

Unit  
**4**

# Human Population

Supplement  
Series



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One of the world's busiest pedestrian crossings, Shibuya Crossing is widely regarded as Tokyo's most iconic landmark. With over 2,500 people traversing at each light change, it holds the title of the busiest crossing on Earth. Featured in films such as *Lost in Translation*, *The Fast and the Furious: Tokyo Drift* and *Resident Evil*, Shibuya Crossing remains a globally recognised emblem of Japanese urban culture.

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# 1

# Population dynamics

## Updated in-text data

### ▶ ORIGINAL DATA

Page 2

The 7.9 million global population in April 2022 was unevenly distributed, as Figure 1.1 shows.

### ▶ UPDATED DATA

The **8.2 billion global population in March 2025** remains unevenly distributed.

[United Nations Population Division \(2025\)](#)

NOTE: [World Population Clock](#) presents this change visually

### ▶ ORIGINAL DATA

Page 3

There are 45 megacities, each with over 10 million people including Tokyo-Yokohama (Japan), Mumbai (India) and Lagos (Nigeria).

### ▶ UPDATED DATA

UNDESA lists 33 megacities, but if the wider urban agglomerations are included, **the figure rises to 53**.

[United Nations Department of Economic and Social Affairs](#)

### ▶ ORIGINAL DATA

Page 3

These densities seem even more extreme when compared with Melbourne's average of 1500 people per square kilometre.

### ▶ UPDATED DATA

These densities seem even more extreme when compared with **Melbourne's average of 453 people per square kilometre**.

[ABS Population Australia](#)

NOTE: The sharp variation is due to ABS figure including the wider metropolitan area.

### ▶ ORIGINAL DATA

Page 3

Government authorities are planning to redistribute key administrative functions to other urban centres as a way of reducing the megacity's growth.

### ▶ UPDATED DATA

In January 2025, *The Times of India* reported that the Iranian government was considering moving the capital to the southern Makran region.

[The Times of India](#)

▼ Global population reached 8.2 billion in early 2025.

©olaser via Canva.com



## ▶ ORIGINAL DATA

Page 4

As Figure 1.6 shows, the global population reached seven billion in 2011 and, at pre-COVID-19 growth rates, is likely to reach eight billion by 2024.

## ▶ ORIGINAL DATA

Page 5

For example, there were 140 million births in 2020 (and 58 million deaths) compared to around 53 million births 35 years earlier.

## ▶ ORIGINAL DATA

Page 5

By 2020 global population was increasing by around 83 million or 1.1 per cent a year (see Figure 1.7)...

## ▶ ORIGINAL DATA

Page 5

Together these two countries account for 35.6 per cent of the global population (China 17.9 per cent, India 17.7 per cent).

## ▶ ORIGINAL DATA

Page 5

Nonetheless, the United Nations projects a world population of around 9.7 billion by 2050, with annual new growth slowing to around 40–45 million people and perhaps 11.2 billion by the end of the century (see again Figures 1.6 and 1.8).

## ▶ ORIGINAL DATA

Page 5

Five of these countries are in Africa where the total projected growth for the continent is from 1.36 billion in 2020 to as much as 4.5 billion by 2100.

## ▶ ORIGINAL DATA

Page 5

Nigeria's population growth will be Africa's stand out: from 206 million in 2020 to a projected 400 million by 2050.

## ▶ UPDATED DATA

The **global population reached 8.2 billion in March 2025.**

▶ [United Nations Population Division \(2025\)](#)

## ▶ UPDATED DATA

There were **132 million births in 2025 (and 63 million deaths).**

▶ [United Nations Department of Economic and Social Affairs](#)

## ▶ UPDATED DATA

By 2025 global population was increasing by **around 69 million or 0.84% per year...**

▶ [United Nations Department of Economic and Social Affairs](#)

## ▶ UPDATED DATA

In 2025, these two countries together account for **35.2 per cent of the global population.**

▶ [United Nations World Population Prospects \(2024\)](#)

## ▶ UPDATED DATA

The United Nations projects a world population of around **9.8 billion**, with annual growth slowing to approximately 40–45 million people, and potentially reaching 11.2 billion by the end of the century.

▶ [United Nations Department of Economic and Social Affairs](#)

▶ NOTE: UNDESA estimates, with 80 per cent confidence, that the global population in 2100 will be between 10 and 12 billion.

## ▶ UPDATED DATA

.. to as **much as 4.2 billion by 2100.**

▶ [United Nations Department of Economic and Social Affairs](#)

## ▶ UPDATED DATA

Nigeria's population growth will be Africa's stand out: from **206 million in 2020 to an estimated 377 million by 2050.**

▶ [United Nations Department of Economic and Social Affairs](#)



▲ There were 286,998 registered births in Australia in 2023.  
©Slatan via Canva.com

**▶ ORIGINAL DATA** Page 5

These projected population figures may change significantly depending on the impact of the COVID-19 pandemic on demographic factors such as growth rates, death rates, birth rates, life expectancy, migration and population distribution.

**▶ UPDATED DATA**

Projections from the United Nations Population Prospects (2024) suggest slightly lower peaks than previously forecast, with a global population peak in the late 2080s followed by a slight decline. Overall, global trends remain largely unchanged from 2020.

▶ [United Nations Department of Economic and Social Affairs](#)

**▶ ORIGINAL DATA** Page 7

Australia's natural population growth rate of just 0.55 per cent in 2020.

**▶ UPDATED DATA**

Australia's natural population growth rate was just **0.4 per cent in 2024**.

▶ ABS, Population

**▶ ORIGINAL DATA** Page 7

The fastest shrinking populations in 2020 were mostly European: Bulgaria (-0.63 per cent a year), Latvia (-0.54), Ukraine (-0.44), Hungary (-0.41), Germany (-0.35) and Russia (-0.34).

**▶ UPDATED DATA**

The fastest declining populations in 2024 were mostly European: **Latvia (-1.13 per cent a year) Bulgaria (-0.62), Hungary (-0.47) and Russia (-0.31)**.

▶ [United Nations Department of Economic and Social Affairs](#)

**▶ ORIGINAL DATA** Page 7

In 2020 Niger in West Africa and Angola in south-west Africa recorded the world's highest crude birth rates of 47.5 and 42.7 per 1000 respectively.

**▶ UPDATED DATA**

In 2025 Niger and Chad in West Africa and Somalia in north-east Africa were predicted to have the world's highest crude birth rates of **44.7, 42.6 and 42.6 respectively**.

▶ [United Nations World Population Prospects \(2024\)](#)

**▶ ORIGINAL DATA** Page 7

.. to bring the world average to 18.1 per 1000.

**▶ UPDATED DATA**

.. to bring the world average to **17.3 per 1000 in 2024**.

▶ [United Nations World Population Prospects \(2024\)](#)

**▶ ORIGINAL DATA** Page 7

The world's lowest birth rates in 2020 were reached by Japan (7.3 per 1000), Greece (7.6), Taiwan (8.0) and Portugal (8.1).

**▶ UPDATED DATA**

The world's lowest birth rates in 2025 were predicted to be **Ukraine (5.1 per 1000), South Korea (5.6), Japan (6.6) and Italy (6.9)**.

▶ [United Nations World Population Prospects \(2024\)](#)

► Around 4.8 million children aged 0–14 lived in Australia (June, 2023).

©tatyana\_tomsickova via Canva.com



## ► ORIGINAL DATA

Page 8

In China, government planning since 1979 has restricted couples to fewer children and at a later age, though since 2015 this policy has been modified.

## ► UPDATED DATA

In China, government authorities restricted couples to one child and **later two children between 1980 and 2015.**

United Nations World Population Prospects (2024)

NOTE: See Chapter 6

## ► ORIGINAL DATA

Page 10

In 2021, the world's TFR averaged 2.42 children per woman.

## ► UPDATED DATA

In 2024, the world's TFR averaged **2.24 children per woman.**

United Nations World Population Prospects (2024)

## ► ORIGINAL DATA

Page 10

Taiwan, South Korea and Singapore had the world's lowest rates at 1.07, 1.09 and 1.15 children per woman respectively.

## ► UPDATED DATA

In 2024, South Korea, Taiwan and Singapore had the world's lowest rates at **0.75, 0.86 and 0.96 children per woman respectively.**

United Nations World Population Prospects (2024)

## ► ORIGINAL DATA

Page 11

Perhaps around 2029, when [China's] population is predicted to peak at between 1.45 and 1.5 billion, will a fall in the total population occur.

## ► UPDATED DATA

China's population continued to grow, but at a slower rate than before, resulting in official total **population decreases of several million in 2023, 2024 and 2025.**

United Nations World Population Prospects (2024)

## ► ORIGINAL DATA

Page 11

In 2020 the world's average crude death rate was 7.7 per 1000.

## ► UPDATED DATA

In 2024 the world's average crude death rate was **7.6 per 1000.**

United Nations World Population Prospects (2024)

## ► ORIGINAL DATA

Page 11

Qatar, the United Arab Emirates and Kuwait ... had just 1.6, 2.0 and 2.3 deaths per 1000 people respectively.

## ► UPDATED DATA

In 2024 Qatar, United Arab Emirates and Oman... had just **1.5, 1.8 and 2.5 deaths per 1000 people respectively.**

United Nations World Population Prospects (2024)

## ► ORIGINAL DATA

Page 11

... the ageing European populations of Lithuania, Bulgaria, Latvia and Ukraine had the world's highest death rates with 15.0, 14.6, 14.6 and 14.0 per 1000 respectively.

## ► UPDATED DATA

... the ageing European populations of Bulgaria, Ukraine, Latvia and Lithuania had the world's highest death rates with **15.6, 15.2, 15.0 and 14.4 per 1000 respectively in 2024.**

United Nations World Population Prospects (2024)

## ▶ ORIGINAL DATA

Page 11

..in 2020, Lesotho in southern Africa could claim to have the world's highest CDR at 15.4 per 1000.

## ▶ UPDATED DATA

.. in 2024, **Bulgaria could claim to have the world's highest CDR** at 15.6 per 1000.

▶ [United Nations World Population Prospects \(2024\)](#)

▶ NOTE: Lesotho's CDR in 2024 was recorded at 13.4

## ▶ ORIGINAL DATA

Page 13

In 2020 the global infant mortality rate was estimated to be at 26.1, equating to 4.0 million deaths annually.

## ▶ UPDATED DATA

In 2024 the global infant mortality rate was estimated to be **26.8 equating to 3.8 million deaths annually.**

▶ [UNDESA Population Division](#)

▶ NOTE: There is some discrepancy in the two sets of data: both sets were originally estimates by UNDESA and this most likely accounts for the variation.

## ▶ ORIGINAL DATA

Page 13

Afghanistan ... estimated in 2020 to be between 50 and 100 per live births.

## ▶ UPDATED DATA

Afghanistan ... estimated in 2025 to be **41.5 per live births.**

▶ [UNDESA Population Division](#)

## ▶ ORIGINAL DATA

Page 13

Basic healthcare centres are not universal and access to them is difficult, since travelling is often on foot. Health education in rural areas and many towns and cities is lacking....

## ▶ UPDATED DATA

Projected improvements in hygiene, water quality, and living conditions have begun to reduce the spread of infections. Together with increased continuity of care from more trained midwives, this is likely to cause further declines in the figure.

▶ [WHO, 2024](#)

## ▶ ORIGINAL DATA

Page 14

... babies born in Slovenia, Singapore, Iceland and Japan had the best chance of survival in their first year with infant mortality rates estimated at 1.5,1.6, 1.7 and 1.9 respectively.

## ▶ UPDATED DATA

... babies born in Iceland, Slovenia, Japan, Finland and Estonia had the best chance of survival in their first year with infant mortality rates estimated for **2025 at 1.2, 1.4, and 1.6 for Japan, Finland and Estonia.**

▶ [UNDESA Population Division](#)

## ▶ ORIGINAL DATA

Page 14

Neonatal mortality rates...to 17.0 in 2019 (representing 2.4 million babies)

## ▶ UPDATED DATA

... to 17.0 in 2022 (**representing 2.3 million babies**)

▶ [United Nations World Population Prospects \(2024\)](#)

## ▶ ORIGINAL DATA

Page 14

In the late 2010s, a world average maternal mortality rate of 216 per 100 000 live births was reached.

## ▶ UPDATED DATA

In 2020, a world average maternal mortality rate of **216 per 100 000 live births was reached.**

▶ [WHO, 2024](#)

## ▶ ORIGINAL DATA

Page 14

Sierra Leone recorded a world high of 1360, ... World lows of less than 2 per 100 000 were recorded by New Zealand and Norway in 2018.

## ▶ UPDATED DATA

South Sudan recorded a world high of 1223 in 2020 ... World lows of less than 2 per 100 000 were recorded by Belarus and Norway in 2020.

▶ [WHO, 2024](#)

## ▶ ORIGINAL DATA

Page 15

Indian males born in 2021 have a projected life expectancy of around 68.7 years, while females have a life expectancy of around 71.5 years. By contrast, Japanese males and females born in 2021 have a life expectancy between 13 and 16 years longer than their Indian counterparts: 81.7 for males, 87.7 for females.

## ▶ UPDATED DATA

Indian males born in 2025 have a projected life expectancy of around 70.9 years, while females have a life expectancy of around 76.2 years. By contrast, Japanese males and females born in 2025 have a life expectancy between 10.9 and 11.6 years longer than their Indian counterparts: 81.8 for males, 87.8 for females.

