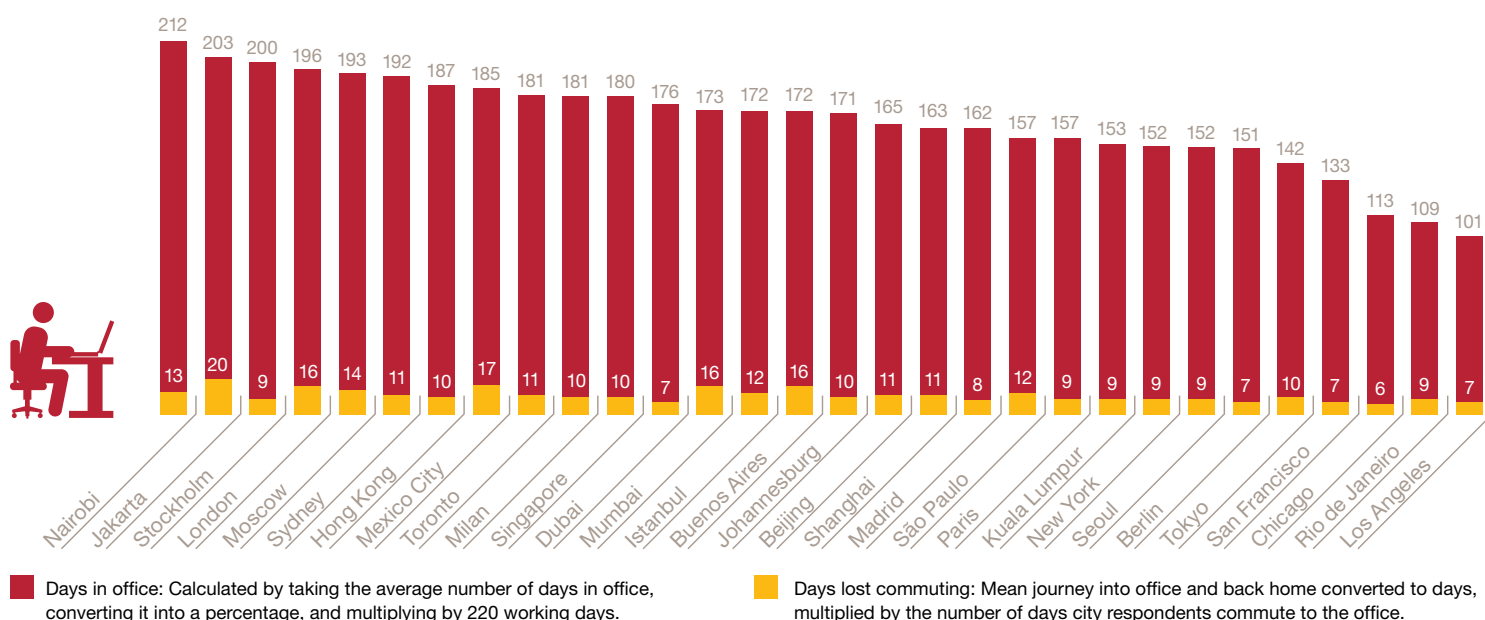
Hardest time is put in behind the wheel:

Only 31% of the drivers can say the road to work is an easy one. With sole drivers constituting the second most popular commuting method at 26%, many working days begin and end on a rough note. City by city, Mumbai, Rio de Janeiro, and Los Angeles have the most difficult commutes.

Finally, one might need a sociologist, economist, and transport engineer to pin down the precise reasons city by city, but carpooling varies widely. Nearly a third of the automobile trips in Buenos Aires are shared, and about a fifth in Hong Kong, Singapore, and San Francisco. PwC people in Johannesburg, Shanghai, and Istanbul rarely bond with their coworkers on the ride into the office or back home.

Lost in the shuffle or tied to the desk: Workday patterns vary

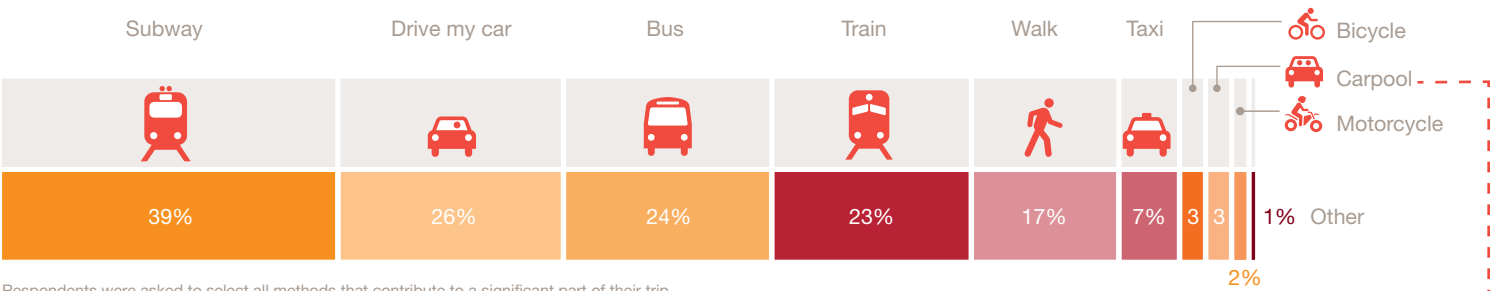
Average number of days in office and days lost to commuting



Source: PwC Cities of Opportunity 6: We the urban people, Northern Ireland Centre for Economic Policy

A, B, C, 1, 2, 3: It's an underground jubilee from London to New York to Paris to Shanghai

% of respondents citing all methods of travel they use in a typical commute



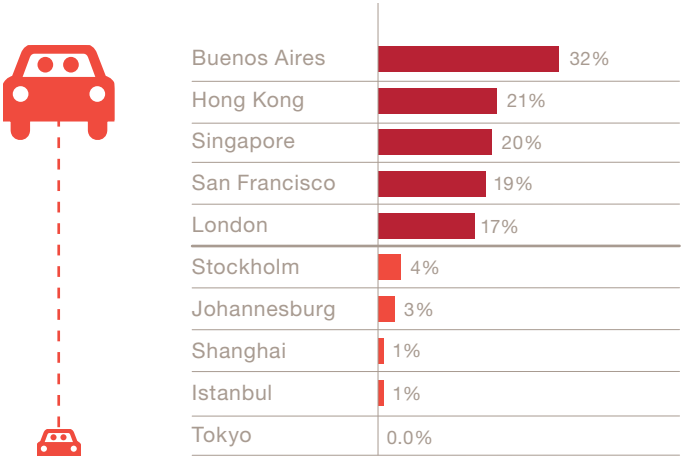
Respondents were asked to select all methods that contribute to a significant part of their trip.
Source: PwC Cities of Opportunity 6: We the urban people



