HIGHLIGHTS

Cities in the World
A new perspective on urbanisation
About the OECD

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

About the OECD Centre for Entrepreneurship, SMEs, Regions and Cities

The Centre helps local, regional and national governments unleash the potential of entrepreneurs and small and medium-sized enterprises, promote inclusive and sustainable regions and cities, boost local job creation and implement sound tourism policies.

About this booklet

This booklet contains highlights from the Cities in the World – A new perspective on urbanisation report, which applies consistent definitions of metropolitan areas, cities, towns and semi-dense areas, and rural areas across the world. The report is a joint work of the OECD and the European Commission, Directorate-General for Regional and Urban Policy. It examines the growth of metropolitan areas over the past 40 years, analyses the link between economic development and countries’ urban systems, assesses and quantifies differences in quality of life across the degree of urbanisation, and documents the changing shape of cities over the past four decades.
Harmonised definitions shed new light on urbanisation

Despite their economic, political, and demographic importance, there is no global consensus on what defines cities. The absence of a harmonised global definition of cities and rural areas has impeded international comparability and inhibited effective policy. For instance, pursuing and achieving the UN Sustainable Development Goals (SDGs) requires not only suitable indicators, but also a clear and consistent definition of cities and rural areas.

This report proposes two new concepts for broadly defining cities and their immediate surrounding areas: the **Degree of Urbanisation** and the **Functional Urban Area**. Through the analysis of these two concepts, the report provides a globally consistent, people-based definition of cities, metropolitan, urban and rural areas. Furthermore, the analysis in this report illustrates how these definitions can help examine and monitor SDGs globally.

The Degree of Urbanisation reflects the urban-rural continuum and proposes three classes instead of only the dichotomy urban or rural. The three classes are: 1) **cities** (or densely populated areas); 2) **towns and semi-dense areas** (or intermediate density areas), and; 3) **rural areas** (or thinly populated areas). **Functional Urban Areas** extend beyond cities, including cities’ commuting zones. By considering commuting flows, the Functional Urban Area takes into account the economic reality of a city. Thus, it better reflects the full extent of its labour market and other functional linkages. In this report, functional areas are referred to as metropolitan areas.

---

**Consistent definitions to understand urbanisation**

- **Cities**
- **Towns and semi-dense areas**
- **Rural areas**
- **Metropolitan Areas** Cities + commuting zones
Almost half of the world lives in cities

The proportion of the world population living in cities of at least 50,000 inhabitants increased from 37% to 48% in the last four decades. Twenty-eight percent live in towns and semi-dense areas and 24% in rural areas. The population share in metropolitan areas, which contain cities and their commuting zones, exceeds more than half of the world population (54%).

While the proportion of city dwellers has consistently grown, it remains lowest in low-income countries. In these countries, the population share of rural areas is still highest, representing 28% of the population, but it is shrinking faster than elsewhere. Globally, urbanisation is spreading. Towns are increasingly growing into cities and suburbs are being absorbed by expanding cities.

![Population by degree of urbanisation, 2015](image)

- **24%** Rural areas
- **28%** Towns and semi-dense areas
- **48%** Cities

**Advantages of a harmonised definition of urbanisation**

- Rely primarily on population size and density
- Simple, transparent and robust methods that can be applied to every country in the world
- Capture the full settlement hierarchy from a small village to a mega city
- Consistent classification of settlements of the same size
- People-based definitions that capture the potential for agglomeration economies
- Enable a common measurement of SDG indicators
- Designed to monitor access to services and infrastructures
- Highly suitable to policy making
- Rely primarily on population size and density
- People-based definitions that capture the potential for agglomeration economies
- Enhanced international comparability of cities and metropolitan areas
What does the future hold for city and rural populations?

The Degree of Urbanisation paints a more nuanced picture than the traditional distinction between urban and rural areas. Until 2050, city populations will keep rapidly growing and are projected to grow by 50% between 2015-50. The population of towns and semi-dense areas will grow by around 25% in 2015-50, but growth is set to slow over time. Even though the share of the global rural population will fall, in absolute numbers total rural population will still increase by 20% between 2015 and 2050 given total global population growth.

Changes in population by type of area, 1975-2050 (1975=100)

Note: These projections are based on linear extrapolations. More refined estimates are included in the final report.
Globally, population growth is increasingly concentrated in large metropolitan areas. Metropolitan areas with over one million inhabitants grew half a percentage faster per year than smaller ones. They alone have grown by more than 400 million since 2000. The largest metropolitan areas, with more than five million inhabitants, grew the fastest in terms of population, and also doubled in number over the past 25 years. This rapid growth of the largest metropolitan areas creates important policy challenges in terms of public transport, affordable housing, and public service provision.