▶ [WHO, 2024](#)

## ▶ ORIGINAL DATA

Page 15

... India, China and Vietnam where the average sex ratio at birth is 111 males for every 100 females.

## ▶ UPDATED DATA

... where the average sex ratio at birth was estimated in **2023 at 110 males for every 100 females.**

▶ [WHO, 2024](#)

## ▶ ORIGINAL DATA

Page 16

In 2021 it stood at 73.2 (70.8 years for males and 75.6 years for females).

## ▶ UPDATED DATA

In 2024 it stood at **73.3 (70.7 years for males and 76 years for females).**

▶ [United Nations World Population Prospects \(2024\)](#)

## ▶ ORIGINAL DATA

Page 16

Australia's equivalent figures in 2021 were 82.9 years: 80.7 for males and 85.2 for females.

## ▶ UPDATED DATA

Australia's equivalent figures in **2024 were 84.1 years: 82.3 for males and 85.8 for females.**

▶ [United Nations World Population Prospects \(2024\)](#)

## ▶ ORIGINAL DATA

Page 16

The World Health Organization (WHO) projections for 2050 are a doubling of the population aged over 65 to 1.5 billion.

## ▶ UPDATED DATA

The World Health Organization (WHO) projections for **2050 are 2.1 billion people aged 60 and over.**

▶ [WHO, 2024](#)

▶ NOTE: The projections are for different age groups.

## ▶ ORIGINAL DATA

Page 18

Worldwide in 2020 there was an estimated 50 million people with some form of dementia. By 2050 this figure could possibly rise to between 130 and 152 million people.

## ▶ UPDATED DATA

Worldwide in 2024 there was an estimated 58 million people with some form of dementia. **By 2050 this figure could possibly rise to 139 million people.**

▶ [WHO, 2024](#)



## ORIGINAL DATA

Page 18

...the worldwide costs of dementia were over US\$800 billion in 2015.



## UPDATED DATA

...the worldwide costs of dementia were estimated to be around **US\$1.3 trillion for 2024-25.**

WHO, 2024

## Updated visual sources



## ORIGINAL DATA

Page 3

**Figure 1.3** Australia's population distribution, 2015.



## NEW DIGITAL SOURCE

ABS: Population change.



## ORIGINAL DATA

Page 4

**Figure 1.6** Global population growth, 1700–2100.



## NEW DIGITAL SOURCE

United Nations World Population Prospects (2024).

NOTE: Select the appropriate data set from the first drop down menu.



## ORIGINAL DATA

Page 5

**Figure 1.7** Annual global population growth, 1950–2100.



## NEW DIGITAL SOURCE

United Nations World Population Prospects (2024).

NOTE: Select the appropriate data set from the first drop down menu.



## ORIGINAL DATA

Page 5

**Figure 1.8** Global births and deaths, 1950-2100.



## NEW DIGITAL SOURCE

United Nations World Population Prospects (2024).

NOTE: Select the appropriate data set from the first drop down menu.



## ORIGINAL DATA

Page 5

**Figure 1.9** Global population changes by regions, 1950-2100.



## NEW DIGITAL SOURCE

United Nations World Population Prospects (2024).

NOTE: Select the appropriate data set from the first drop down menu.



## ORIGINAL DATA

Page 6

**Figure 1.10** Distribution of natural increase and natural decrease, 2020.



## NEW DIGITAL SOURCE

United Nations World Population Prospects (2024).

NOTE: Select the appropriate data set from the first drop down menu.

▼ There are more women than men in aged care facilities, partly due to longer life expectancy.

©pixelshot via Canva.com



**Figure 1.11** Declining populations in selected countries.

Country	Population (millions) 2050	per centage decline 2050
Italy	58.9	12.5%
Poland	37.8	13.2%
Greece	8.8	15.4
Bulgaria	5.3	19.4
Ukraine	31.6	20.2
Japan	100	18.6

▶ **Figure 1.11** Declining populations in selected countries.

**Figure 1.12** Distribution of crude birth rates, 2020.

[United Nations World Population Prospects \(2024\).](#)

NOTE: Select the appropriate data set from the first drop down menu.

**Figure 1.13** Changing crude birth rates, 1950-2020.

Country	Crude Births Rates (2025 projections)
Egypt	21.7
India	16.1
Indonesia	16.0
Italy	6.9
Japan	6.6
Kenya	27.3
Mexico	14.5
World	17.7

▶ **Figure 1.13** Changing crude birth rates, 1950-2025 (projected).



## ORIGINAL DATA

Page  
10

**Figure 1.16** Distribution of total fertility rates, 2021.



## NEW DIGITAL SOURCE

[United Nations World Population Prospects \(2024\).](#)

NOTE: Select the appropriate data set from the first drop down menu.



## ORIGINAL DATA

Page  
12

**Figure 1.17** Distribution of crude death rates, 2020.



## NEW DIGITAL SOURCE

[United Nations World Population Prospects \(2024\).](#)

NOTE: Select the appropriate data set from the first drop down menu.



## ORIGINAL DATA

Page  
12

**Figure 1.18** Changing crude death rates

## NEW SOURCE

Country	Crude Death Rates (2025 projections)
Egypt	5.7
India	7.4
Indonesia	6.8
Italy	10.9
Japan	11.5
Kenya	5.4
Mexico	6.3
World	7.6

▲ **Figure 1.18** Changing crude death rates, 1950-2025 (projected).



## ORIGINAL DATA

Page  
13

**Figure 1.20** Distribution of infant mortality rates, 2020.



## NEW DIGITAL SOURCE

[United Nations World Population Prospects \(2024\).](#)

NOTE: Select the appropriate data set from the first drop down menu.

▶ ORIGINAL DATA

Page 14

**Figure 1.20** Distribution of maternal mortality rates, 2018.

▶ NEW DIGITAL SOURCE

WHO, 2024

NOTE: Data for many countries may not be available later than 2018.

▶ ORIGINAL DATA

Page 17

**Figure 1.24 (b)** per centage of the population aged 65 and over, 2020.

▶ NEW DIGITAL SOURCE

World Bank Group, 2023

▶ ORIGINAL DATA

Page 17

**Figure 1.25** The world's ageing population.

NEW SOURCE ◀

	65 years and over	80 years and over
2024	830 million (10% of world population)	165 million
2050	1700 million (17.2% of world population)	426 million

▲ **Figure 1.25** The world's ageing population 2024 and 2050 (projected).

▼ Although life expectancy is linked to access to quality healthcare, adequate sanitation and hygiene are even more crucial worldwide, particularly in economically less developed countries.

©sasint via Canva.com



**Figure 1.26** Economic old age dependency ratio

OECD Country	2023/2024	2050
Angola	5.3	88
Australia	26.9	42
Brazil	17.1	39.5
China	20.7	47.5
Germany	41.4	58.1
India	11.6	22.5
Indonesia	10.4	26.9
Italy	40.9	74.4
Japan	54.5	80.7
Niger	5.1	8.3
Russia	25.2	47.5
Saudi Arabia	3.1	32.4
South Africa	9.7	18.2
USA	31.3	40.4
Vietnam	12.7	19.4

▲ **Figure 1.26** Economic old age dependency ratio, 2023/2024 and 2050 (projected).

**Figure 1.28 (a) (b) (c)** Various population pyramids

[Populationpyramid.net](https://www.populationpyramid.net)

## ▶ UPDATED ACTIVITIES

Page 4

### Figure 1.6 (new), Figure 1.8 (new) and Activity 7

Consider the updated data. Briefly describe the trend in births and in deaths shown in Figure 1.8. How do these trends reflect in the data of Figure 1.6?

Page 7

### Activity 4

Describe the spatial distribution of countries with declining populations in 2025.

Page 10

### Activity 4

Discuss the likely impact on crude birth rates in more economically developed countries of each of the following:

- increasing age of marriage and delaying the birth of a first child
- celebrities having large families
- government promotion of births through cash incentives
- and child care vouchers
- rising costs of living, raising children and tertiary education fees.

Page 13

### Figure 1.10 (new), Figure 1.17 (new) and Activity 3

Use Figures 1.10 and 1.17 to comment on the degree of spatial association existing between countries with high CDR and those with a declining population.

Page 15

### Activity 7

Define maternal mortality. Research recent health programs implemented around the world and describe how these programs aim to reduce maternal mortality rates.

## ▶ NEW ACTIVITY

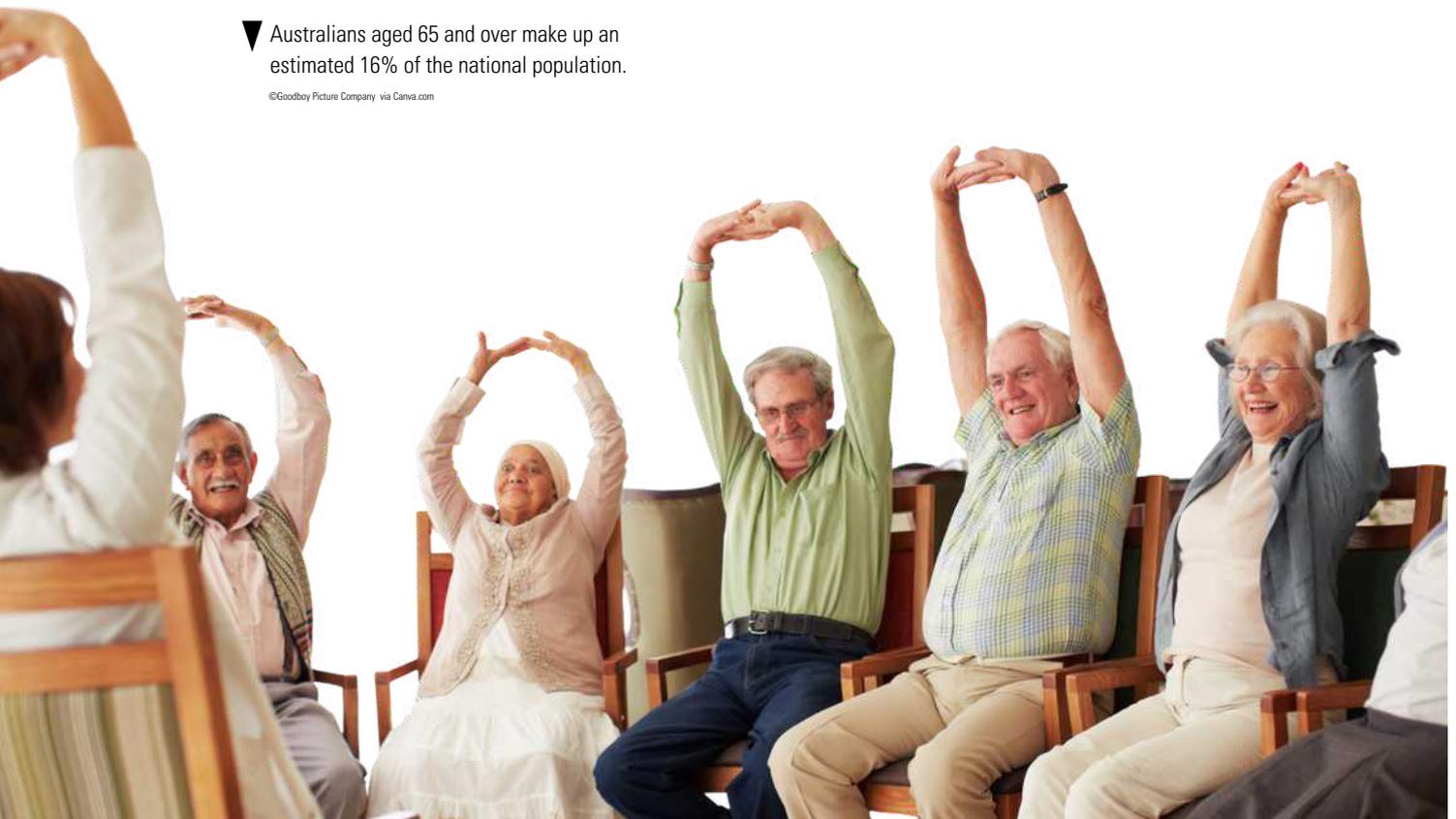
Page 19

### Figure 1.26 (new) and Activity 7

- Calculate and rank the top five countries for 2023–24. How is this list expected to change by 2050?
- How does Japan's 2050 estimate differ from the other countries listed?
- Discuss why Niger's ratio is predicted to remain low by 2050.

▼ Australians aged 65 and over make up an estimated 16% of the national population.

©Goodboy Picture Company via Canva.com



# 2

## Population movement

### Updated in-text data

#### ▶ ORIGINAL DATA

Page  
36

... developing countries totaled \$482 billion in 2018... an estimated \$689 billion in 2018.

#### ▶ UPDATED DATA

... developing countries totaled \$647 billion in 2022... an estimated \$831 billion in 2022.

▶ [McAuliffe, M. and L.A. Ochoa \(eds.\), 2024. World Migration Report 2024. International Organization for Migration \(IOM\), Geneva.](#)

#### ▶ ORIGINAL DATA

Page  
39

In 2019, there were more than 79.5 million forcibly displaced people worldwide...

#### ▶ UPDATED DATA

In 2023, there were more than **122.6 million** forcibly displaced people worldwide...

▶ [UNHCR](#)

#### ▶ ORIGINAL DATA

Page  
39

In 2019, the highest number of refugees came from Syria.