PwC New York

Sharing is caring or perhaps it's just cost-effective

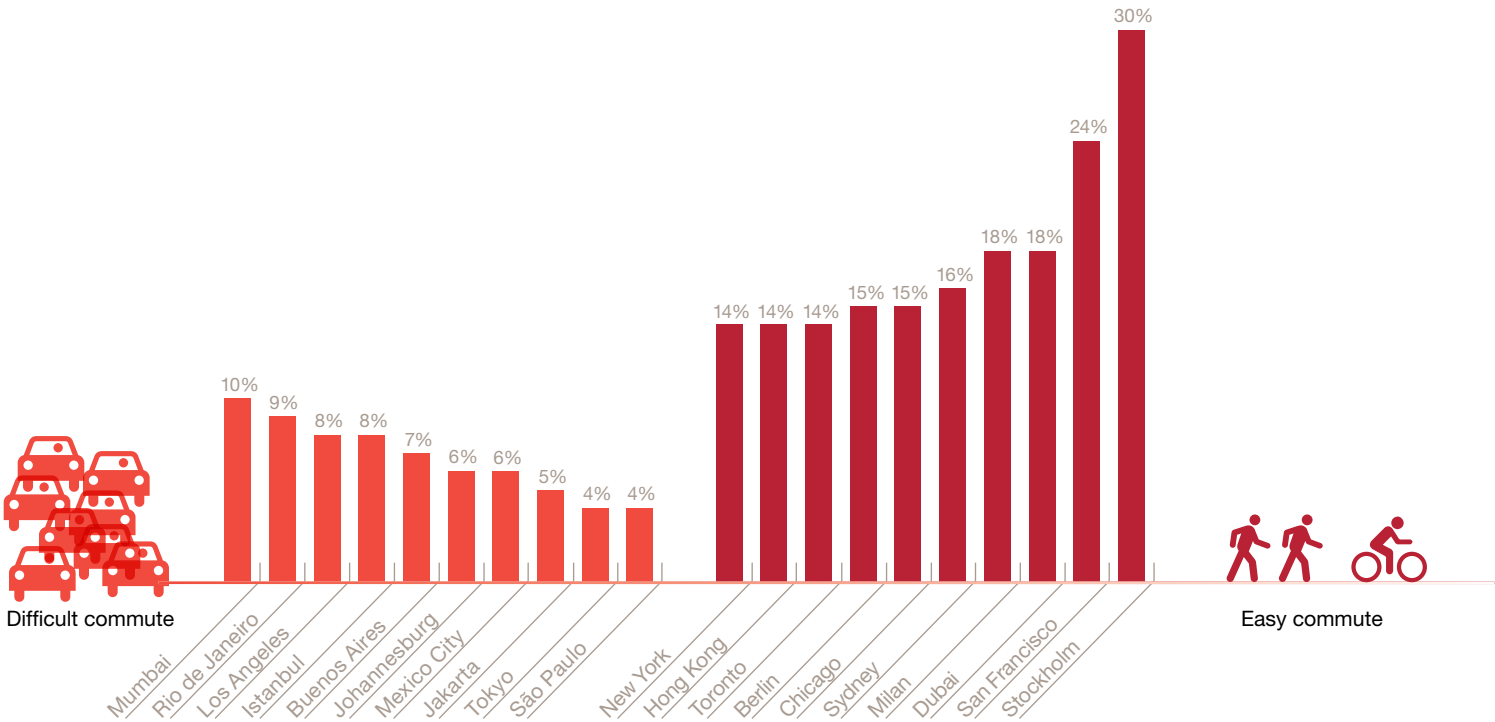
Top and bottom five cities by % of car journeys shared



Total car journeys includes those who share a ride (carpool) and those who drive their car (on their own).
Source: PwC Cities of Opportunity 6: We the urban people

Doing hard time behind the wheel...or easy riding on your bike

% of respondents rating journey as 1 difficult or 10 easy on a scale of 1–10



Source: PwC Cities of Opportunity 6

Take a walk on the wildly happy side

% rating their commute as easy: Respondents citing either 8, 9, or 10 on a 10-point scale where 1 is most difficult and 10 is easiest

Walk	Bicycle	Motorcycle	Subway	Bus	Train	Drive my car
60%	57%	43%	39%	36%	35%	31%

Respondents were asked to select all methods that contribute to a significant part of their trip.

Source: PwC Cities of Opportunity 6: We the urban people

How we kick back, relax, and spend



PwC New York

To learn the joys of city life once the workday is over and the basic bills are paid, we asked our people how they choose to spend their discretionary income. The response reflects the lifestyle of the survey’s mean demographic of young, hard-working urbanites in regional and world business centers.

Vacations, restaurants, and entertainment account for two-thirds (67%) of the #1 top spending choices among the 15,000 responses. Spending in restaurants shows a strong positive correlation with a city’s wealth (using productivity or gross domestic product [GDP] per worker as a proxy for wealth). Books, movies, and games, as well as technology negatively correlate with wealth. This might suggest outer indulgences like a restaurant meal and inner rewards such as a good book are driven by one’s relative affluence. We dine out more in rich cities, read more in poorer ones. But individual city cultures play into the equation, and productivity is just one way to measure wealth, so it’s difficult to determine with certainty.

Going city by city, however, the patterns grow more revealing among the respondents citing a spending category among their top three

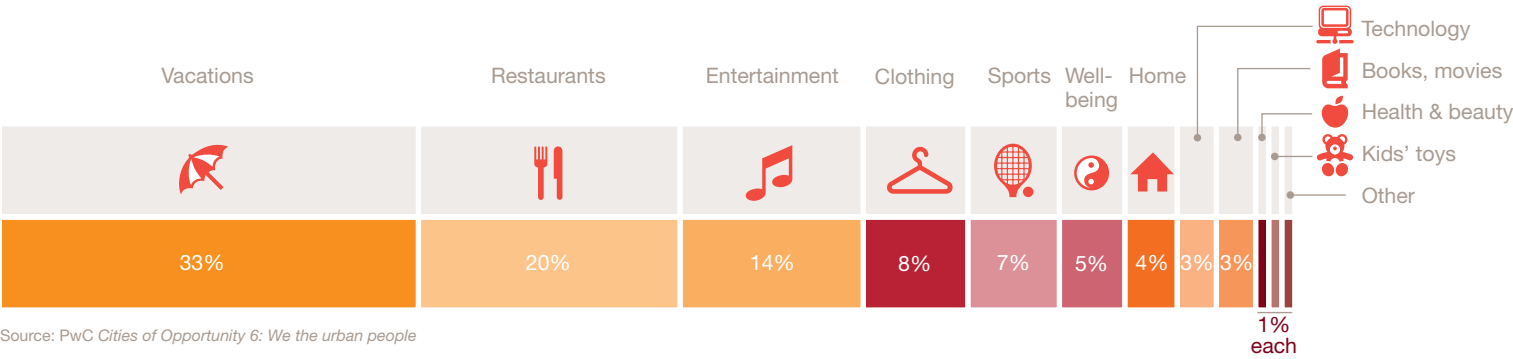
choices. For entertainment, San Francisco, Sydney, Toronto, Berlin, and Stockholm are the most frugal five cities but are among our most satisfied with urban life. PwC people in those five towns score toward the top when we track respondents citing positive words like enjoyable and fun to describe their cities (see page 28). And all are among the top 10 in *Cities of Opportunity 6* overall performance, except Berlin which finishes 11th.

Holidays are serious business in every corner of our urban world. Approximately three-quarters of the professionals in Singapore, Hong Kong, Buenos Aires, Moscow, and Paris are ready to ride planes, trains, and automobiles toward greener pastures on their vacation. Even in the two lowest holiday spending cities, Johannesburg and Nairobi, about half the PwC respondents in Africa still rate vacations among their top three discretionary spending selections.

American urbanites seem to spend the least time in the kitchen and the most money in restaurants and bars. Stockholmers proudly carry the blue and gold standard for Sweden’s world-renowned domestic aesthetic, spending most on the home next to Nairobians.

Discretionary spending preferences: After the numbers are run, there’s time for fun

% of all respondents citing category as their #1 top choice



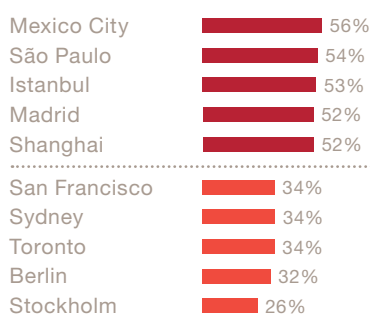
Source: PwC *Cities of Opportunity 6: We the urban people*

Discretionary spending preferences: Local color in the urban consumer fabric

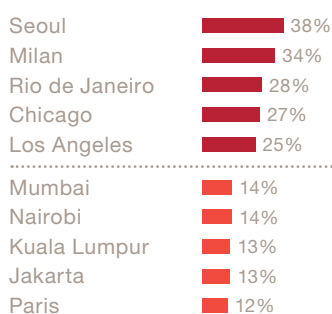
% of respondents citing category among their top three selections