Large metropolitan areas grow fastest across all countries
Annual population growth rates of metropolitan areas by size and income group, 2000-2015

What is a high income country?
According to the World Bank, low-income economies are defined as those with a GNI per capita of $1,025 or less in 2018; lower middle-income with a GNI per capita between $1,026 and $3,995; upper middle-income economies with a GNI per capita between $3,996 and $12,375; high-income economies with a GNI per capita of $12,376 or more.
Rapid population growth means new metropolitan areas in Africa and South Asia

Urban growth has not been limited to large metropolitan areas. In the developing world, rapid population growth has also caused precipitous growth in towns, transforming many of them into cities and metropolitan areas. Around 4,000 new metropolitan areas emerged between 1975 and 2015, now accounting for one third of all metropolitan areas in the world. More than half of metropolitan areas in low-income countries, primarily in sub-Saharan Africa, were towns with a population below 50,000 inhabitants in 1990. In contrast, the majority of metropolitan areas in high-income countries such as the OECD and EU already existed prior to 1975.

In less developed countries, half of metropolitan areas have emerged since 1975
Shares of metropolitan areas by when they emerged (i.e. included a city of at least 50,000)
One in five metropolitan areas has been shrinking

Globally, one fifth of metropolitan areas have been shrinking in population since 2000. Most of these are located in countries in East Asia and Europe where population is stagnating or has started declining. Metropolitan areas with less than a million inhabitants are the most susceptible to population loss; in East Asia and Europe, over one-third of them shrank between 2000 and 2015. This raises unprecedented challenges for policy makers who need to manage the decline in a smart way, ensuring that public services such as education or health facilities remain accessible to residents while facing budgetary pressure.

Population growth rates in metropolitan areas, 2000-15

Managing smart decline

Managing urban decline takes place at both the local and national levels and requires collaboration between businesses, property owners, and residents.

Recent policy actions taken in various countries include:
- Adapting land use planning
- Revitalising inner cities through Private-Public Partnerships
- Supporting densification

Political status, access to markets, and location are three factors connected to metropolitan growth. Capitals have grown 0.8 percentage points faster annually since 2000. Both past and recent population growth were higher in metropolitan areas with greater access to markets. Metropolitan areas on the coast and navigable rivers are larger, and in some regions continue to grow faster.
Economic development and metropolitan growth go hand in hand. Across the world, countries with higher GDP per capita have larger proportions of the population living in cities and, especially, metropolitan areas. As countries develop, the share of people living in metropolitan areas increases, in particular in the largest metropolitan areas. The average share of people living in metropolitan areas with more than 5 million people is 20% greater in high-income countries.

**Service-oriented economies have larger metropolitan populations**

Where people live depends on the economic structure of their country. Among advanced economies, countries with a larger service sector have a higher proportion of people living in metropolitan areas. By contrast, those countries with a larger manufacturing sector have a smaller proportion of people living in metropolitan areas. Today’s developed economies heavily rely on metropolitan areas as important locations for the service economy, which benefit from agglomeration economies, the availability of information technologies and a large variety of amenities that cities and their commuting zones offer.

The concentration of population in a few metropolitan areas varies across stages of development, peaking at intermediate development levels. Then, as countries become richer, the metropolitan system becomes more balanced, with lower regional inequalities and growth spreading in secondary metropolitan areas.

---

**Countries with higher GDP per capita have a greater share of people living in cities**

% of population in metropolitan areas by size and income group, 2015

To facilitate the growth of metropolitan areas as required by the service economy, adequate investment in infrastructure and service provision is necessary.
Regional inequalities peak in middle income countries

Countries’ metropolitan structure matters for regional inequality. Regions with a higher concentration of their population in metropolitan areas tend to be richer than the other regions. This income gap between metropolitan areas and other places tends to change with levels of development:

- Regional income disparities are greater in middle-income countries than in the poorest and the richest countries.
- In middle-income countries, GDP per capita in the most metropolitan regions is twice that of the least metropolitan regions.*
- Larger net migration towards metropolitan regions contributes to regional economic growth which partially explains regional income gaps within countries.
- The difference in human capital between the most and least metropolitan regions is particularly high in countries outside the OECD and EU, raising regional disparities in those countries.

*The most and least metropolitan regions refer to those regions in a country that have the highest and lowest share of population living in metropolitan areas, respectively.
Cities offer the highest quality of life

Overall, residents in cities enjoy better living conditions than people living elsewhere. Evidence from 111 countries shows that city residents are on average more likely to be satisfied with their lives, tend to suffer less from health problems, enjoy more economic opportunities, and have more access to services and technology.

While quality of life is highest in cities across most well-being indicators, there are notable exceptions. City residents are more exposed to crime and violence such as theft, mugging or assaults. Furthermore, a number of urban ills such as air pollution, higher blood pressure, and obesity are more widespread in more densely populated areas.

The role of expectations: Individuals’ experience and expectations shape their satisfaction with local conditions. Consequently, perception-based indicators might understate actual differences in well-being indicators between the degrees of urbanisation.

Dimensions of quality of life by degree or urbanisation
More access to infrastructure and technology in densely populated areas

Where a resident lives has a strong impact on their access to public infrastructure and modern technology. Unsurprisingly, public transport and access to roads and highways increase with the degree of urbanisation. This trend extends to modern technologies - across all income groups, internet access follows a clear gradient, with residents in more densely populated areas enjoying markedly better internet access.