#### ▶ UPDATED DATA

The countries with the highest number of refugees as of mid-2024 are **Syria, Ukraine, and Afghanistan.**

▶ [Statista](#)

#### ▶ ORIGINAL DATA

Page  
40

In 2018, less than 1 per cent of the 10 million refugees registered with UNHCR were resettled.

#### ▶ UPDATED DATA

In 2023, less than **1 per cent of the 30 million** refugees registered with UNHCR were resettled. In 2023, 158,700 refugees were admitted for resettlement during the year.

▶ [UNCHR](#)

▼ In 2023–24, Australia recorded a net overseas migration of 446,000.

©AndreyPopov via Canva.com



## Updated visual sources

### ▶ ORIGINAL DATA

Page 31

**Figure 2.10** Countries that have the highest immigrant populations, 2019.

### ▶ NEW DIGITAL SOURCE

**Figure 2.10** Countries with the largest number of international migrants in 2024, according to the UN.

Rank	Country	International migrants (millions)
1	United States	52.4
2	Germany	16.8
3	Saudi Arabia	13.7
4	United Kingdom	11.8
5	France	9.2
6	Spain	8.9
7	Canada	8.8
8	United Arab Emirates	8.2
9	Australia	8.1
10	Russian Federation	7.6

UN, International Migrant Stock 2024

### ▶ ORIGINAL DATA

Page 35

**Figure 2.14** Major flow of remittances from the United States, the United Kingdom and Canada, 2018.

### ▶ NEW DIGITAL SOURCE

[Migration Policy Institute: Global Remittances Guide.](#)

### ▶ ORIGINAL DATA

Page 36

**Figure 2.15** Remittance money from migrant workers flowing back to their country of origin is a significant driver of population movement in addition to providing economic benefit, 2018.

### ▶ NEW DIGITAL SOURCE

[Migration Policy Institute: Global Remittances Guide.](#)

## ▶ ORIGINAL DATA

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40

**Figure 2.21** United Nations High Commissioner for Refugees (UNHCR) global trends, 2019.

## ▶ NEW DIGITAL SOURCE

[UNHCR](#)

## ▶ ORIGINAL DATA

Page 41

**Figure 2.22** Distribution of people internally displaced by conflict and disasters in 2019.

## ▶ NEW DIGITAL SOURCE

[Global Report on International Displacement, 2023](#)

## ▶ UPDATED ACTIVITIES

### Activity 8

Page 38

Examine the interactive map at [Migration Data Portal](#). Where do remittances come from? Choose one country that has a high proportion of remittances and list which countries host these nationals.

### Activity 2

Page 40

Analyse Figure 2.22 to outline the world distribution and magnitude of internally displaced people. Select one location to investigate and evaluate the immediate and longer-term responses to this issue by national and global organisations. Use the International Displacement Monitoring Centre (IDMC) website ([internaldisplacement.org](http://internaldisplacement.org)) to begin your investigation.

Locations that you might select include: Syria, Afghanistan, State of Palestine, Bangladesh, Burkina Faso, Central African Republic, China, Columbia, Democratic Republic of Congo, Ethiopia, Guatemala, Iraq, Libya, Mali, Myanmar, Philippines, Somalia, Sri Lanka, Sudan and Yemen.

## ▶ NEW ACTIVITY

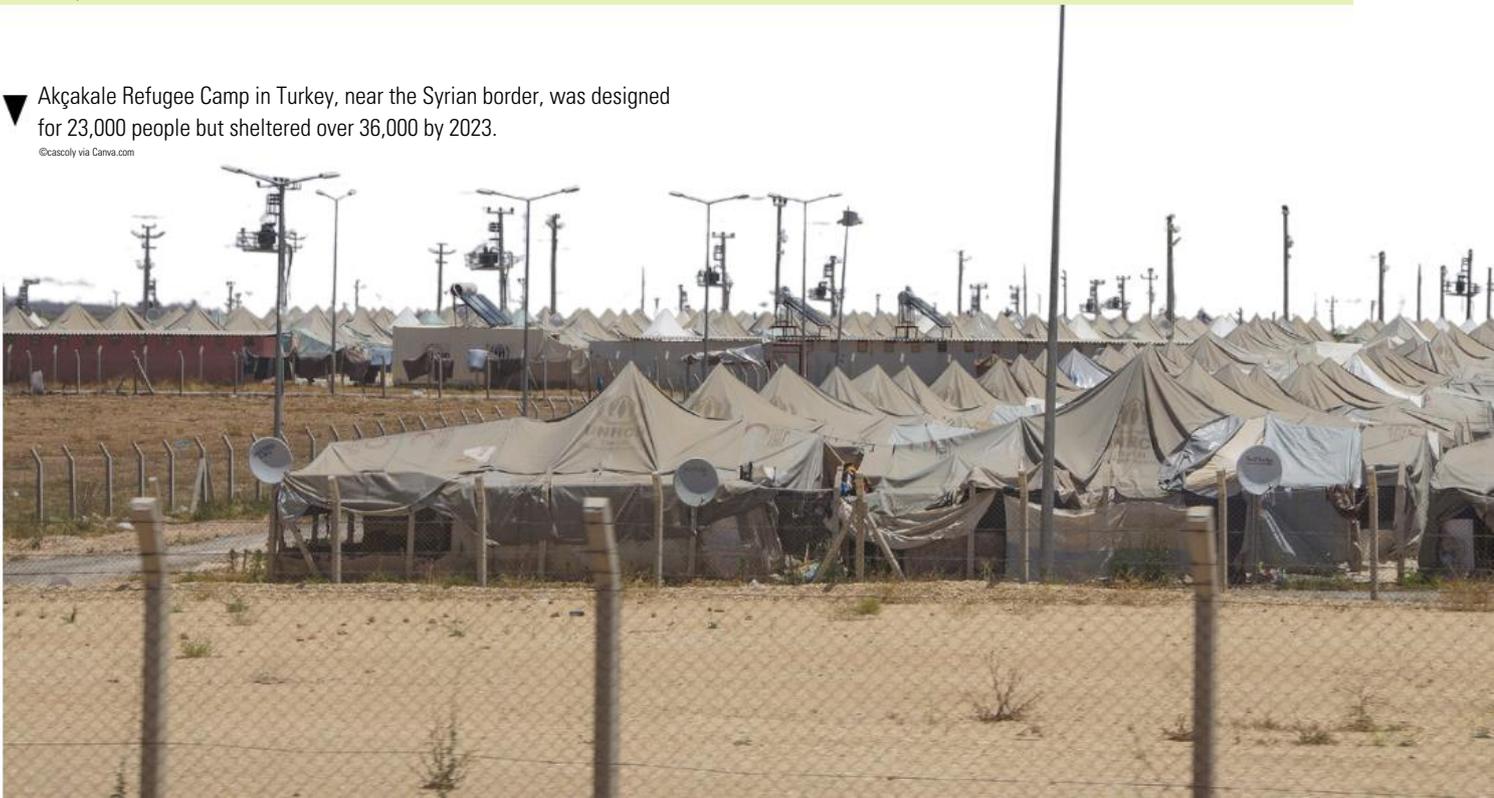
### Activity 3

Page 40

Examine the StoryMap at [UNHCR Global Trends](#). Summarise and quantify the key trends. List the three new areas of forced displacement in 2023.

▼ Akçakale Refugee Camp in Turkey, near the Syrian border, was designed for 23,000 people but sheltered over 36,000 by 2023.

©cascofy via Canva.com



# 3

## Population trends and issues: growth in Bangladesh

### Updated in-text data

#### ▶ ORIGINAL DATA

Page 46

Although the last official census in Bangladesh was conducted in 2011...

#### ▶ UPDATED DATA

The last official census in Bangladesh was conducted in 2022.

[SID Portal](#)

NOTE: The preliminary report is available as a PDF document (55 pages). It is useful for much of the data updates in this chapter.

#### ▶ ORIGINAL DATA

Page 46

In 2020 the Bangladesh Bureau of Statistics (BBS) stated that the population of the country was 168 million.

#### ▶ UPDATED DATA

The 2022 census reveals that the population of Bangladesh was **165 million** (and is estimated by the World Population Review to be **175 million in 2025**).

[SID Portal](#)

#### ▶ ORIGINAL DATA

Page 46

In 2019, Bangladesh was one of the most densely populated countries on earth with an average of 1116 people per square kilometre.

#### ▶ UPDATED DATA

In 2022, Bangladesh remained one of the most densely populated countries in the world, with an average of **1119 people per square kilometre**. Dhaka was the most densely populated region, with 2156 people per square kilometre, and Barishal the least, with 688 people per square kilometre.

[SID Portal](#)

NOTE: A map of population density by district is shown in the Census report on page 47. The patterns remain consistent, even though the data has been updated.

#### ▶ ORIGINAL DATA

Page 46

##### Development

In 2020 Bangladesh was ranked 133 out of 189 countries on the Human Development Index (HDI). The HDI is a tool developed by the United Nations Development Programme (UNDP) to measure and rank a country's levels of social and economic development. It is based on four criteria, that in 2020 for Bangladesh were: life expectancy at birth (72.6 years); mean years of schooling (6.2 years); expected years of schooling (11.6 years); and Gross National Income (GNI) per capita (US\$4976).

#### ▶ UPDATED DATA

As of the latest update, Bangladesh is now ranked 129 out of 193 countries. **The current life expectancy is 73.7 years, the average (mean) years of schooling is 7.5, and the GNI per capita has risen to US\$6510.**

[UNDP: Bangladesh](#)

NOTE: As indicated in the text (Third Edition), there have been improvements in development criteria for Bangladesh.

## ▶ ORIGINAL DATA

Page  
46

### Urbanisation

While the nation is still very much an agrarian one with 61.1 per cent of the population living in rural areas, the per centage of urban dwellers has been steadily increasing from 7.9 per cent in 1971 to the current estimate of 38.9 per cent (2021).

## ▶ ORIGINAL DATA

Page  
48

The population of Bangladesh was estimated by the Bangladesh Bureau of Statistics (BBS) to be over 168 million in 2020 and at current growth rates is predicted to increase to a peak of 192 million in 2053 before it begins to decline.

## ▶ ORIGINAL DATA

Page  
48

Currently it is estimated that the population of Bangladesh is growing at a rate of 1.01 per cent per year.

## ▶ ORIGINAL DATA

Page  
49

It has risen from 41.8 years in 1972 to 66.2 years in 2002 and by 2020 life expectancy had increased to 72.8 years.

## ▶ UPDATED DATA

The percentage of urban dwellers has been steadily increasing with the current census data showing estimates of **31.5% (2022)**.

▶ [Population and Housing Census, Preliminary Report \(2022\), P.9](#)

## ▶ UPDATED DATA

The 2022 census reported a total population of **165 million ...**

▶ [Population and Housing Census, Preliminary Report \(2022\), P.5](#)

## ▶ UPDATED DATA

The 2022 Census showed that the population of Bangladesh is growing at a rate of **1.22 per cent**.

▶ [Population and Housing Census, Preliminary Report \(2022\), P.5-6](#)

## ▶ UPDATED DATA

... by 2022 life expectancy had increased to **73.7 years**.

▶ [UNDP: Bangladesh](#)

## ▶ UPDATED DATA

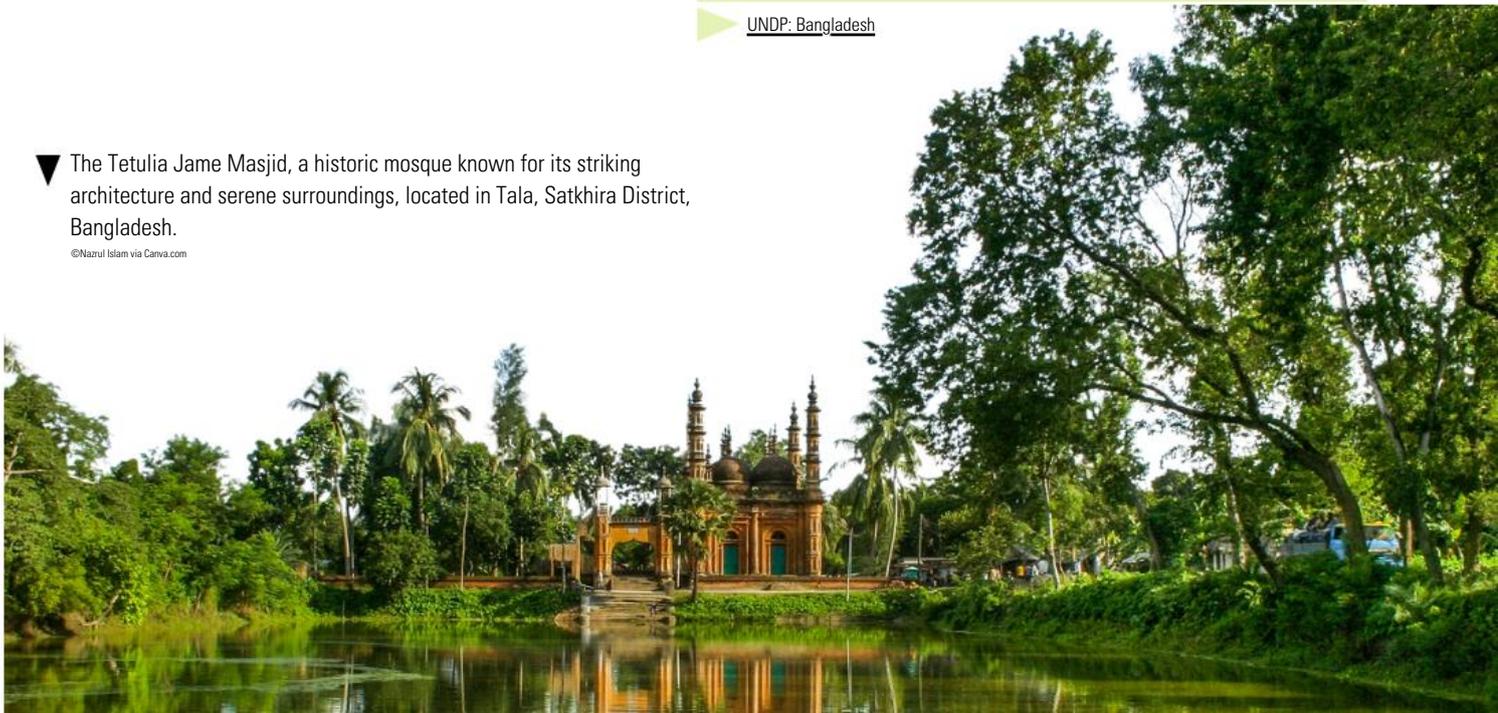
NEW

The UN estimates that in 2025, 50 million women are in the 15-49 (child bearing years) category. This helps to account for population growth as a product of population momentum.