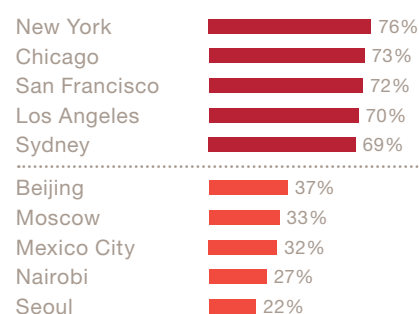
Entertainment



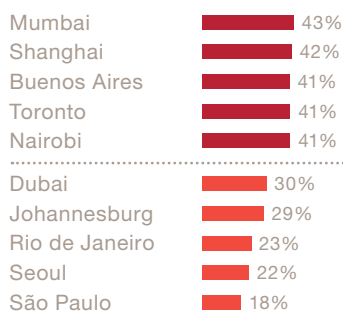
Sports



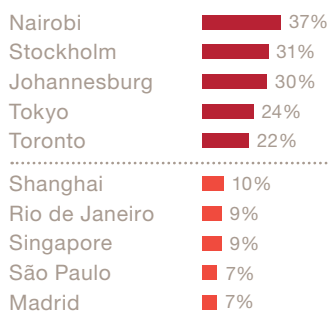
Restaurants and bars



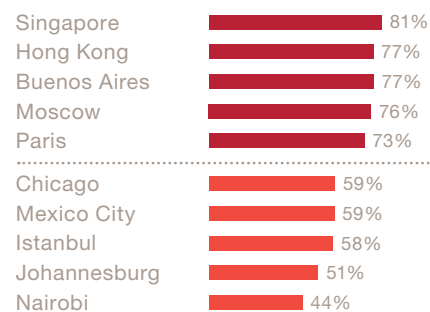
Clothing



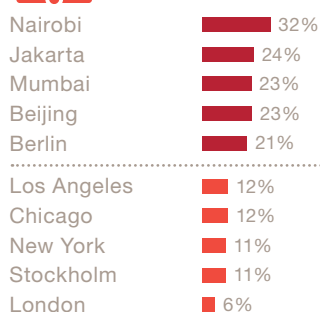
Home



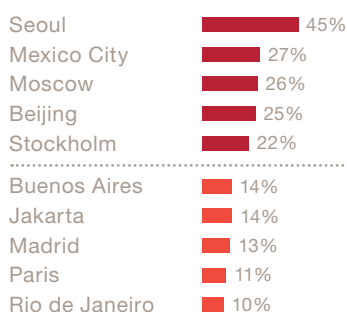
Vacations



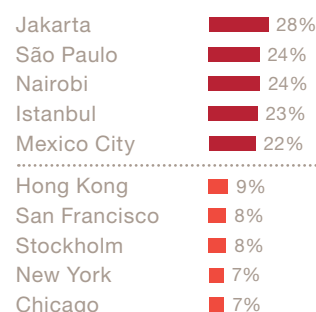
Technology



Wellbeing



Books, movies, games



Source: PwC Cities of Opportunity 6: We the urban people

Say what? Follow the scent of city spirit

Test your urban IQ by matching cities with mottos submitted by PwC people

This is a small selection from thousands of slogans received attesting to the love/hate relationship urbanites have with their towns.



City	Slogan
___ Beijing	1. The bubble that inflates and shrinks but will never explode
___ Berlin	2. Look at the blue sky, the sea, and the mountains; take a deep breath, and your problems disappear
___ Buenos Aires	3. Ambition packaged in optimism and chaos
___ Chicago	4. I am stuck in a traffic jam. You can start dinner without me
___ Dubai	5. A city where no one walks, and everyone is a star
___ Hong Kong	6. Stepmothers are less cruel than capital cities
___ Istanbul	7. The coexistence of sophistication and tradition
___ Jakarta	8. The most valuable flower in the middle of an avalanche
___ Johannesburg	9. A congested and gregarious city looking for more respect
___ Kuala Lumpur	10. The city of lights—car lights
___ London	11. Cold, overcrowded, and gloomy at first sight. But warm, sunny, and calm for those who love it
___ Los Angeles	12. There are so many people, I am afraid that my city will sink into the sea
___ Madrid	13. Like a naughty puppy—unpredictable, energetic but without much restraint
___ Mexico City	14. City of love. City of complainers
___ Milan	15. Poor but sexy
___ Moscow	16. Safe, serious, and spotless
___ Mumbai	17. The city that's relaxed and just right
___ Nairobi	18. A city of double identities: dreary and contemporary but also dynamic
___ New York	19. China for beginners
___ Paris	20. They call it chaos. We call it home
___ Rio de Janeiro	21. If you are tired of this city, you are tired of life
___ San Francisco	22. Risotto and steel
___ São Paulo	23. It's like eating tacos: messy but worth experiencing
___ Seoul	24. Tolerant of your beliefs, judgmental of your shoes
___ Shanghai	25. The city of endless possibilities if you can bear the traffic
___ Singapore	26. The city that has everything—but a beach
___ Stockholm	27. Enjoy the summer because the winters are terrible
___ Sydney	28. A rose that is still beautiful despite the thorns
___ Tokyo	29. City of gold
___ Toronto	30. Where independent, intelligent, conscientious people pay too much rent

Continued from page 24

The next three cities in the top five most attractive for relocation—Sydney (10%), San Francisco (9%), and Paris (5%)—demonstrate that an appreciation for quality of life accompanies the love of professional challenge. While London and New York offer a wealth of urban quality and beauty (with London finishing narrowly second in demographics and livability in *Cities of Opportunity 6*), charm and culture seem more popularly associated with the conception of life in Sydney, San Francisco, and Paris—three advanced cities in different corners of the world, each with its own distinctive profile.

Sydney is the least dense of all our cities. Its beaches and beauty are legend, and, in fact, PwC people proudly note that in many of their slogans such as “The beach and the city at your fingertips—what more could you want?” San Francisco is just as famous for urban beauty of a different nature: Our smallest city is visually striking with its hills and natural harbor. It’s a hotbed of innovation ranging from technology to food (arguably spawning the modern “foodie culture” in the US). Paris, of course, is Paris—a city traditionally synonymous with quality of urban life served in refined balance.

In *Cities of Opportunity 6*, Sydney finishes first in demographics and livability, as well as sustainability and the natural environment. It comes in second in health, safety, and security. San Francisco finishes fifth overall in *Cities of Opportunity 6* and third in the demographics and livability indicator. Paris, sixth overall in *Cities of Opportunity 6*, ranks first in intellectual capital and innovation, third in sustainability and the natural environment and fifth in transportation and infrastructure.

San Franciscans, Sydneysiders, and Parisians all describe their town using a positive word as their first choice 69%, 66%, and 59%, respectively, of the time. Residents of all three cities only lag Stockholm and Rio de Janeiro in appreciation of their city’s “beauty” when listing the top three descriptors of their city. San Franciscans lead the way in caring about culture at 55%, and Paris comes in fourth with 43% declaring the finer things in life are critical to them. Sydney most values green space, with 39% calling it critical for them to live/work there. San Francisco follows at 35%.

San Franciscans say they are “inspired” by their city in a fifth of the replies (21%). And the City by the Bay never forgot to keep on truckin’ in the chilled out spirit that swept

from Haight-Ashbury to much of the world in the 1960s. They are least stressed out of all our city dwellers, with only 2% choosing that word to describe the city. San Francisco (3%) and Sydney (7%) are also among the least likely to call their city “challenging.” Yet, over three-quarters in each—78% in Sydney and 77% in San Francisco—say the city is “expensive,” and 93% and 95%, respectively, tell us affordability is among the top three problems that must be addressed. Like London and New York, the challenges of Sydney and San Francisco are apparent to those who live there—but the urban charms offer a powerful pull to PwC people worldwide nonetheless.

Finally, to prove perhaps that likes do attract, there appears to be a bit of a mutual admiration society among the top four cities. Londoners, New Yorkers, Sydneysiders, and San Franciscans all list each other among top few choices for relocation, ranging from 37% to 11%. But, the subtle, old-world seductions of Paris appeal in San Francisco, the city often called the most European in the US. Ten percent of San Franciscans cite Paris as a favored relocation destination, and 17% of Parisians think it’s a good bargain to swap baguettes for sourdough bread and fog.



PwC Toronto



PwC Rio de Janeiro

Cities as a solution to an aging world



Some facts of life never get old on a Sunday in the park in Paris.