Globally, the share of residents in cities with regular internet access is almost 50% above that of rural residents. Similarly, recent use of the internet (SDG 17.8.1) also ranges from 74% in cities and 67% in towns & semi-dense areas to 56% in rural areas. Disparities by degree of urbanisation in low-income countries also exist with respect to mobile phones (SDG 5.b.1). Only around half of rural residents in low-income countries own a mobile phone compared to more than 60% of residents in towns and semi-dense areas and more than 70% of residents in cities.

In the developing world, cities are better off, but fertility rates strain public resources

In developing countries, the provision of utilities such as drinking water or electricity is consistently better in cities than in rural areas or towns and semi-dense areas. While most health outcomes are also better in cities, rural areas have narrowed the gap over the past 15 years.

Educational attainment follows a clear density gradient: it is best in cities, followed by towns and semi-dense areas, and lowest in rural areas. These differences are most striking in Sub-Saharan Africa, Latin America and the Caribbean, and in Southeast Asia, where the proportion of people with at least eight years of education is more than 20% higher in cities than rural areas.

High fertility rates remain a policy challenge in the developing world, especially as rural fertility rates are 50% higher than in cities. Even though fertility rates have fallen in most areas, they remain very high in all types of areas in Sub-Saharan Africa, ranging from 4 (in cities) to 5 (in towns & semi-dense areas) and 6 children per woman (in rural areas). If fertility rates continue to only slowly decline, population growth in Sub-Saharan Africa will drive the growth of megacities and the proliferation of small and medium-sized cities, putting public resources in those cities under strain.

Monitoring SGDs across the degree of urbanisation and metropolitan areas

<table>
<thead>
<tr>
<th>Financial means to buy food</th>
<th>Gender equality</th>
<th>Use of internet</th>
<th>Land use change &amp; open space</th>
</tr>
</thead>
<tbody>
<tr>
<td>feeling safe walking at night</td>
<td>access to public transport</td>
<td>partnerships for the goals</td>
<td>inclusion of minorities</td>
</tr>
</tbody>
</table>
Cities in high-income countries are less dense

Cities everywhere are dense, but not all are equally so. In general, the higher the income of a country, the lower the densities of its cities. Cities in low-income countries have the highest densities, close to 10,000 inhabitants per km², compared to 7,200 in lower middle-income countries, 5,300 in upper middle-income and only 2,800 in high-income countries. Cities in low-income countries are almost four times denser than the cities in high-income countries.

Cities are denser at lower development levels

Population density of cities, 2015

The larger a city, the denser it is. This density gradient is clearly visible in high and upper middle-income countries and to a lesser degree in lower middle-income countries. In low-income countries, however, this gradient is absent: cities of all sizes are very dense. Globally, cities have continuously become denser over the past 40 years. The increasing density of large and very large cities (of more than 1 million inhabitants) mainly accounts for global increases in population density.

5. The shape of cities is changing
Densification accounts for more than two thirds of city growth

Cities are growing and expanding. Cities’ population can grow in different ways: through densification within old city borders or through expansion by adding the population in incorporated nearby areas.

On average, 65-70% of population growth of cities since 1975 occurred through densification. This pattern has become stronger over time. In 1975-90, 65% of city population growth happened within cities’ old boundaries, increasing to 71% between 2000-15. The form of city growth differs by region and by city size. For example, in small, medium and large cities in North America, most growth occurs outside the old city boundaries, in areas such as suburbs and smaller settlements that densified and became part of the city.

Cost-effective public transport requires sufficient density

Population density matters for public transport. Generally, lower density cities require a longer network to provide access to public transport to its residents. As such, the shape of cities directly affects SDG 11 in terms of convenient access to transport. For 37 large metropolitan areas globally, research shows a strong link between the cost of providing public transport and the spatial distribution of people. For example, Hong Kong can provide public transport to 80% of its residents with a network of only 6 km per 100,000 inhabitants, while less densely populated Atlanta would need 45 times more (273 km).

Longer networks substantially raise the cost of constructing and operating transport. However, the benefits of higher density are neither proportional nor unlimited. Increasing neighbourhood density from 1,000 to 3,000 per square km reduces the network length per 100,000 inhabitants from 3.3 km to 0.9 km. Further increases do not generate the same magnitude of cost reductions.

Decomposing average annual population growth in cities, 1975-2015
Visit our webtool

www.worldcitiestool.org

Contacts

OECD Centre for Entrepreneurship, SMEs, Regions and Cities

Rudiger AHRENDE | Rudiger.Ahrend@oecd.org

Paolo VENERI | Paolo.Veneri@oecd.org

Lukas KLEINE-RUESCHKAMP | Lukas.Kleine-Rueschkamp@oecd.org

European Commission, DG for Regional and Urban Policy

Lewis DIJKSTRA | Lewis.Dijkstra@ec.europa.eu