▶ [UNDP: Bangladesh](#)

- ▼ The Tetulia Jame Masjid, a historic mosque known for its striking architecture and serene surroundings, located in Tala, Satkhira District, Bangladesh.

©Nazrul Islam via Canva.com



▶ ORIGINAL DATA

Bangladesh is a young population with 27 per cent of the population younger than 15 years old and just over 5 per cent over the age of 65.

▶ UPDATED DATA

Bangladesh is a young population with **28.7 per cent** of the population younger than 15 years of age.

▶ [Population and Housing Census, Preliminary Report \(2022\), P.14](#)

▶ ORIGINAL DATA

In 1972 the Gross Domestic Product per capita was US\$94: by 2000, it has risen to US\$418 and was estimated to be approximately US\$2000 in 2021.

▶ UPDATED DATA

In 1972, the Gross Domestic Product (GDP) per capita was US\$94; by 2000, it had risen to US\$418 and is currently estimated by the International Monetary Fund to be **more than US\$2500**.

▶ [International Monetary Fund](#)

▶ ORIGINAL DATA

A comprehensive report of the findings of this survey was published in 2019 in the Progotir Pathey (Road to Progress) report (Fig 3.17).

▶ UPDATED DATA

A comprehensive report of the findings of this survey was published in 2019 in the Progotir Pathey (Road to Progress) report (Fig. 3.17). **Round 7 of the MICS was announced in June 2014 and will be undertaken during the period 2024–2025.**

▶ [UNICEF press release 2024](#)

▼ Oblique aerial view of Babu Bazar Breeze in Dhaka, Bangladesh.

©VMD MARUF HASSAN via Canva.com



## ▶ ORIGINAL DATA

Page  
57

It has risen from 54 per cent for males and 40 per cent for females in 2000 to 74.7 per cent for males and 71.9 per cent for females in 2020.

## ▶ ORIGINAL DATA

Page  
57

The total dependency ratio (a measure showing the number of dependents aged 0–14 and over 65, to every 100 working age people who are aged 15–64) is 47 in Bangladesh.

## ▶ ORIGINAL DATA

Page  
58

... there has been an overall reduction in fertility rate from 7 to 2.5 children per woman.

## ▶ ORIGINAL DATA

Page  
58

The current population policy, formulated in October 2004, had a target of reaching replacement-level fertility of 2.1 by 2010, and to stabilise the population at 210 million around the year 2060.

## ▶ ORIGINAL DATA

Page  
58

Reducing the incidence of child marriage by encouraging cultural change.

## ▶ UPDATED DATA

It has risen from..... in 2000 to **76.5 per cent for males and 72.8 per cent for females in 2022.**

▶ [Population and Housing Census, Preliminary Report \(2022\), P.16](#)

## ▶ UPDATED DATA

The total **dependency ratio was calculated in 2022 to be 52.6 nationally.** It is slightly lower in urban areas and higher in rural areas.

▶ [Population and Housing Census, Preliminary Report \(2022\), P.15](#)

## ▶ UPDATED DATA

... there has been an overall reduction in fertility rate from **7 to 2.2 children per woman.**

▶ [World Bank Data](#)

## ▶ UPDATED DATA

The Bangladeshi government is committed to slowing population growth and has been successful in reducing fertility levels. The provision of field workers was impacted by the COVID-19 pandemic of 2020–2022, and family planning, particularly in rural areas, has been recommended as a future focus for government services.

▶ [Bhatia et al., 2024.](#)

## ▶ UPDATED DATA

Child marriage is illegal (Child Marriage Restraint Act 2017) but it still occurs. Efforts to encourage cultural change are important.

▶ [UNICEF Data](#)



▶ Children in traditional attire, Rangpur, Bangladesh.  
©SAGOR BORMON via Canva.com

## Updated visual sources

### ▶ ORIGINAL SOURCE

Page  
46

**Figure 3.7** The distribution of population in Bangladesh.

### ▶ NEW DIGITAL SOURCE

[\(Bangladesh\) Population and Housing Census 2022 Preliminary Report, p.47, Map 2, Population Density by District 2022.](#)

### ▶ ORIGINAL SOURCE

Page  
50

**Figure 3.14** Various population pyramids.

### ▶ NEW DIGITAL SOURCE

[Bangladesh\) Population and Housing Census 2022 Preliminary Report, p.14, Figure 2.8, Age-Sex Pyramid \(in millions\).](#)

### ▶ ORIGINAL SOURCE

Page  
56

**Figure 3.20** Distribution of extreme poverty in Bangladesh, an example from Poverty Maps of Bangladesh 2010, published by Bangladesh Bureau of Statistics (BBS), World Bank and the World Food Programme (WFP).

### ▶ NEW DIGITAL SOURCE

[Bangladesh Poverty Map 2022, p.31, Map 4, Extreme Poverty Estimates at Upazila level 2022.](#)

### ▶ UPDATED ACTIVITIES

Page  
45

#### Activity 4

Use the internet to gather information on the most recent major flooding event in Bangladesh. Outline the social and environmental effects of the flood.

Page  
49

#### Activity 3

How does population momentum explain population growth?

### ▶ NEW ACTIVITIES

Page  
47

#### Activity 7

Access the [United Nations Development Program](#) and consider the data provided for Bangladesh. Using this data, write a paragraph that summarises the changes to development criteria for Bangladesh since 2020.

Page  
57

#### Figure 3.20 and Activity 7

Examine the Bangladesh Extreme Poverty Map (Fig. 3.20). Access the [Bangladesh Extreme Poverty Map 2022: Map 4 — Extreme Poverty Estimates at Upazila Level 2022 \(p. 31\)](#) and [Map 7 — Change in Poverty 2010 to 2022 at Upazila Level \(p. 39\)](#). Describe the spatial distribution of changes in extreme poverty that have been identified in Bangladesh between 2010 and 2022.

# 4

## Population trends and issues: growth in Saudi Arabia

### Updated in-text data

#### ▶ ORIGINAL DATA

Page  
61

The population of Saudi Arabia...

#### ▶ UPDATED DATA

The population of Saudi Arabia reached 35.3 million in 2024, representing a growth of 10 million since 2006. Approximately 55.6 per cent of the population are Saudi nationals, while the remainder are immigrants. Among these immigrants, 13 million are foreign workers—an increase of over one million since 2017.

▶ [GASTAT](#)

#### ▶ ORIGINAL DATA

Page  
61

...the population density in 2020 was 16.19 people per square kilometre...

#### ▶ UPDATED DATA

...the population density in **2025 was an estimated 16 people per square kilometre...**

▶ [Worldometers](#)

#### ▶ ORIGINAL DATA

Page  
61

Figure 4.5 shows that the urban population has increased from ...

#### ▶ UPDATED DATA

Figure 4.5 shows that the urban population has increased from just under 50 per cent in 1970 to just under 85 per cent in 2023. With an urbanisation rate of 3.6 per cent, the United Nations projects that over 90 per cent of Saudi Arabia's population could be living in urban areas by 2030, making it one of the most urbanised countries in the world and contributing to the uneven population distribution.

▶ [World Bank](#)

#### ▶ ORIGINAL DATA

Page  
62

With a population of 7.7 million, it is also the largest city in the country (Figure 4.6 (a)) accounting for 22 per cent of the total population.

#### ▶ UPDATED DATA

With a population of 7.9 million, it is also the largest city in the country (Figure 4.6 (a)) **accounting for 23 per cent of the total population.**

▶ [Macrotrends](#)

▶ ORIGINAL DATA

In 2019, Saudi Arabia's Human Development Index...

▶ UPDATED DATA

In 2022, Saudi Arabia's **Human Development Index (HDI) ranking was 40 out of 193 countries.** This indicates that Saudi Arabia has a higher standard of living compared to neighbouring countries such as Oman, ranked 59th, and Yemen, ranked 186th, and a lower standard of living compared to Australia, ranked 10th. Its HDI value of 0.875 places it in the category of countries with very high levels of development, above the regional average of 0.739.

▶ [Human Development Reports](#)

▶ ORIGINAL DATA

By the end of 2020, Saudi Arabia's population was estimated to be...

▶ UPDATED DATA

By mid-2024, Saudi Arabia's population had **reached 35.3 million.**

▶ [GASTAT](#)

▶ ORIGINAL DATA

Growth has begun to slow from an annual...

▶ UPDATED DATA

Growth has begun to slow, with the annual population growth rate decreasing from 3.37 per cent in 2015 to 2.1 per cent in 2024. Despite this decline, Saudi Arabia's population is projected to reach **over 47 million by 2050**, followed by a period of stabilisation and decline as the population ages.

▶ [Arab News](#)

▶ ORIGINAL DATA

...compared with 75.2 years in 2020...

▶ UPDATED DATA

...compared with 76.0 years in 2025. This is projected to continue increasing to around **78 years by 2040.**

▶ [World Bank](#)

▶ ORIGINAL DATA

...and remaining relatively stable with a slight decrease to 3.5 in 2020.

▶ UPDATED DATA

and remaining relatively stable with a **decrease to 2.8 in 2023.**

▶ [World Bank](#)

▶ ORIGINAL DATA

...and continued to around 6 deaths in 2020.

▶ UPDATED DATA

...and continued to fall to around **5 deaths in 2025.**

▶ [World Bank](#)

▶ ORIGINAL DATA

...2.24 babies in 2020.

▶ UPDATED DATA

...**2.3 babies in 2022.**

▶ [World Bank](#)

### ORIGINAL DATA

Crude birth rates have also reduced.... to 14.7 in 2020.

### UPDATED DATA

Crude birth rates have also reduced.... to **15.27 in 2024.**

[World Bank](#)

### ORIGINAL DATA

Saudi Arabia is still experiencing a large natural increase with 585,170 births in 2020 compared with 123,170 deaths.

### UPDATED DATA

...large natural increase with **660,150 more births than deaths in 2024.**

[Countrymeters](#)

### ORIGINAL DATA

The United Nations World Migration Report 2022 ranked Saudi Arabia third...

### UPDATED DATA

The United Nations World Migration Report 2024 ranked **Saudi Arabia third**, behind the United States and Germany, based on the number of resident migrants.

[World Migration Report](#)

### ORIGINAL DATA

By January 2021, around 10.2 million foreign workers remained in Saudi Arabia.

### UPDATED DATA

By January 2021, around 10.2 million foreign workers remained in Saudi Arabia. This number grew to 13.2 million in 2024, representing **77 per cent of Saudi Arabia's total workforce.**

[Arqaam.com](#)

### ORIGINAL DATA

The net migration rate in 2020 was...

### UPDATED DATA

The net migration rate in 2024 was 6.7 migrants per 1,000 population, equating to around 122,170 people. This is a significant increase from 2020, when the rate was 3.0, but less than in 2013 when it was 11.7. The rate is expected to continue falling slightly to 0.920 by 2040, contributing to the slowing of Saudi Arabia's overall population growth rate.

[Worldometers](#)

[CIA](#)

▼ Muslim pilgrims from around the world perform tawaf (ritual circling) and pray around the Ka'bah in Mecca, Saudi Arabia.

©Sony Herdiana via Canva.com



**▶ ORIGINAL DATA** Page 68

The unemployment rate for Saudi nationals, excluding migrants, was significantly higher at over 13 per cent. In the second quarter of 2020, the total unemployment rate averaged 9.0 per cent due to the challenges associated with managing the COVID-19 pandemic.

**▶ UPDATED DATA**

The unemployment rate for Saudi nationals, excluding migrants, was 7.8 per cent—a considerable decrease from 15.4 per cent in the second quarter of 2020, at the height of the COVID-19 pandemic.

[Argam.com](#)

**▶ ORIGINAL DATA** Page 68

Figure 4.19 shows that the youth unemployment rate...

**▶ UPDATED DATA**

Figure 4.19 shows that the youth unemployment rate for those aged between 15 and 24 was 16.25 per cent in 2023. This is significantly higher than the national average, although it represents a reduction from previous highs.

[Macrotrends](#)

**▶ ORIGINAL DATA** Page 69

...while just 15.8 per cent of the total workforce were female...