Tokyo, Seoul, and Stockholm are among the cities working to turn an aging megatrend into a longevity dividend

In recent years, Tokyo and Seoul, among other Cities of Opportunity, have been at the center of news stories regarding demographic trends in aging populations. Headlines of “lonely death” in Japan or senior suicides in South Korea underscore the social costs.

Projections estimate that about 900,000 elderly people will live alone in Japan by 2030, up from 600,000 in 2013, and that roughly 470,000 of Japan’s elderly will die alone by 2030 unless more investment is made for their care.¹ In Tokyo alone, *Cities of Opportunity: We the urban people* estimates that nearly 3 million people over age 67 will live in the city by 2025, comprising 23% of the population.²

Already, the trend of solitary deaths among the elderly is rising. In Tokyo, that number has jumped from just over 538 in 2009 to 2,727 in 2013. Meanwhile, 420,000 of the country’s elderly are waiting for nursing home beds. Increasingly, stories are reported in Tokyo of children unable to support their parents in old age, with officials scrambling to keep track of anyone older than age 70 living alone.³

In South Korea, the same generation that helped to build the country’s spectacular economic success is finding itself vulnerable in their later years. Aging parents are said to have been forgotten by their children, who are now themselves caught up in a technological and manufacturing juggernaut that has raised South Korea’s per capita purchasing power to higher than that of Spain and New Zealand.⁴ In Seoul alone, we project that workers between ages 50 and 66

will comprise about 26% of the population and that citizens age 67 and older will make up almost 19% of the population by 2025.⁵

Indeed, a younger South Korean “sandwich generation,” caught between the demands of raising their own children and maintaining their own career, has increasingly been unable to fulfill what had been the traditional role of adult children in Korean society—to care for their elderly parents. Living alone, seemingly left behind, many South Korean seniors have taken a last, drastic step; as a result, the country’s suicide rate is the highest in the world.⁶ The issue has triggered national concern, highlighted by best-selling South Korean author Kyung-Sook Shin, whose novel, *Please Look After Mom*, touches on the demographic dilemma: Traditional family obligations to the elderly are falling short. Help is needed.

1 “In fast-aging Tokyo, elderly to account for one-third of population in 2040,” Yusuke Saito, *Asahi Shimbun*, June 12, 2013, https://ajw.asahi.com/article/behind_news/social_affairs/AJ201306120055, and “In Japan, the Rising Cost of Elder Care—and Dying Alone,” Kanoko Matsuyama, *Bloomberg Businessweek*, February 28, 2013, <http://www.businessweek.com/articles/2013-02-28/in-japan-the-rising-cost-of-elder-care-and-dying-alone>.

2 PwC *Cities of Opportunity 6: We the urban people*, Oxford Economics.

3 “In Japan, the Rising Cost of Elder Care—and Dying Alone,” Kanoko Matsuyama, *Bloomberg Businessweek*, February 28, 2013, <http://www.businessweek.com/articles/2013-02-28/in-japan-the-rising-cost-of-elder-care-and-dying-alone>.

4 “South Korea’s Elderly Left Behind by Speed of Change,” Simon Mundy, *Financial Times*, February 7, 2014, <http://www.ft.com/cms/s/0/a1db5868-889f-11e3-85a2-00144feab7de.html#slide0>.

5 PwC *Cities of Opportunity 6: We the urban people*, Oxford Economics.

6 “South Korea’s Elderly Left Behind by Speed of Change,” Simon Mundy, *Financial Times*, February 7, 2014, <http://www.ft.com/cms/s/0/a1db5868-889f-11e3-85a2-00144feab7de.html#slide0>.

Vital statistics



Youngest city:
Nairobi

Average age:
25

36%
under age 20



Oldest city:
Milan

Average age:
45

22%
over age 66

Lean on me

Young and old in our 30 cities depend on a strong working-age economy.

Average dependent population 2013:

48%



Highest dependency

Milan 63%

Mumbai 61%

Nairobi 58%

Buenos Aires 57%

Sydney 57%

Lowest dependency

Dubai 17%

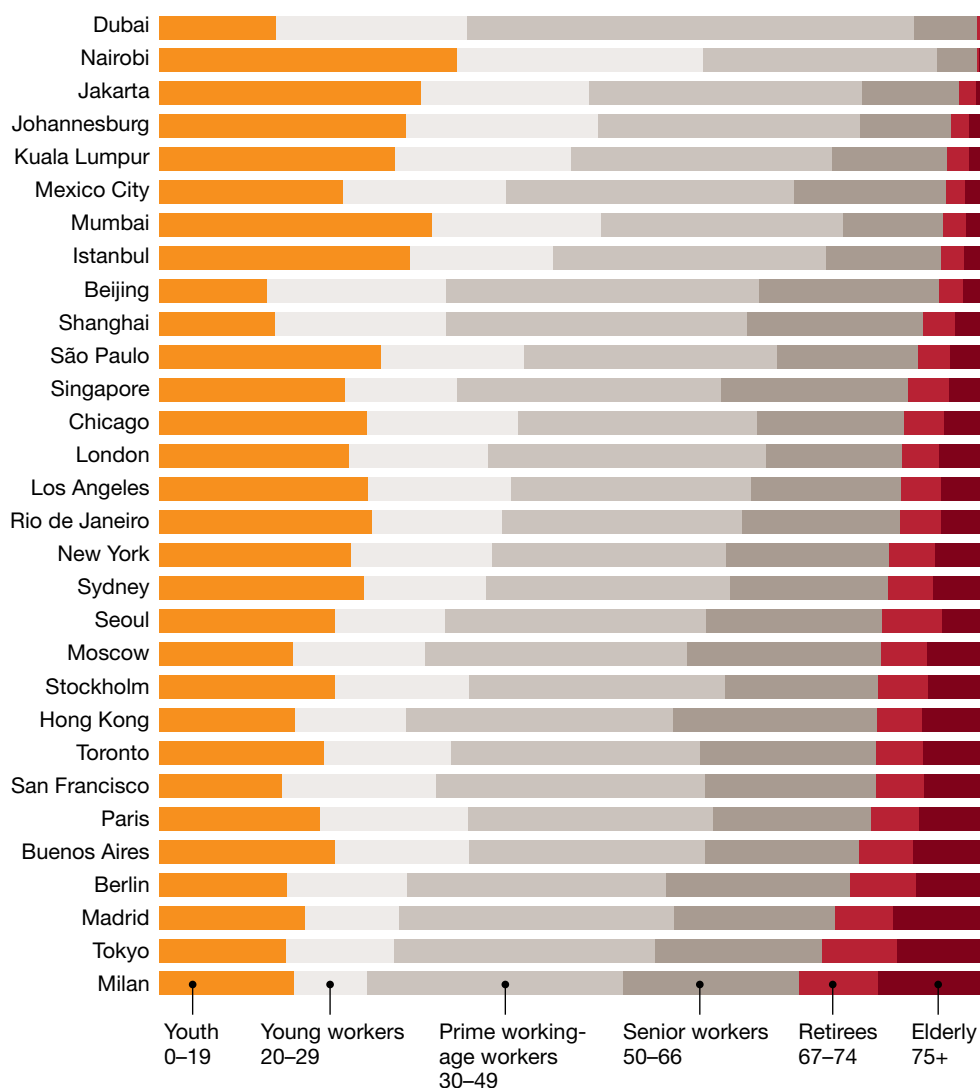
Beijing 22%

Shanghai 27%

Each city's "dependent" population in 2013 is defined in two ways in this study. The figures above give the sum of everyone above age 66 and below age 20 as a total percentage of the working-age population (22%, for example, in Beijing). It is also illustrated on pages 10–12 as a "dependency ratio," the measure universally used by demographers to indicate the ratio of workers in an economy providing for all dependents.

Urban age bands 2013

Sorted by number of people age 67+



Source: PwC Cities of Opportunity 6: We the urban people, Oxford Economics

Most of the world's aging population will live in the very places where they can be helped effectively—in cities.



A restaurateur outside her café in New York.