**▶ UPDATED DATA**

In 2023, while 80.8 per cent of males participated in the workforce, only 34.1 per cent of females were employed in paid work. Although the female unemployment rate has decreased significantly—from 23.29 per cent in 2019 to 12.32 per cent in 2023—it remains considerably higher than the male rate of 2.31 per cent.

[Trading Economics](#)

**▶ ORIGINAL DATA** Page 73

The total cost of the project is estimated at US\$500 billion and the first section is expected to be completed by 2025.

**▶ UPDATED DATA**

The original estimated cost of the project was US\$500 billion. However, more recent estimates suggest the cost may blow out to US\$8.8 trillion. The project is also taking longer than expected. The first phase—a 2.4-kilometre segment of the city—was initially expected to be completed by 2025, but it is now estimated to take until at least 2030.

[Bloomberg](#)

**▶ ORIGINAL DATA** Page 73

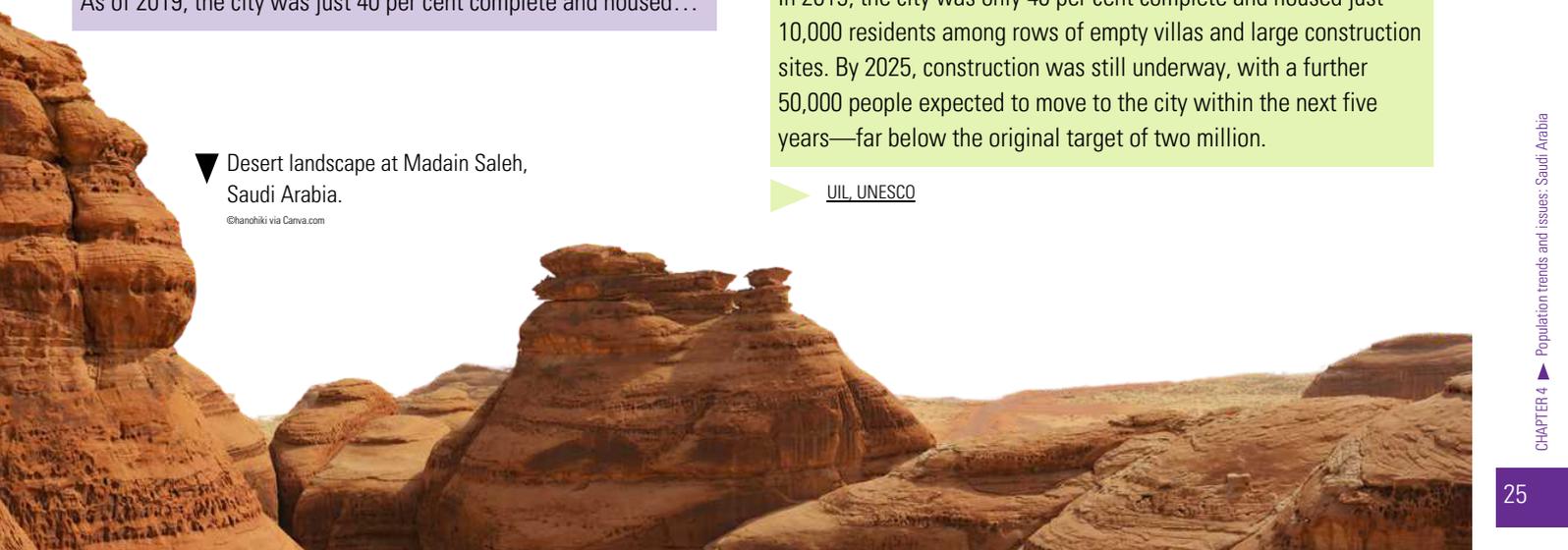
As of 2019, the city was just 40 per cent complete and housed...

**▶ UPDATED DATA**

In 2019, the city was only 40 per cent complete and housed just 10,000 residents among rows of empty villas and large construction sites. By 2025, construction was still underway, with a further 50,000 people expected to move to the city within the next five years—far below the original target of two million.

[UJL, UNESCO](#)

▼ Desert landscape at Madain Saleh, Saudi Arabia.  
©hanhiki via Canva.com



# Updated visual sources

## ▶ ORIGINAL SOURCE

Page  
61

**Figure 4.5** The rate of urbanisation in Saudi Arabia from 1960 to 2020.

## ▶ NEW DIGITAL SOURCE

[World Bank, Urban population](#)

## ▶ ORIGINAL SOURCE

Page  
64

**Figure 4.9** Population growth of Saudi Arabia.

## ▶ NEW DIGITAL SOURCE

[Worldometer](#)

## ▶ ORIGINAL SOURCE

Page  
64

**Figure 4.10** Life expectancy in Saudi Arabia.

## ▶ NEW DIGITAL SOURCE

[Macrotrends, Life Expectancy](#)

## ▶ ORIGINAL SOURCE

Page  
64

**Figure 4.11** Crude death rate in Saudi Arabia.

## ▶ NEW DIGITAL SOURCE

[World Bank, Death rate](#)

## ▶ ORIGINAL SOURCE

Page  
64

**Figure 4.12** Total fertility rate in Saudi Arabia.

## ▶ NEW DIGITAL SOURCE

[World Bank, Total fertility rate](#)

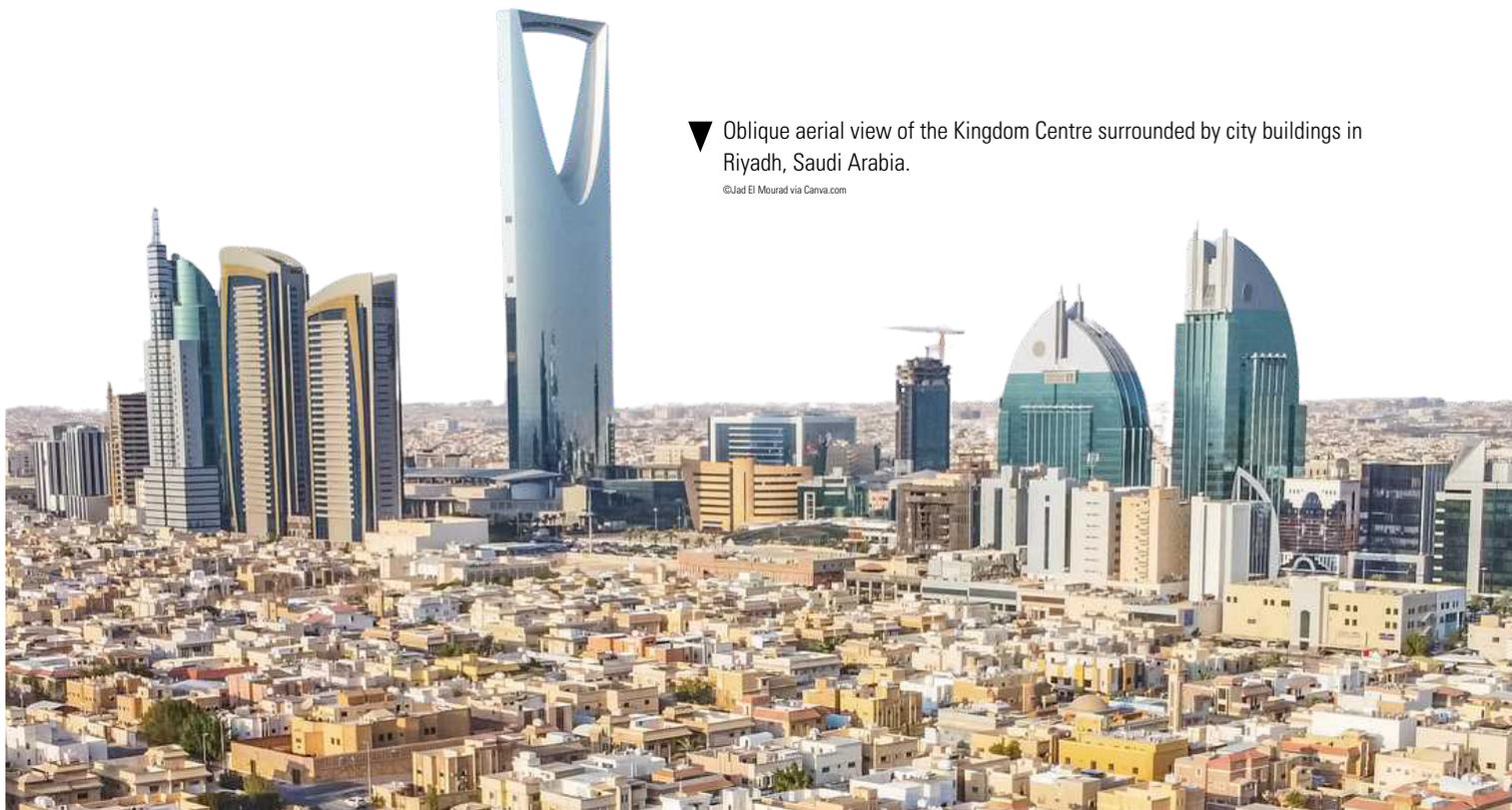
## ▶ ORIGINAL SOURCE

Page  
65

**Figure 4.13** Literacy rate in Saudi Arabia

## ▶ NEW DIGITAL SOURCE

[Macrotrends, Literacy rate](#)



▼ Oblique aerial view of the Kingdom Centre surrounded by city buildings in Riyadh, Saudi Arabia.

©Jad El Mourad via Canva.com

Page  
65

### ▶ ORIGINAL SOURCE

**Figure 4.14** Saudi Arabia's changing population structure.

### ▶ NEW DIGITAL SOURCE

[2000](#)  
[2025](#)  
[2040](#)

Page  
66

### ▶ ORIGINAL SOURCE

**Figure 4.15** The origin of migrants to Saudi Arabia, 2018.

### ▶ NEW DIGITAL SOURCE

[Integral Human Development](#)

Page  
68

### ▶ ORIGINAL SOURCE

**Figure 4.17** The distribution of the unemployment rate in Saudi Arabia during 2020 by province.

### ▶ NEW DIGITAL SOURCE

[Knoema.com](#)

NOTE: This site requires a log in. Free trial available.

Page  
68

### ▶ ORIGINAL SOURCE

**Figure 4.18** Saudi Arabia's unemployment rate from 1991 to 2020.

### ▶ NEW DIGITAL SOURCE

[Macrotrends, Unemployment rate](#)

Page  
68

### ▶ ORIGINAL SOURCE

**Figure 4.19** Saudi Arabia's youth unemployment rate (aged between 15 and 24 years) from 1991 to 2020.

### ▶ NEW DIGITAL SOURCE

[Macrotrends, Youth unemployment rate](#)

Page  
69

### ▶ ORIGINAL SOURCE

**Figure 4.20** The youth and total unemployment rates for Saudi Arabia and its surrounding region in 2020.

### ▶ NEW DIGITAL SOURCE

[Youth unemployment](#)  
[Total unemployment](#)

Page  
69

### ▶ ORIGINAL SOURCE

**Figure 4.21** The median age in Middle Eastern countries.

### ▶ NEW DIGITAL SOURCE

[World Factbook](#)

Page  
71

### ▶ ORIGINAL SOURCE

**Figure 4.23** The unemployment rate of Saudi nationals from 2016 to 2020.

### ▶ NEW DIGITAL SOURCE

[Argaam.com, unemployment rate compared with Saudi nationals.](#)  
[Unemployment in males](#)  
[Unemployment in females](#)

NOTE: Data may be inconsistent with the Third Edition as it's a different source.

# Updated case study

## ▶ NEW CASE STUDY TEXT

In January 2025, Saudi Arabia announced additional updates to Saudization. The mandated proportion of Saudi workers was raised in 269 professions, to be implemented by 27 July 2025. For example, the required nationalisation rate for dentistry businesses with at least three dental workers was raised to 45 per cent, and the rate was raised to 30 per cent for engineering businesses employing at least five engineers. The rate for accounting businesses with at least five accountants was raised to 40 per cent by 27 October 2025, and will increase by 10 per cent annually until reaching 70 per cent by 27 October 2028. Government support programmes will assist companies with recruiting and training Saudi nationals to ensure they can meet Saudization targets while remaining productive.

## ▶ UPDATED ACTIVITIES

Page 63

### Figure 4.5 and Activity 7

- Using Figure 4.5, describe the change in the proportion of people living in Saudi Arabia's urban areas between 1960 and 2023.
- Suggest an issue that Saudi Arabia may face as its urban population continues to grow.

Page 66

### Figure 4.9 and Activity 1

- Describe the growth in Saudi Arabia's population from 1950 to 2024.
- Predict what you think Saudi Arabia's population could be in 2050 and 2100.
- Undertake research to determine a recent prediction from a source such as the United Nations. Explain why this prediction is similar or different to your prediction from part b.

Page 71

### Figures 4.18, 4.19 and 4.23 and Activity 4

Using Figures 4.18, 4.19 and 4.23, and Saudi Arabia's most recent unemployment figures, justify whether Saudization has successfully managed Saudi Arabia's unemployment issues among the total population, the youth, females and Saudi nationals.

## ▶ NEW ACTIVITIES

Page 66

### Activity 7

- Visit [populationpyramid.net](http://populationpyramid.net) and view the population pyramids for the current year. Describe the changes since 2020.
- View the pyramids for 2040, 2050 and beyond. Explain the reason for the changes over this period using your knowledge of demographic transition.

Page 67

### Activity 5

Access the most recent [World Migration Report](#) and view the table showing the top countries sending remittances. Analyse the location of these countries and comment on any trends in their distribution or the world regions in which they are located.

Page 70

### Figures 4.18 and 4.19 and Activity 10

- Compare the most recent data for trends in total unemployment and youth unemployment rates. Consider whether they follow similar periods of peaks and troughs.
- Undertake research to find similar data for other countries in the Middle East region. Justify whether other Middle Eastern countries follow similar unemployment trends.

Page 71

### Activity 7

- Choose either [King Abdullah Economic City](#) or [NEOM](#) and visit its official website. List unique features of its modern design and the economic, social, and environmental benefits it aims to achieve.
- Undertake research to find up-to-date information about the progress of this development and use this information to determine whether the city is likely to achieve its proposed benefits.

### Activity 8

- Undertake research to learn more about recent updates to the Saudization strategy.
- Using a table, summarise the changes to the strategy and the impacts of these changes.
- Discuss whether these updates influence your evaluation of Saudization in meeting Saudi Arabia's unemployment challenge.

### Additional videos:

[What is Neom and why are ads for the futuristic Saudi Arabian city all over social media? - ABC News](#)

[Saudi Arabia's Neom development wants to be an 'accelerator for human progress'. Will it happen? - ABC News](#)

# 5

## Population trends and issues: growth in Niger

### Updated in-text data

#### ▶ ORIGINAL DATA

Page 77

The population of Niger was 3.4 million in 1960 and in 2020 it was 24 million (see Figure 5.5).

#### ▶ ORIGINAL DATA

Page 77

The average population density of Niger is 19 people per square kilometre of land area. In 2020, life expectancy in Niger was 60.7 years for males, 63.0 years for females and the average total life expectancy was 61.8 years. In 2020, Niger ranked last out of 189 countries on the United Nations Human Development Index (HDI). Niger is one of the world's poorest nations with 41.4 per cent of its people living in poverty and a per capita income of US\$553.90.

#### ▶ UPDATED DATA

In 2024 it was 28 million.

[UN Population Division](#)

#### ▶ UPDATED DATA

The average population density of Niger is 22 people per square kilometre of land area. In 2024, life expectancy in Niger was 60.6 years for males, 61.3 years for females, and the average total life expectancy was 60.9 years. In 2024, Niger ranked 189th out of 191 countries on the United Nations Human Development Index (HDI). Niger is one of the world's poorest nations, with 45.3 per cent of its people living in poverty and a per capita income of US\$560.85.

[UN Population Division](#)

▼ Sahel, Niger.  
©Madelin Olariu via Canva.com



## ORIGINAL DATA

Page  
78

Niger has one of the highest population growth rates of any nation in the world – its rapidly increasing population is growing annually by 3.84 per cent. Niger’s population of 24,206,644 ranked it the fifty-sixth most populous country in the world in 2020. The United Nations predicts a population of 70 million in 2050, a remarkable threefold increase from 2020.

Fertility is the most important factor in determining future population growth in Niger. A total fertility rate (TFR) of 2.1 babies per woman is needed to replace a population over time. In 2019, Niger’s TFR was 6.8 babies per woman (though some sources put this as high as 7), which ranked Niger as the country with the world’s highest TFR (see Figure 5.6). Statistically, a Nigerien mother’s median age at first birth is 18.1 years. Niger’s population growth rate is high due to this higher fertility rate. The death rate for Nigeriens has steadily declined in the last five decades and in 2020 the crude death rate (CDR) was approximately 7.8 per 1000 people. This is a very common trend among economically less developed countries and is illustrated in the theoretical Demographic Transition Model (see Chapter 1, pages 23–25).

In Niger, net migration is very small when taken as a five-year average, although migration movements can rapidly vary during periods of drought or conflict. The key population trend for Niger is a high population growth rate. Its high birth rate of 45.2 births per 1000 people, combined with the comparatively low death rate of 7.8 deaths per 1000 people, has led to a high rate of natural increase of 37.4 per 1000 people, contributing to the rapidly growing population.

## UPDATED DATA

Niger has one of the highest population growth rates of any nation in the world – its rapidly increasing population is growing annually by 3.73 per cent. Niger’s population of 28,238,972 ranked it the fifty-fifth most populous country in the world in 2024. The United Nations predicts a population of 70 million in 2050, a remarkable threefold increase from 2020.

Fertility is the most important factor in determining future population growth in Niger. A total fertility rate (TFR) of 2.1 babies per woman is needed to replace a population over time. In 2024, Niger’s TFR was 6.4 babies per woman (though some sources put this as high as 7), which ranked Niger as the country with the world’s highest TFR (see Figure 5.6). Statistically, a Nigerien mother’s median age at first birth is 18.5 years. Niger’s population growth rate is high due to this higher fertility rate. The death rate for Nigeriens has steadily declined in the last five decades, and in 2024 the crude death rate (CDR) was approximately 7.2 per 1000 people. This is a very common trend among economically less developed countries and is illustrated in the theoretical Demographic Transition Model (see Chapter 1, pages 23–25).

In Niger, net migration is very small when taken as a five-year average, although migration movements can rapidly vary during periods of drought or conflict. The key population trend for Niger is a high population growth rate. Its high birth rate of 43.9 births per 1000 people, combined with the comparatively low death rate of 7.2 deaths per 1000 people, has led to a high rate of natural increase of 36.7 per 1000 people, contributing to the rapidly growing population.

[UN Population Division](#)

## ORIGINAL DATA

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80

Niger has a relatively high under-five child mortality rate of 80.4 deaths per 1000 live births, shown in Figure 5.11.

## UPDATED DATA

Niger has a relatively high under-five child mortality rate of 114.8 deaths per 1000 live births, shown in Figure 5.11.

[UN Population Division](#)

## ORIGINAL DATA

Page  
82

Niger currently hosts over 180,000 refugees and displaced persons who have fled conflict in neighbouring countries.

## UPDATED DATA

Niger currently hosts over 305,000 refugees and displaced persons who have fled conflict in neighbouring countries.

[NRC](#)

## ORIGINAL DATA

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82

People displaced by natural disasters are predominantly moving to other rural regions with the urbanisation rate only increasing from 16.23 per cent in 2009 to 16.66 per cent in 2020.

## UPDATED DATA

People displaced by natural disasters are predominantly moving to other rural regions with the urbanisation rate only increasing from 16.23 per cent in 2009 to 17.05 per cent in 2020.

[Statista](#)

## ▶ ORIGINAL DATA

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The median age in 2019 was 15.8 years – this compares to 48.4 years in Japan, 38.4 years in China, and 24.4 years in Laos. Dependency ratios measure the proportion of the population who are not typically in the workforce compared to those who are. The United Nations Population Division (UNDP) estimated that in 2020, Niger’s total dependency ratio was 110 dependants for every 100 people of working age (with a youth dependency ratio of 104.1 and an elderly dependency ratio of 5.4). A high dependency ratio means that employed people have to support more non-working people.

## ▶ ORIGINAL DATA

Page  
83

The World Food Programme estimated that approximately two million Nigeriens were food insecure from June to August 2020, an increase of almost half a million people since 2017. In addition, the World Food Programme also found that 10.3 per cent of children under five years are acutely malnourished and do not consume the recommended vitamins and minerals.

## ▶ ORIGINAL DATA

Page  
84

Niger is surrounded by countries facing a similar population growth issue. Countries with a similar population growth rate to Niger include Angola (3.2 per cent), Burkina Faso (2.8 per cent), Chad (3.0 per cent), Equatorial Guinea (3.5 per cent), Mali (3.0 per cent) and Uganda (3.6 per cent).

## ▶ ORIGINAL DATA

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84

However, in 2019 it was reported that the use of contraceptives in Niger has prevented over 230,000 unintended pregnancies and avoided 930 maternal deaths.

## ▶ ORIGINAL DATA

Page  
86

Being able to go to school has now become a reality for more children in Niger with increased enrolment rates and with completion rates of 35 per cent in 2020.

## ▶ UPDATED DATA

The median age in 2024 was 15.4 years – this compares to 49.4 years in Japan, 39.6 years in China, and 24.7 years in Laos. Dependency ratios measure the proportion of the population who are not typically in the workforce compared to those who are. The United Nations Population Division (UNDP) estimated that in 2024, Niger’s total dependency ratio was 98 dependants for every 100 people of working age (with a youth dependency ratio of 91.7 and an elderly dependency ratio of 5.5). A high dependency ratio means that employed people have to support more non-working people.

▶ [Our World in Data](#)

## ▶ UPDATED DATA

The World Food Programme estimated that approximately three million Nigeriens were food insecure from June to August 2024, an increase of almost 1.5 million people since 2017. In addition, the World Food Programme also found that 12.2 per cent of children under five years are acutely malnourished and do not consume the recommended vitamins and minerals.

▶ [World Food Programme](#)

## ▶ UPDATED DATA

Niger is surrounded by countries facing a similar population growth issue. Countries with a similar population growth rate to Niger include Angola (3.6 per cent), Burkina Faso (2.8 per cent), Chad (3.9 per cent), Equatorial Guinea (2.4 per cent), Mali (3.8 per cent) and Uganda (2.6 per cent).

▶ [Macrotrends](#)

## ▶ UPDATED DATA

However, in 2022 it was reported that the use of contraceptives in Niger has prevented over 210,000 unintended pregnancies and avoided 830 maternal deaths.

▶ [Track 20](#)

## ▶ UPDATED DATA

Being able to go to school has now become a reality for more children in Niger with increased enrolment rates and with completion rates of 54 per cent in 2021 for girls and 61 per cent for boys.

▶ [iicba](#)

# Updated visual sources

**▶ ORIGINAL SOURCE** Page 77

**Figure 5.5** Population change in Niger, 1950–2020.

**▶ ORIGINAL SOURCE** Page 79

**Figure 5.10** Adult literacy rates in selected West African countries, 2018.

**▶ ORIGINAL SOURCE** Page 80

**Figure 5.11** Child mortality rates, 2019.

**▶ NEW DIGITAL SOURCE**

2022- 26 million  
2023- 27 million  
2024- 28 million

[UN Population Division](#)

**▶ NEW DIGITAL SOURCE**

**Figure 5.10** Adult literacy rates in selected West African countries, 2022.

Country	Male	Female
Burkina Faso	43%	29%
Chad	36%	19%
Mali	48%	29%
Niger	46%	30%

**▶ NEW DIGITAL SOURCE**

**Figure 5.11** Child mortality rates, 1900 -2023 (under-five mortality rate).

[Unicef: Niger](#)

## ▶ UPDATED ACTIVITIES

- Page 77 **Figure 5.5 and Activity 1**  
Refer to Figure 5.5. Describe the changes in Niger’s total population from 1950 to 2020.
- Page 79 **Activity 1**  
What was Niger’s population growth rate in 2024?
- Page 86 **Activity 2**  
Drawing on internet sources, including FP2030, examine the progress of Niger’s FP2030 commitment after 2020.



# 6 Population trends and issues: ageing in China



**Author's note:** This case study can **no longer be used for a growing population**. China has now transitioned *from* a growing population *to* a population in decline with an ageing population.

## Updated in-text data

**ORIGINAL DATA** Page 88

With over 1.402 billion people in 2020, China's population is the largest in the world (Figure 6.1). Its growth since the 1950's was unprecedented and it is currently home to 17.9 per cent of the world's total population. However, its growth has slowed significantly, reaching a growth rate of 0.53 per cent in 2020.

**UPDATED DATA**

With over 1.419 billion people in 2024, China's population is the second largest in the world (Figure 6.1). Its growth since the 1950's was unprecedented and in 2023 it was home to 17.3 per cent of the world's total population. **However, its growth has slowed significantly, reaching a growth rate of -0.1 per cent in 2023.**

[United Nations](#)  
[World Bank](#)

**ORIGINAL DATA** Page 90

China's population has grown significantly from 552 million in 1950 to 1.402 billion in 2020 (Figure 6.6).

**UPDATED DATA**

China's population has grown significantly from 552 million in 1950 to **1.419 billion in 2024 (Figure 6.6).**

[United Nations](#)

**ORIGINAL DATA** Page 90

The TFR declined (see Figure 6.8) reaching 1.3 children per woman by 2020  
... decreasing infant mortality rate to 1.5 deaths per 1000 live births in 2020 and increasing life expectancy to 77 years in 2020

**UPDATED DATA**

The TFR declined (see Figure 6.8) reaching 1.2 children per woman in 2022.  
... decreasing infant mortality rate to 5 deaths per 1000 live births in 2022 and **increasing life expectancy to 79 years in 2022.**

[World Bank, Total Fertility Rate](#)  
[World Bank, Mortality Rate](#)  
[World Bank, Life Expectancy](#)

## ▶ ORIGINAL DATA

Page  
92

...and by 2020, 13 per cent of the population were aged over 65 years.

## ▶ ORIGINAL DATA

Page  
96

In 2020, 12 per cent of China's population was aged 65 and over.

## ▶ ORIGINAL DATA

Page  
98

In 2020, China registered 10.035 births, the lowest number since 1961.

## ▶ ORIGINAL DATA

Page  
98

Both schemes receive substantial direct financial subsidies from the government. There are other forms of pension with limited participation. In 2019 public pension schemes had over 960 million participants accounting for nearly 70 per cent of the total population.

## ▶ UPDATED DATA

...and by 2023, **14 per cent of the population were aged over 65 years.**

[World Bank](#)

## ▶ UPDATED DATA

In 2023, **14 per cent** of China's population was aged 65 and over.