A big part of the solution may be found in the nature of cities themselves—densely populated places often with well-developed shared resources and services. Urban density shrinks the distance between the elderly, allowing easier companionship and the possibility of “naturally occurring retirement communities,” right in one building on one block. Social and health services are often close by, and it can be easier to provide them individually or communally. Public transport enables mobility for elderly city dwellers. Hospitals are around town. And the vibrancy of city life—art, music, parks, and people—fills the air, often for free or a small fee.

To put the challenges that cities face in context, Seoul and Tokyo are by no means alone in their experience of a great aging shift that by 2050 will increase the number of people aged 65 and older worldwide by nearly 1 billion, a growth of 183%.⁷ Looking at near-term demographics, we project developed economic cities—Milan, Tokyo, Madrid, Berlin, and Stockholm, for example—to

have significantly greater proportions of retirees and elderly, while cities in emerging economic regions remain relatively young. By 2025, people aged 67-plus in Milan and Tokyo, for instance, will account for a sizable portion of the total city population (26% and 23%, respectively). When you add the percentage of “pre-retirees” aged 50–66, the numbers jump. By 2025, we project 51% of Milan’s population will be 50-plus years old, with Tokyo at 42% of its population over age 50. By comparison, people 67-plus years old in Nairobi and Jakarta will comprise just 1% and 5% of the population, respectively, according to our projections.⁸

In advanced economies, projections of a low fertility rate have combined with the looming elderly population projections to suggest the possibility that a near-term unsustainable economic crisis may be on the horizon.⁹

In Seoul, for example, the proportions of non-working elderly above age 66 and “youth-dependents” below age 20 are

growing. A 54% dependent population is forecast by *Cities of Opportunity 6: We the urban people*, Oxford Economics by 2025—that is, every 100 workers in Seoul will be supporting 54 seniors and elderly over age 67, as well as youth dependents under age 20. That figure in Tokyo is projected to reach 59% and in Stockholm 63%, and in Milan, the projections are that nearly 74 youth, seniors, and elderly will have to be supported by every 100 people of working age by 2025.¹⁰

The “graying planet” megatrend could foreshadow broad, global challenges to business and economic performance—among them, health, social services, and pension systems that risk being overwhelmed by a massive shift in elderly populations compounded by fewer working-age people to support such systems. Much of this will be happening in cities whose social and physical infrastructure may not be prepared to adequately service the needs of a quickly growing elderly population.

7 *Cities and Ageing*, GCIF Policy Snapshot No. 2, September 2013, p. 7, http://www.cityindicators.org/Deliverables/Cities%20and%20Ageing%20Policy%20Snapshot%20-%20GCIF%20and%20Philips%20-%20Sept%202013_9-30-2013-1145908.pdf; The World Economic Forum parses the aging challenge a bit differently, saying that the population of “60-plus are expected to reach 22% (2 billion) of global population by 2050,” *Global Population Ageing: Peril or Promise*, World Economic Forum, 2012, p. 5, <http://www.weforum.org/reports/global-population-ageing-peril-or-promise>.

8 Demographic forecasts are based on each city’s strict definition of its municipal limits with demographic breakdowns shown in the first section of this report, “Vital statistics,” PwC *Cities of Opportunity 6: We the urban people*, Oxford Economics.

9 Growth for aging populations in developed economies, by region, is projected to be significant (North America, for instance, will add 51 million new seniors, or grow 113% by 2050), but it is dwarfed by projections for developing regions, according to the Toronto-based Global City Indicators Facility. In South America, for instance, 105 million seniors will be added, a 259% growth by 2050. In Africa, 80 million more people 65-plus will be added, a

growth of 291% by 2050; in the Asia-Pacific region, 328 million elderly people (more than the current population of the United States) are projected, an increase of 182%; and in West Asia-North Africa, the aging population is projected to be 109 million, growing by a stunning 366%, *Cities and Ageing*, GCIF Policy Snapshot No. 2, September 2013, p. 8, http://www.cityindicators.org/Deliverables/Cities%20and%20Ageing%20Policy%20Snapshot%20-%20GCIF%20and%20Philips%20-%20Sept%202013_9-30-2013-1145908.pdf.

10 PwC *Cities of Opportunity: We the urban people*, Oxford Economics.

But there's good news, too. First, most of the world's aging population will live in the very places where they can be helped effectively—in cities. Indeed, according to the World Health Organization, reinvestment in “age-friendly” cities promises to be “the most effective policy. . .to responding to demographic aging.”¹¹ Unlike sudden economic corrections, demographic bubbles can be seen coming from a distance—giving cities time to prepare, according to a World Economic Forum report, *Global Population Ageing: Peril or Promise?*¹²

Second, the cities affected the soonest by demographic aging will likely be among the wealthiest, most advanced economies—the ones best able to respond to the challenges ahead. Thus, the “early entry” of developed cities into demographic aging, according to labor economist Atsushi Seike, president of Tokyo's Keio University, will serve cities elsewhere in developing economies, where the headwinds of demographic aging will occur decades later.

“Today's developing countries will enjoy a late-comer's advantage,” explained Seike, who has studied the economics of aging populations for more than two decades. “Cities in developing economies will learn from the successes and failures of those in developed countries,” he said in a discussion with *Cities of Opportunity 6: We the urban people*.

As Seike sees it, demographic aging poses challenges to cities that are “formidable but not insurmountable.” Seike and others suggest that important features of the demographic outlook—principal among them a phenomenon called the “longevity dividend,” as well as technological solutions

Looking closely at Seoul, Tokyo, and Stockholm, where aging demographics are pronounced, we see three cities facing these challenges head on, taking leadership roles to study, discuss, and address the oncoming impact of demographic aging.

and policy directions—when taken together, suggest a manageable path. Looking closely at Seoul, Tokyo, and Stockholm, for instance, where aging demographics are pronounced, we see three cities facing these challenges head on, taking leadership roles to study, discuss, and address the oncoming impact of demographic aging. In many ways, these cities are among the testing grounds for practical, technological, and policy solutions that will help cities adapt to one of the most significant demographic trends of the coming century.

***The manageable path—
reframing an aging challenge into
a “longevity dividend”***

Discussions of aging demographics often cast the elderly as a projected burden on pension and healthcare systems—a double hydra of unsustainable costs. The average dependent population (of both old and young on working-age population) for the 30 Cities of Opportunity, for instance, is expected to be 51% by 2025.¹³

Healthcare costs for the elderly are expected to increase along with their number. In the United States, for example, total healthcare spending, which was 17.7% of GDP in 2011, is predicted to grow to 25% of GDP by 2030, largely because the population will be older, with Medicaid spending projected to increase from \$555 billion to \$903 billion in 2020.¹⁴ In Japan, healthcare spending represents 9.6% of GDP, compared with Sweden at 9.5%, and South Korea at 7.4% of GDP.¹⁵ But according to the World Economic Forum's *Global Population Ageing: Peril or Promise?*, the conclusions drawn from such numbers by researchers and policymakers are too often fueled by “myths and stereotypes about older people [that] contribute to widespread pessimism about aging societies.”¹⁶

An alternative school of thought sees signs of a longevity value potential. While acknowledging substantial challenges ahead, this outlook suggests that aging populations will not necessarily be “old and infirm”

11 Cities and Ageing, GCIF Policy Snapshot No. 2, September 2013, p. 8, http://www.cityindicators.org/Deliverables/Cities%20and%20Ageing%20Policy%20Snapshot%20-%20GCIF%20and%20Philips%20-%20Sept%202013_9-30-2013-1145908.pdf.

12 Bloom, David E, et al., Chapter 6: “Population Ageing: Macro Challenges and Policy Responses,” found in *Global Population Ageing: Peril or Promise?* World Economic Forum, 2011, p. 35, http://www3.weforum.org/docs/WEF_GAC_GlobalPopulationAgeing_Report_2012.pdf.

13 PwC *Cities of Opportunity 6: We the urban people*, Oxford Economics.

14 Healthcare percentage of US GDP data are from *OECD Health Data 2013*, <http://www.oecd.org/unitedstates/Briefing-Note-USA-2013.pdf>; the growth to 25% of US GDP is from “The State of Aging and Health in America, 2013,” Centers for Disease Control and Prevention, p. 5, http://www.cdc.gov/features/agingandhealth/state_of_aging_and_health_in_america_2013.pdf.

15 *OECD Health Data 2013* <http://www.oecd.org/unitedstates/Briefing-Note-USA-2013.pdf>.

16 Simon Biggs, Laura Carstensen, and Paul Hogan, Chapter 7: “Social Capital, Lifelong Learning and Social Innovation,” *Global Population Ageing: Peril or Promise?* World Economic Forum, 2012, p. 39, http://www3.weforum.org/docs/WEF_GAC_GlobalPopulationAgeing_Report_2012.pdf.



Board games among friends in Shanghai.

nor will they, of necessity, constitute a drag on economic activity. This “longevity dividend” view anticipates healthier aging, a broad physiological improvement as people remain healthier longer. Many of us recognize this value potential—and continuing vitality—every day in the elder doctors, teachers, public servants, and businesspersons (from CEOs of large corporations to small shop owners) who remain actively engaged in city life. Less obvious may be the new products and services a healthy aging population demands. The outlook also foresees more productive aging, a policy-based phenomenon that incentivizes more seniors to continue working and contributing to the tax base. According to researchers at Columbia University, Harvard University, the University of Illinois-Chicago, and the University of Southern California, if healthy aging can, in effect, stretch middle age outward by only a couple of years, countries could gain significant health and economic advantages—up to \$7.1 trillion over 50 years for the US economy.¹⁷

Some see the longevity dividend as a potential boom market for developed countries. In Japan, the hope is represented by the country’s “silver market” generation, people age 50 and older, the so-called *rojin kizouk* (or elder nobility) who have few debts, who own their own home, and who, according to a discussion with Florian Kohlbacher, head of business and economics at the German Institute for Japanese Studies in Tokyo and Fellow of the World Demographic & Ageing Forum, hold a staggering 80% of Japan’s total personal financial assets.¹⁸

In Stockholm, researchers are developing a new range of products and equipment for what they expect to be an emergent market for products targeting the elderly. In Seoul, the senior product marketplace is projected to grow from \$31 billion in 2010 to \$118 billion in 2020.¹⁹ “That growth is due, in part, because the senior market aligns with so many other industries,” Jeffrey Chun, director of consulting, Senior Partners Co.

Ltd, a senior-focused Internet and social media company, told *Cities of Opportunity 6: We the urban people*.

A key pillar of Seoul’s response to demographic aging is to help its residents 50-plus years old consider new careers and businesses.²⁰ Indeed, cities like Seoul and Tokyo are working hard to leverage the experience, institutional wisdom, and cultural knowledge of older, healthy employees who want to stay in the flow of business and daily working life—a key part of the longevity dividend. It’s an idea that dates back to the 1950s and 1960s, according to S. Jay Olshansky, a pioneer in longevity dividend research. Olshansky is author of *The Quest for Immortality: Science at the Frontiers of Aging* and senior author of the 2013 study that quantified the benefits of delayed aging at \$7.1 trillion over 50 years in the United States. “The science has finally caught up with the idea,” Olshansky told us in a telephone discussion. “The bottom line is that if we take a fundamentally different approach to the diseases that plague us as we grow older, we get much more in the way of returns in healthy life,” said Olshansky. And those benefits include “money not spent on health-care for the infirm.”²¹ Within the very real challenges posed by an aging planet, in other words, there are also windows of opportunity.

17 “One way to think about the future gains,” said the report, “is to look at the present discounted value of all the additional quality-adjusted life-years that would arise from delayed aging relative to the status quo. These life-years can then be valued using a conservative metric, such as \$100,000 per life-year. Doing so yields a social benefit of approximately \$7.1 trillion.” Goldman, Dana, and S. Jay Olshansky, et al., “Substantial Health and Economic Returns From Delayed Aging May Warrant A New Focus For Medical Research, *Health Affairs*, 32, No. 10, October 2013, p. 1703, <http://www.mailman.columbia.edu/sites/default/files/Goldman%20et%20al.2013.Health%20and%20Economic%20Returns%20to%20Delayed%20Aging.pdf>.

18 Kohlbacher, Florian, “The Raku-raku land tale: The silver market phenomenon in Japan,” in *The New Millennium Tales: Baby Boomer Marketing Stories*, Lavery, Keven (Ed) Berforts, pp 29–33.

19 “Korea Senior Industry Analysis,” Ministry of Health and Welfare, November 2011.

20 “Korea’s Age Boom: How South Korea Is Addressing the Reality of Low Fertility and a Rapidly Aging Society,” Chemin Rim, Minister of Health and Welfare, Republic of Korea, AARP Journal, 2013 Print Edition, <http://journal.aarpinternational.org/a/b/2013/02/Koreas-Age-Boom-How-South-Korea-is-Addressing-the-Reality-of-Low-Fertility-and-a-Rapidly-Aging-Society>.

21 Goldman, Dana, and S. Jay Olshansky, et al., “Substantial Health and Economic Returns From Delayed Aging May Warrant A New Focus For Medical Research, *Health Affairs*, 32, No. 10, October 2013, p. 1703, <http://content.healthaffairs.org/content/32/10/1698.abst>.



Urban farming and traditional music in Seoul.



Solutions in Seoul—the longevity dividend applied in cities

Solutions are being explored in Seoul, which, in 2012, developed a comprehensive plan addressing the short- and long-term needs of its growing population of the elderly—including health services, comfortable living conditions, recreation, and the integration of the elderly into daily life.²² But it's the title of Seoul's comprehensive plan, "Happy Old Age in a City of Life's Second Harvest," that suggests the city has the healthy and productive aging elements of the longevity dividend squarely in its sights. Indeed, 70% of the program budget (or about \$270.5 million) is devoted to short- and long-term senior employment—productive aging. One near-term goal, for example, is the city's commitment to create 100,000 jobs for aging citizens by 2018—from meal service helpers at schools, to safety patrols, to positions as environmental docents and subway guides.²³

Seoul has also made a big push to expand its network of senior clubs—senior-operated businesses like the Gwanak Senior Club, one of whose stores, *Kong Ggak Ji*, utilizes old-fashioned cooking knowledge to make a fresh,

home-style specialty tofu—"made today and sold today." Customers love the old-school tofu, which is rarely found at local supermarkets, and profits are paid out to employees, all seniors. There are 88 other senior clubs in Seoul, each of which runs multiple businesses—from city walking tours, to dumpling making, to lunch box shops and school proctors, to an increasing number of professional and technical enterprises. The city plans to expand these clubs to all of Seoul's 25 districts, eventually employing up to 6,000 of the elderly, according to Uhm Eui-Sik, director of the Welfare Policy Division of Seoul's Health and Welfare Office.²⁴

Long-term strategic plans, Uhm said in an email response to us, include city initiatives to help baby boomers in their 50s explore ideas for a new career. The Second Half Life Support Centers, for example, provide training and education, job banks, Internet connectivity, and social network support for people who want to continue working. Last year, a senior entrepreneur festival was held in which young and old citizens gathered to propose business ideas. The festival "capitalized on the talents and experiences of senior

citizens and presented ways to turn their ideas into viable businesses," Uhm said. The program represents a long-term vision to provide new horizons and opportunities and leverage the skills and experience of older workers who want to keep a hand in the flow and energy of business life.