[World Bank](#)

## ▶ UPDATED DATA

In 2023, China registered **9.020 births**, the lowest number for over 70 years.

[National Bureau of Statistics of China](#)

## ▶ UPDATED DATA

Both schemes receive substantial direct financial subsidies from the government and are regarded as the first pillar of the Chinese pension system. There are other forms of pension with limited participation. By the end of 2022, China's old-age insurance system included approximately 1.05 billion people, leaving around 350 million people uncovered.

The second pillar is a mandatory, employer-sponsored pension plan introduced in 2004 to supplement the basic pension. In 2022, the Chinese government launched individual retirement accounts as the third pillar. This voluntary, privately managed, pension scheme is encouraged by the government to help address the challenges posed by a rapidly ageing population.

[Metrics](#)

[Council on Foreign Relations](#)

▼ Shanghai Pudong, China.

©chuyu via Canva.com



## Updated visual sources

### ▶ ORIGINAL SOURCE

Page  
88

**Figure 6.1** Ten most populous countries in the world, 2020.

### ▶ NEW DIGITAL SOURCE

[World Population Prospects 2024: Summary of Results](#)

### ▶ ORIGINAL SOURCE

Page  
90

**Figure 6.8** Changes in China's fertility rate over time.

### ▶ NEW DIGITAL SOURCE

[Our World in Data](#)

### ▶ ORIGINAL SOURCE

Page  
91

**Figure 6.9** Changes in China's infant mortality rate over time.

### ▶ NEW DIGITAL SOURCE

[World Bank](#)

### ▶ ORIGINAL SOURCE

Page  
93

**Figure 6.13** Changes in rural and urban populations.

### ▶ NEW DIGITAL SOURCE

[Data Commons](#)

### ▶ ORIGINAL SOURCE

Page  
97

**Figure 6.19** Changes in China's dependency ratio.

### ▶ NEW DIGITAL SOURCE

[World Bank](#)  
[EIU](#)

## Updated case study

### ▶ NEW CASE STUDY TEXT

Page  
98

#### Issues arising from the abolition of the One Child Policy

China's population is now in decline. Despite the introduction of a three-child policy, the population size continues to fall. There are several reasons for this demographic shift:

- Continued low birth rates and a falling total fertility rate
- Fewer women of reproductive age as the population structure changes
- Declining marriage rates and a rise in single-person households

China now has one of the fastest-growing ageing populations in the world. This is due to the impact of the former One-Child Policy and increasing life expectancy.

▶ [Caixin Global](#)

▶ [Reuters](#)

▶ [BBC](#)

▶ [Pew Research](#)

▶ [Data Commons](#)

▶ [South China Morning News](#)

▶ Cooking at a street food market in Shanghai, China.

©Maria Burnay via Canva.com



## ▶ UPDATED ACTIVITIES

Page 71

### Figure 6.1 and Activity 1

Refer to Figure 6.1. China was the world's most populous country from at least 1950 until being surpassed by India in 2023. What demographic factors are likely to explain this change in rank?

## ▶ NEW ACTIVITIES

Page 88

### Figure 6.1 and Activity 4

There have been changes to the countries listed in Figure 6.1 for 2020 and 2024. Identify these changes.

Page 92

### Figure 6.11 and Activity 5

**g.** In Figure 6.11 it is predicted that there will be a decline in the size of the reproductive age group (females aged between 15 and 45 years) between 2020 and 2050. What are the implications of this decline?

Page 93

### Figure 6.13 and Activity 4

With reference to Figure 6.13, describe the change in rural and urban populations between 1970 and 2020.

Page 96

### Figure 6.15 and Activity 11

**a.** Refer to Figure 6.15. By 2023 the number of boys born for every 100 girls was 110. Describe the changes in this ratio between 1980 and 2023.

**b.** What are the implications of this high sex ratio?

Page 97

### Figure 6.18 and Activity 4

With reference to Figure 6.18, identify the projected trends from 2020 to 2100.

Page 99

### Figure 6.21 and Activity 5

Refer to Figure 6.21 Identify which pension schemes belong to each of the three pillars of the Chinese pension structure.

#### Activity 6

Describe the change in China's population since 1990.

#### Activity 7

Despite China now encouraging a 3-child policy, why has the population continued to decline?

#### Activity 8

Describe the change in life expectancy between 1960 and 2021.

### Figure 6.3 and Activity 9

Compare the map of elderly population in China with Figure 6.3 showing China's population density. Is there a spatial association between areas of low population density and areas with a high percentage of the population aged over 65 years?

Page 101

### Figures 6.22 and 6.23 and Activity 3

What are some issues or challenges created by the Smart Cities concept?

#### Activity 4

Hong Kong is developing into a Smart City. Using the ESRI China Hong Kong link, find an example of GIS data that links to Smart Cities.

◀ The Forbidden City, China.

©Kit Sanchez via Canva.com





# 7 Population trends and issues: ageing in Japan

## Updated in-text data

**▶ ORIGINAL DATA** Page 102

Japan had an estimated population of 125.7 million in 2020...

**▶ UPDATED DATA**

Japan had an estimated population of 123.3 million in 2025...

[Worldometer](#)

**▶ ORIGINAL DATA** Page 102

With a median age of 48.4 years, Japan has both an ageing and a declining population.

**▶ UPDATED DATA**

...median age of 49.8 years...

[Worldometer](#)

**▶ ORIGINAL DATA** Page 102

The average population density in Japan is 348 persons per square kilometre with approximately 92 per cent of people living in urban environments.

**▶ UPDATED DATA**

The average population density in Japan is 338 persons per square kilometre with approximately 93 per cent of people living in urban environments.

[Worldometer](#)

▼ Shibuya Crossing, Tokyo, Japan.  
©Mienny via Canva.com



## ▶ ORIGINAL DATA

Page  
102

Tokyo, the capital city, with over 13 million people...

## ▶ UPDATED DATA

Tokyo, the capital city, with over 14 million people...

▶ [Statista](#)

▶ NOTE: Note over 37 million in greater Tokyo area

## ▶ ORIGINAL DATA

Page  
102

In 2020 it was estimated that approximately 2.93 million people living in Japan were born overseas. The majority were from other nearby countries in the Asian region such as China, South Korea, Philippines and Vietnam. Although the number of migrants has been increasing, this represents around 2 per cent of Japan's population.

## ▶ UPDATED DATA

In 2024 it was estimated that approximately 3.41 million people ... born overseas... represents around 2 per cent of Japan's population.

▶ [Harvard International Review](#)

## ▶ ORIGINAL DATA

Page  
103

Japan not only has an ageing population but it is truly hyper-aged with over 28 per cent of its population over 65 years of age in 2021.

## ▶ UPDATED DATA

...over 29 per cent of its population over 65 years of age in 2024.

▶ [Japan Times](#)

## ▶ ORIGINAL DATA

Page  
103

Birth rate has continued to fall since then from 18 to 7.3 per 1000 per year.

## ▶ UPDATED DATA

Birth rate has continued to fall since then from 18 to 6.9 per 1000 per year in 2024.

▶ [Macrotrends](#)

## ▶ ORIGINAL DATA

Page  
104

Death rate was 10.8 per 1000 in 2020.

## ▶ UPDATED DATA

Death rate was 11.9 per 1000 in 2024.

▶ [Macrotrends](#)

## ▶ ORIGINAL DATA

Page  
104

In 2020 the natural rate of population change was minus 3.5 per 1000.

## ▶ UPDATED DATA

In 2024 the natural rate of population change was minus 5.4 per 1000.

▶ [Macrotrends](#)

## ▶ ORIGINAL DATA

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104

The resulting population structure of Japan is illustrated by the population pyramids in Figure 7.5. The broad base of the 0–14 age groups in 1950 (35.5 per cent of the population) had reduced by almost one third by 2020 to 12 per cent. Conversely, the percentage of people aged 65 years and above increased from 4.9 per cent in 1950 to 28.9 per cent in 2020 and is expected to contain over one-third of the population by 2050. The proportion of the population in the working age groups (59.1 per cent in 2020) has been declining since 1993 and is expected to continue to do so.

## ▶ UPDATED DATA

Had reduced by almost one-third by 2023 to 11.4 per cent. Conversely, the percentage of people aged 65 years and above increased from 4.9 per cent in 1950 to 29.1 per cent in 2023. The proportion of the population in the working-age groups was 59.5 per cent in 2023.

▶ [Statistical handbook of Japan, p.29 Figure 2.4.](#)

## ▶ ORIGINAL DATA

Page  
105

Marriage remains the only socially acceptable way to have children in Japan: far fewer children are born outside wedlock than in other more developed countries (2.3 per cent of births in Japan compared to nearly 50 per cent in Britain in 2020).

## ▶ ORIGINAL DATA

Page  
107

...the average age of Japanese farmers has increased from 51 years in 1980 to 67 years in 2020. In 2020, 70 per cent of farmers were aged 65 years and over.

## ▶ ORIGINAL DATA

Page  
107

The number of unoccupied dwellings in Japan was estimated at 13.6 per cent in 2019, with one third of all houses likely to be vacant by 2033, posing a significant challenge for local governments.

## ▶ ORIGINAL DATA

Page  
110-111

As shown in Figures 7.14 and 7.15, immigrants currently comprise 2 per cent of Japan's population with a total of 2.93 million. The largest group is from China (810,000), followed by Koreans (44,000) and Vietnamese (410,000). In December 2018, the Japanese parliament passed legislation amending its Immigration Act to expand its temporary labour migration program from April 2019 to allow more than 345,000 new workers between 2019 and 2023 to fill areas of specified skills.

## ▶ ORIGINAL DATA

Page  
113

2015: National Fertility Survey.

## ▶ UPDATED DATA

Children born outside wedlock... (2.4 per cent of births in Japan compared to over 51 per cent in Britain in 2024).

[Hiro Clinic](#)

## ▶ UPDATED DATA

The average age of Japanese farmers has increased from 51 years in 1980 to 68.7 years in 2023. In 2023, 70 per cent...

[Statistica](#)

## ▶ UPDATED DATA

The number of unoccupied dwellings in Japan was estimated at 13.8 per cent in 2024 (9 million dwellings).

[Asahi](#)

## ▶ UPDATED DATA

Immigrants currently comprise 2.7 per cent of Japan's population, with a total of 3.4 million. The largest group is from China (844,000), followed by Vietnamese (600,000) and Koreans (411,000).

[OECD, International Migration Outlook, 2024](#)

## ▶ UPDATED DATA

2021: National Fertility Survey

[IPSS](#)

No surveys were conducted in 2020 due to COVID; no details are available on post-2021 surveys.

▼ Rice terraces in Japan.

©DeltaWorks via Canva.com



## Updated visual sources

**ORIGINAL SOURCE** Page 103

**Figure 7.3** Japan's changing population growth and structure, 1950–2065.

**NEW DIGITAL SOURCE**

[Meiji](#)

NOTE: Clearer figure for three age groupings; projections up to 2100. Does not separate out 75 years and over, and the percentage of elderly is not graphed separately as in the current Figure 7.3.

**ORIGINAL SOURCE** Page 103

**Figure 7.4** Japan's changing birth and death rate.

**NEW DIGITAL SOURCE**

[Statistical handbook of Japan, p.15 Figure 2.6](#)

**ORIGINAL SOURCE** Page 104

**Figure 7.5** Japan's changing population pyramids.

**NEW DIGITAL SOURCE**

[Statistical handbook of Japan, p.15 Figure 2.4](#)

**ORIGINAL SOURCE** Page 104

**Figure 7.6** Changing life expectancy, fertility and infant mortality rates in Japan.

**NEW DIGITAL SOURCE**

[Changing life expectancy, fertility and infant mortality rates in Japan, 2025.](#)

Year	Life expectancy (years)	Total fertility rate (births per woman)	Infant mortality rate (deaths per 1000 live births)
2025	85.27	1.38	1.49

**ORIGINAL SOURCE** Page 105

**Figure 7.7** Changing labour force participation rates for males and females in Japan.

**NEW DIGITAL SOURCE**

[JCER](#)

**ORIGINAL SOURCE** Page 106

**Figure 7.9** Changes in Japan's social security over time.

**NEW DIGITAL SOURCE**

[JPSS, p.9, Figure 2.](#)

**ORIGINAL SOURCE** Page 107

**Figure 7.12** The distribution of population change in Japan.

**NEW DIGITAL SOURCE**

[Nippon](#)

**ORIGINAL SOURCE** Page 110

**Figure 7.14** Change in migration numbers and percentage.

**NEW DIGITAL SOURCE**

[OECD, International Migration Outlook, 2024](#)

# Updated case study

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## ▶ NEW CASE STUDY TEXT

### National scale response

Under Prime Minister Kishida (2021–2024), a number of ‘intensive measures’ were introduced as a ‘last chance’ to reduce the declining birth rate. Known as the Acceleration Plan, these policies to support children and child-rearing included:

1. Monthly payments for children: approximately A\$160 for children up to 3 years of age; A\$106 for children aged 3 to high school age.
2. Use of public housing and vacant houses to provide approximately 300,000 homes for households raising children.
3. Working to foster a society sympathetic to children and to child-rearing via actions such as priority queuing for pregnant women and people with children, and separating spaces inside public transportation for people using baby strollers.
4. Beginning in the 2025 fiscal year, to encourage both parents to take childcare leave, the childcare leave allowance will increase from 80 per cent to 100 per cent of take-home pay when this leave is taken by both men and women during a certain period soon after childbirth.