More than two dozen business models emerged from that single Second Half event—from restaurants run by seniors, to a "Senior Dating Service" and an educational business where seniors mentor teenagers. Last year, moreover, Seoul joined a nonprofit consortium of government, business, and academic groups called the Korean Society on Aging, which, among many other objectives, will expand the base for senior entrepreneurs and offer senior education programs, "in recognition," said Uhm "of the need to build a senior business ecosystem."²⁵

Part of that ecosystem involves product development for seniors. The Seongnam Senior Complex, for example, is a research facility where visitors can enter a "senior simulation center" that allows them to experience the world in the way that the elderly do every

22 Korea's 52% growth in public expenditures on long-term care between 2000 and 2010 outpaced all Organisation for Economic Co-operation and Development (OECD) countries by a wide margin. See: "A Good Life in Old Age? Monitoring and Improving Quality in Long-Term Care," OECD Health Policies and Data report, 2013, p. 45, http://www.keepeek.com/Digital-Asset-Management/oecd/social-issues-migration-health/a-good-life-in-old-age_9789264194564-en#page45. The OECD projects that Korea's long-term care growth rate to be at or above average—or between 1.6% and 2.3% GDP—by 2060. "Public spending on health and long-term care: a new set of projections," and see OECD report, June 2013, p. 73, <http://www.oecd.org/eco/growth/Health%20FINAL.pdf>.

23 "Happy Old Age: a City of Double-Cropping in Life: Seoul Comprehensive Plans for Senior Citizens," Senior Welfare Department of Health and Welfare Office, Part VI, "Budget," p. 56, November 2012.

24 According to the city of Seoul's Senior Welfare Department of Health and Welfare Office, between 2010 and 2012, most of the jobs in which seniors were employed (about 70%) were non-skilled, service-oriented positions, but the number of professional, technical, and higher-skilled jobs for seniors rose 20% in the same period.

25 The implied value in the social capital of the "senior business ecosystem" suggested here is affirmed in four papers in the World Economic Forum's *Global Population Ageing: Peril or Promise?* 2012, chapters 7, 8, 9, and 11, <http://www.weforum.org/reports/global-population-ageing-peril-or-promise>.

day—visitors wear sandbags to weigh them down, back braces that make them stoop, and special glasses that blur their vision.²⁶ The center also develops new, senior-friendly products—height-adjustable sinks, a foldable chair near a door entrance that allows seniors to put their shoes on without bending over, and a foot-operated water faucet invented 12 years ago by Kim Ye-Ae, a grandmother in her 70s. “My mother thought, ‘why should water faucets be operated only by hand?’” recalled the inventor’s son, Kim Say-June, who now manufactures the Easy Valve, as part of a senior marketplace that is the only industry sector in South Korea expected to have a compound annual growth rate of 10% by 2020.²⁷

**Solutions in Stockholm—
technology and the built environment
for age-friendly cities**

Sweden has long recognized the role that cities play in caring for the elderly, said Carl Smitterberg, communications manager at Stockholm’s Elderly Services Administration,

who spoke with *Cities of Opportunity 6: We the urban people* recently. Indeed, Sweden’s 290 major municipalities are primarily responsible for all long-term care and general care for the elderly and the disabled—from home help, to nursing homes, to long-term dementia care, according to Smitterberg, with a budget of \$1.1 billion, or 16% of Stockholm’s \$6.72 billion annual city budget.²⁸

For Stockholm residents, observed Mats Thorslund, professor of social gerontology at Stockholm University’s Aging Research Centre, that care is funded by a 30% municipal income tax, about 13% of which funds elderly care for city residents. “It’s a system that has worked well for decades,” said Thorslund, “but in 10 to 15 years, the baby boom generation will need treatment for the often complex ailments that can beset the elderly.” That is when the real challenges will hit Sweden, from Stockholm to the rural areas, Thorslund told us in a telephone conversation.

According to *Cities of Opportunity 6: We the urban people*, Oxford Economics estimates,

Stockholm’s population of citizens aged 67 and older will grow 38% between 2013 and 2025, yet despite that jump, the city is not expecting a dramatic increase in the costs of caring for its elderly. Smitterberg points to two main explanations. First, the elderly are increasingly staying in their own home as they age—or “aging-in-place,” in the same neighborhood and apartment building where they spent the bulk of their life and tend to be happier and healthier. Second, healthy aging can translate into more efficient, less costly healthcare delivery for cities. “One of the effects,” said Smitterberg, “is to stretch the healthy living years of middle age deeper into old age.” And that means a reduction in the number of elderly residents who live in the city’s 115 care homes and require much more costly 24-hour care.

26 “South Korea Prepares The Young For A Rapidly Aging Population,” Anthony Kuhn, National Public Radio, January 4, 2013, <http://www.npr.org/2013/01/04/168615553/south-korea-prepares-the-young-for-a-rapidly-aging-population>.

27 “Korea Senior Industry Analysis,” Ministry of Health and Welfare, November 2011.

28 PwC interview with Carl Smitterberg, Stockholm’s Elderly Services Administration, March 10, 2014.

The “longevity dividend,” as well as technological solutions and policy directions, when taken together, suggest a manageable path.



Midsommar festival in Stockholm.

To facilitate Stockholm's aging-in-place agenda, the city has budgeted roughly \$320 million annually for home care services for about 14,500 elderly residents, according to Smitterberg. Last year, he added, the City Planning Administration received more than 7,600 requests for new, age-friendly installations and spent more than \$10 million to retrofit bathrooms and kitchens, to install slip-and-fall protection in homes, and even to install stairway lifts. Residents must apply to the city for all such services, and because there are hundreds of private home care providers from which to choose (Stockholm pays for these, too), the city also hosts a "Find-and-compare home care" website, as well as an "Elder Direct" hotline, to help seniors answer general questions and negotiate the home help system. Elder services can range from cleaning, bathing, and exercise, to gardening and even information technology consultation. There are 30 city-sponsored

"Meeting Places," some of which include "iPad cafes," where seniors socialize and receive computer-related instruction or help with IT problems. The city has also partnered with pension organizations and other nonprofits to provide a few hundred more such meeting places with a wide range of activities. City investments in broadband and volunteer efforts such as "Senior.net" encourage Internet connectivity among the elderly.

Stockholm, Seoul, and Tokyo are technology-friendly cities (ranking third, first, and 10th, respectively, in *Cities of Opportunity 6*, technology readiness), and technology is expected to play a major role in helping cities address the challenges of demographic aging. As a high-technology innovation center, Stockholm continues to encourage research and development of new technologies to help the elderly maintain

social connections; to provide remote healthcare monitoring and fall-detection services; and, according to Filippa Kull, business development director of the Stockholm Science City Foundation, to provide application software and even "gaming solutions" that will help seniors remain active and better manage chronic ailments.

The city has taken a major partnership role with the Stockholm Science City Foundation, Kull said in a telephone conversation with *Cities of Opportunity 6: We the urban people*. She helps match academic researchers with businesses, entrepreneurs, and the healthcare industry to develop technology-driven solutions that can include eldercare. At a recent city-sponsored "Digital Health Days" conference, for example, teams of software engineers competed in a 24-hour "hack-a-thon" to develop ingenious mobile apps, many of which targeted the needs of the



A physician practicing in London.

elderly. This year, those included an app that measures mobility exercises; one that helps patients monitor their drug dosages; and a grand prize winning app that helps prevent incontinence, using a smartphone game to motivate elderly women to exercise.

Elsewhere, Stockholm University's Centre for Health and Building is testing vital equipment for the elderly at a full-scale living laboratory. Trials include special apartments with age-friendly architectural elements like height-adjustable sinks and counters and equipment like Segway walkers that seniors can literally test drive. Recently, according to Tore Larsson, a professor at the centre who spoke with *Cities of Opportunity 6: We the urban people*, 30 experimental subjects, all of them aged 75 or older, went about their daily activities in the living lab—doing chores, washing household laundry, cooking, cleaning, and putting away dishes—while researchers studied the effectiveness of the new equipment, including videophones that allow seniors to communicate with friends or their doctors in real time.

“What we have found,” said Larsson, “is a shortage of good, cleverly designed equipment that can make aging-in-place easy and accessible and can allow seniors independence.” The current market, he said, is more or less captured by small equipment manufacturers that often lack competition “so their products for the elderly are bulky, clunky, unimaginative, and very, very expensive.” Larsson envisions a day when the research at his center will lead to a competitive marketplace filled with innovative products to keep the elderly socially connected and physically fit.

Solutions in Tokyo—long-term care, affordable housing, and “aging in place”

There's a name for it in Tokyo: “the 2020 problem”—a phrase referring to the broad, cultural, and economic challenges of aging demographics. Indeed, by the year 2025, *Cities of Opportunity 6: We the urban people* estimates that of Tokyo's urban core of 13.3 million residents, 23% will be aged 67 or older.²⁹

“What we have found is a shortage of good, cleverly designed equipment that can make aging-in-place easy and accessible and can allow seniors independence,” said Tore Larsson of Stockholm University's Centre for Health and Building.

More broadly, at around the same time, Japan's shrinking workforce will cause the country's economy to “enter an era of structural minus growth,” according to Akihiko Matsutani, professor emeritus at the National Graduate Institute for Policy Studies. In an interview last year, Matsutani suggested that without sweeping reforms in Japan's economic structure, its pension and welfare systems, and its fiscal framework, the country would suffer terribly. “Pensions and social welfare programs will be drastically cut,” Matsutani said, “and elderly people without assets and families supporting them will be impoverished and even displaced in a situation that could be called a ‘refugee crisis of old people.’”³⁰

But Japan has long taken a careful look at aging demographics, according to Michael Gusmano, adjunct assistant professor of health policy and management at Columbia University and co-editor of *Growing Older in World Cities: New York, London, Paris, and Tokyo*. “Japan has arguably done more than any country in the world,” said Gusmano, “to plan and put policies in place that address demographic aging.”

In a telephone discussion with us, Gusmano cited the country's systematic, comprehensive, and multi-dimensional approach to

policy implementation—the heart of which has been a national, long-term health-care insurance program, of which cities like Tokyo play a significant financial and strategic role in deployment. The Long-Term Care Insurance Act (LTCI), which was formulated in the mid-1990s, passed into law in 2000, and revised in 2005, is a kind of strategic reckoning with projections for long-term healthcare costs that are expected to reach 4.1% of Japan's GDP by 2025.³¹ The LTCI Act, which is modeled after similar programs in Germany and Sweden, creates a mandatory, long-term healthcare insurance system, funded by the city, prefecture, and national taxes that pay for half of the system. Premiums paid by the insured fund the other half of the program. The services provided by the LTCI are sweeping and

29 For a slightly different age composition, the Tokyo Metropolitan Government estimates that for a younger 65-plus age group, the population of elderly people in Tokyo will be closer to 25%. These figures also take into account a much larger urban geography and population of about 30 million. The *Cities of Opportunity 6: We the urban people* study focuses on a smaller, urban core geography of 13.2 million people rather than the larger metropolitan area. PwC *Cities of Opportunity 6: We the urban people*, Oxford Economics.

30 “Without Drastic Reforms, Japan Faces ‘Refugee Crisis of Old People’” *Asahi Shimbun*, January 28, 2013, https://ajw.asahi.com/article/forum/politics_and_economy/east_asia/AJ201301280122.

31 Shimizutani, Satoshi, “The Future of Long-Term Care in Japan,” Research Institute of Economy, Trade and Industry, Discussion Paper Series 13-E-064, July 2013, p. 2, <http://www.rieti.go.jp/jp/publications/dp/13e064.pdf>.



Brooklyn riverfront facing Manhattan.

strategic. “It’s a multi-dimensional approach,” said Columbia’s Gusmano, “that looks at big-picture financing of long-term care; rethinks the basic infrastructure of eldercare, including affordable housing; and also tries to recognize and be supportive of community-based programs that are emerging naturally.”

According to a report from the Tokyo Metropolitan Institute of Gerontology, nearly all of the country’s citizens aged 65-plus are insured under the Long-Term Care Insurance Act, and it has so far been successful at reducing costs even though Japan has the highest projected share of population aged 80 and over in the world—with long-term care costs running at just 1.2% of GDP in 2010, compared with Sweden’s 3.58% of GDP.³² Even so, cost remains an issue with the large proportion of the elderly, and the LTCI system is being stretched thin, Ryutaro Takahashi, M.D., vice director of the Institute of Gerontology, said in a discussion with *Cities of Opportunity 6: We the urban people*.

Cost-effective improvements and efficiencies, therefore, are the order of the day in Tokyo. Among recent solutions, in 2010, the Tokyo metropolitan government established the Silver Koban Setchi Jigyō, a program to monitor the living conditions of elderly residents. With 43 monitoring stations currently located in 12 municipalities, the city plans to increase the monitoring stations to 70 in the next two years.³³

Affordable housing for the elderly in Tokyo remains a top priority, according to Dr. Takahashi, who said that the city is hoping to expand its program for retrofitting private homes, as well as rental apartments “so the elderly poor will also be able to enjoy aging in place.” The Bureau of Urban Development has also developed a preferential lottery and points system to help the elderly poor secure public housing, and recently a new Barrier Free Building ordinance was passed to enable the elderly to move through the city’s buildings and streets more easily.³⁴

More broadly, Tokyo has adopted a method for cost-effective aging-in-place—often called naturally occurring retirement communities, a model first developed in New York City. This simply takes apartment buildings, for instance, where many elderly people are living and adds services they might need right on the site. This includes social service workers, on-call caregivers, transportation services to doctors, Internet connectivity, exercise classes, yoga and tai chi classes, and other social activities. “The naturally occurring retirement community model is really perfect for Tokyo,” explained Gusmano, “because in Tokyo, you already have lots of people who are aging in place—they don’t want to go to a nursing home.” Indeed, a recent, strategic revision of the Long Term Care Insurance system, according to Dr. Takahashi, introduced community care service centers directly into naturally occurring aging communities as a way of integrating medical attention with other services that elderly patients need.

32 Growth rate of population 80-plus is from Takahashi, Ryutaro, M.D., “Integrated Community Care System in Japan: A New System Implementation and the Role of the Care Manager,” Tokyo Metropolitan Institute of Gerontology presentation, January 15, 2014, p. 9.

33 “In fast-aging Tokyo, elderly to account for one-third of population in 2040,” Yusuke Saito, *Asahi Shimbun*, June 12, 2013, https://ajw.asahi.com/article/behind_news/social_affairs/AJ201306120055.

34 Urban Development in Tokyo, Tokyo Metropolitan Government, pp. 10 and 23, <http://www.toshiseibi.metro.tokyo.jp/pamphlet/pdf/udt2011english.pdf>.

35 “The Current Situation of and Future Direction of Long-Term Care in Japan, with a Focus on Housing for the Elderly,” Ministry of Health, Labour and Welfare, Japan, March 7, 2013, p. 27. http://www.mhlw.go.jp/english/policy/care-welfare/care-welfare-elderly/dl/ri_130311-01.pdf.

“Lonely death” can change to “longevity dividend” as we make room for the wisdom of the ages in modern, independent cities.

In addition, Tokyo and other cities have developed a new generation of smaller nursing facilities that resemble the layout and feel of a home. Community-based floor layouts dramatically decrease the amount of time elder patients spend alone in their rooms and increase the amount of walking, socializing, and exercising with others.³⁵

For cities worldwide, harvesting the longevity dividend will require adjustments in attitudes about what the elderly can accomplish, allowing older citizens to play an important role in work and society. It will also call for pragmatic solutions like aging-in-place to integrate and include the elderly within the communities they’ve always lived in. Technology will lend a hand with creative care and communications solutions that will help the elderly stay in touch.³⁶ By moving in this direction, cities will position themselves to harvest the dividends of healthy and productive aging.

All told, urban aging is a fact of life, but the story can change from “lonely death” to “longevity dividend” as cities, citizens, and organizations make room for the wisdom of the ages in modern, independent cities.

36 *Cities and Ageing*, GCIF Policy Snapshot No. 2, September 2013, pp. 21–22, http://www.cityindicators.org/Deliverables/Cities%20and%20Ageing%20Policy%20Snapshot%20-%20GCIF%20and%20Phillips%20-%20Sept%202013_9-30-2013-1145908.pdf.



Ballroom dancing in Fuxing Park, Shanghai.

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Quiz answers page 38—
Top to bottom on alphabetical list of cities:
4, 15, 23, 27, 1, 18, 20, 6, 29, 25, 21, 5, 26, 8, 22, 11, 12,
28, 24, 14, 2, 30, 10, 18, 3, 16, 17, 13, 7, 9

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