In terms of migration, Japan introduced legislation in 2024 to secure foreign human resources in fields facing labour shortages, which could potentially lead to permanent residency. In addition, the fields covered by the skilled worker system, introduced in 2019, have been successively expanded to a total of 16 industries in 2024.

▶ [Prime Minister's Office of Japan](#)

## ▶ NEW ACTIVITIES

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108

### Figure 7.7 and Activity 6

Compare the changing rates of labour force participation for males and females of different ages between 2006 and 2023.

Page  
113

### Activity 8

Link each of the strategies listed as part of the Acceleration Plan to the issue it seeks to overcome to meet the challenge of raising birth rates.

Page  
113

### Activity 9

Explore the [Statistics Bureau of Japan](#) for latest data. Select any two of the Tables or Figures and describe the data.

▶ In 2024 the natural rate of population change was minus 5.4 per 1000.

©Alfo Images via Canva.com



# 8

## Population trends and issues: ageing in Germany

### Updated in-text data

#### ▶ ORIGINAL DATA

Page  
114

Germany had an estimated population of 83.2 million in early 2021 ranking it the second most populous country in Europe and nineteenth in the world.

#### ▶ UPDATED DATA

...population of 83.5 million in 2024...

▶ [Destatis, the Federal Statistics Office](#)

#### ▶ ORIGINAL DATA

Page  
114

With a median age of almost 46 years, Germany has an ageing population, and it has moved into the hyper-aged category with 21.8 per cent of its population over 65 years of age, second after Japan.

#### ▶ UPDATED DATA

...23 per cent of its population over 65 years of age in 2023 ...

▶ [World Bank](#)

#### ▶ ORIGINAL DATA

Page  
114

In 2021, approximately 13 per cent of the population was born overseas...

#### ▶ UPDATED DATA

In 2024, an estimated 19 per cent of the population was born overseas...

▶ [Destatis, the Federal Statistics Office](#)

#### ▶ ORIGINAL DATA

Page  
115

Estimates for 2020 put the fertility rate at 1.59 births per woman with total births under 770,000 in that year.

#### ▶ UPDATED DATA

Estimates for 2024 put the fertility rate at 1.46 births per woman with total births under 693 000.

▶ [Statista](#)

#### ▶ ORIGINAL DATA

Page  
116

In 2020, the under-five mortality rate for Germany was 2.6 deaths per 1000.

#### ▶ UPDATED DATA

In 2024, the under-five mortality rate for Germany was 3.4 deaths per 1000.

▶ [Worldometer](#)

## ▶ ORIGINAL DATA

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Similarly, infant mortality fell gradually from 4.4 deaths per 1000 live births in 2000 to 2.1 deaths in 2020.

## ▶ ORIGINAL DATA

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116

The German Federal Statistical Office estimated the 2021 figure as 81 years with the life expectancy of newborn boys at 78.6 years and that of newborn girls 83.4 years.

## ▶ ORIGINAL DATA

Page  
116

The German Federal Statistical Office estimated the 2021 figure as 81 years with the life expectancy of newborn boys at 78.6 years and that of newborn girls 83.4 years.

## ▶ ORIGINAL DATA

Page  
117

Germany's population structure has a lower percentage in the under 15 year age group, approximately 14% in 2020, compared with 22 percent in the 65 plus year group. About 64% of the population is therefore in the 15-64 year age group.

## ▶ ORIGINAL DATA

Page  
117

There are currently 11.4 million migrants registered in Germany with the largest group being from Turkey followed by Poland (refer to Figure 8.7).

## ▶ UPDATED DATA

Similarly, infant mortality fell gradually from 4.4 deaths per 1000 live births in 2000 to 2.8 deaths in 2024.

[Worldometer](#)

## ▶ UPDATED DATA

The German Federal Statistical Office estimated the 2024 figure as 81.5 years with the life expectancy of newborn boys at 79.2 years and that of newborn girls 83.9 years.

[Destatis, the Federal Statistics Office](#)

## ▶ UPDATED DATA

The German Federal Statistical Office estimated the 2024 figure as 81.5 years with the life expectancy of newborn boys at 79.2 years and that of newborn girls 83.9 years.

[Destatis, the Federal Statistics Office](#)

## ▶ UPDATED DATA

Germany's population structure has a lower percentage in the under 15 year age group, approximately 14% in 2025, compared with 22 percent in the 65 plus year group. About 64% of the population is therefore in the 15-64 year age group.

<https://www.populationpyramid.net/>

## ▶ UPDATED DATA

There are currently almost 14 million migrants registered in Germany with the largest group being from Turkey followed by Ukraine (refer to new data provided for Figure 8.7).

[OECD](#)

▼ Nuremberg, Germany.

©SeanPavonePhoto via Canva.com



## Updated visual sources

**ORIGINAL SOURCE** Page 115

**Figure 8.4** Changing fertility rates in Germany.

**NEW DIGITAL SOURCE**

[Worldometer](#)

NOTE: No separation of East and West Germany data.

**ORIGINAL SOURCE** Page 116

**Figure 8.5** Changing births and deaths in Germany

**NEW DIGITAL SOURCE**

[Step Stone Group](#)

NOTE: Data to 2022.

**ORIGINAL SOURCE** Page 117

**Figure 8.6** Germany's changing life expectancy.

**NEW DIGITAL SOURCE**

[Worldometer](#)

**ORIGINAL SOURCE** Page 118

**Figure 8.8 (a)** Origin of people seeking protection in Germany.

**NEW DIGITAL SOURCE**

[Destatis](#)

**ORIGINAL SOURCE** Page 119

**Figure 8.11** Population change in Germany, 2019.

**NEW DIGITAL SOURCE**

[EuroStat](#)

**ORIGINAL SOURCE** Page 120

**Figure 8.12** Germany's regional context: median age of population in EU countries.

**NEW DIGITAL SOURCE**

[EuroStat](#)

## Updated case study

**NEW CASE STUDY TEXT** Page 115

**Population Trends and Issues: Ageing Germany**

Germany's population grew by 1.3 per cent (over 1.1 million) in 2022, after a small increase of only 0.1 per cent in 2021. This was due to a large increase in net immigration to over 1.4 million, mainly caused by refugee movements from Ukraine. However, in terms of natural increase, more people died than were born – a loss of 327,000. Eurostat's latest population projection shows a temporary increase in Germany's population over the coming decades, before a decline sets in. The total population in 2070 will still be higher than in 2022. Migration assumptions for Germany are the main driver for the observed increase in the population.

[Destatis Press Release 2023](#)

## ▶ NEW CASE STUDY TEXT

**Germany: Migration Update**

Post-COVID, migration rebounded quickly. In 2022, Germany received 669,000 new immigrants, 25 per cent more than in 2021. Roughly 1.1 million arrivals of people from Ukraine were recorded. Germany accounted for over 30 per cent of asylum applicants in the EU, with 329,035 applicants registered in 2023.

▶ [Destatis Press Release 2023](#)

## ▶ NEW CASE STUDY TEXT

**Germany: Issues and Challenges**

In 2022, the old-age dependency ratio had risen to 38 (up from 31 in 2015). However, the German census of 2022 reported that the lower median age of the migrant population—37 years, compared to the German-born median age of 45 years—could help reduce the rate of increase to this ratio in future.

▶ [Zensus, 2022](#)

## ▶ NEW CASE STUDY TEXT

**Changes to Skilled Migration Act**

Germany made changes to the Skilled Migration Act in 2024 to make it easier for skilled workers from outside the European Union to immigrate. A points system is used to assess applicants based on qualifications, work experience, language skills, age, and job offers. The list of shortage occupations has also been significantly expanded.

▶ [Germany Federal Government](#)

## ▶ NEW CASE STUDY TEXT

**Role of Geospatial Technologies**

The AgeSpot feasibility project undertaken by the European Space Agency was deemed successful, and it is now available for commercial use by governments and businesses to meet the service needs of local populations.

▶ [Age Spot](#)

## ▶ NEW ACTIVITIES

**Figure 8.7 and Activity 6**

- List the 3 [largest contributing countries](#) to Germany's foreign population.
- Suggest how political factors might influence this movement.
- With reference to the total EU data, suggest the impact of EU membership on migration to Germany.

**Activity 7**

Explore the [interactive map](#) and identify regions with the highest and lowest proportions of aged population.

**Activity 7**

Watch the following videos ([video 1](#), [video 2](#)). Make notes on the adaptations being made to cater for an ageing workforce.

**Activity 3**

The [German census](#) uses a survey method to gather data via a random sample of the population across regions. This contrasts with the Australian census which is a compulsory for all households. Suggest the strengths and weaknesses of each method in terms of data collection and application.

# 9

## Population trends and issues: ageing in Australia

### Updated in-text data

#### ▶ ORIGINAL DATA

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126

Australia's population was 10 million in 1960, 17 million in 1990 and reached 25.7 million on 30 September 2020.

#### ▶ ORIGINAL DATA

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Its steady annual growth rate of about 1.7 per cent dropped to 0.9 per cent during the COVID-19 year to September 2020.

#### ▶ ORIGINAL DATA

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In 2019, the United Nations ranked Australia 8th out of 189 nations according to the Human Development Index (HDI). New Zealand was ranked 14th while Indonesia is ranked 109th.

#### ▶ ORIGINAL DATA

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Life expectancy was 80.9 years for males and 85 years for females 2017–19.

#### ▶ ORIGINAL DATA

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For the year 2014–15 Australia accepted 190,000 migrants. This target remained for 2017–18 in addition to the arrival of 18,750 displaced persons.

#### ▶ UPDATED DATA

Australia's estimated population was 27,204,809 people at 30 June 2024.

▶ [ABS](#)

#### ▶ UPDATED DATA

2023 saw an increase to 2.4 per cent — a temporary spike because arrivals recovered faster than departures — and it has settled to 1.8 per cent in the 12 months leading up to 30 September 2024.

▶ [ABS](#)

#### ▶ UPDATED DATA

In 2022, the United Nations ranked Australia 10th out of 189 nations according to the Human Development Index (HDI). New Zealand was ranked 16th while Indonesia is ranked 112th.

▶ [HDI](#)

#### ▶ UPDATED DATA

Life expectancy was 81.1 years for males and 85.1 years for females 2021–23.

▶ [AIHW](#)

#### ▶ UPDATED DATA

For the year 2023–24 Australia accepted 210,000 permanent migrants, in addition to the arrival of 20,000 displaced persons.

▶ [Home Affairs](#)

## ▶ ORIGINAL DATA

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The overall population density of Australia is just 3.3 people per square kilometre, making it one of the least densely populated nations in the world.

## ▶ UPDATED DATA

The overall population density of Australia is just 3.5 people per square kilometre, making it one of the least densely populated nations in the world.

▶ [ABS](#)

## ▶ ORIGINAL DATA

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In 2020, 89.7 per cent of the Australian population lived in urban areas and Greater Melbourne had a population density of 487 people per square kilometre. The proportion of the population living in Australia's urban areas is expected to rise with an annual rate of urbanisation of 1.65 per cent in 2019. Victoria has a density of 28 people per square kilometre, which is the second highest of all states and territories, and the Australian Capital Territory has 179 people per square kilometre. Within Melbourne, inner-city Melbourne is the region with the highest population density containing 22,400 people per square kilometre.

## ▶ UPDATED DATA

In 2020, 89.7 per cent of the Australian population lived in urban areas and Greater Melbourne had a population density of 521 people per square kilometre. The proportion of the population living in Australia's urban areas is expected to rise with an annual rate of urbanisation of 1.32 per cent in 2023-4. Victoria has a density of 31 people per square kilometre, which is the second highest of all states and territories, and the Australian Capital Territory has 179 people per square kilometre. Within Melbourne, inner-city Melbourne is the region with the highest population density containing 23,840 people per square kilometre.

▶ [ABS](#)

## ▶ ORIGINAL DATA

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A dip is predicted for 2020–21 as people delay having children because of the economic downturn and uncertainty that accompanied the COVID-19 pandemic. Even though there are minor fluctuations, Australia's TFR has been below the replacement level of 2.1 since 1976. The crude birth rate (CBR) in Australia has also dropped steadily from approximately 23 live births per 1000 people per year in 1965 to 12.5 in 2020.

## ▶ UPDATED DATA

A dip is predicted for 2020–21 as people delay having children because of the economic downturn and uncertainty that accompanied the COVID-19 pandemic. Even though there are minor fluctuations, Australia's TFR has been below the replacement level of 2.1 since 1976. The crude birth rate (CBR) in Australia has also dropped steadily from approximately 23 live births per 1000 people per year in 1965 to 10.8 in 2023.

▶ [ABS](#)

## ▶ ORIGINAL DATA

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Figure 9.5 shows a steady increase in the life expectancy of Australians from 1905 to 2020. During this same period, the crude death rate (CDR) in Australia dropped from approximately 18 deaths per 1000 people in 1905 to 6.7 in 2020.

## ▶ UPDATED DATA

Figure 9.5 shows a steady increase in the life expectancy of Australians from 1905 to 2023. During this same period, the crude death rate (CDR) in Australia dropped from approximately 18 deaths per 1000 people in 1905 to 6.9 in 2023.

▶ [ABS](#)

## ▶ ORIGINAL DATA

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In 2019, more than 29 per cent of Australia's population, or 7.5 million people, were born overseas according to figures released by the ABS. This was the highest proportion of migrants since the late 1890s when Australia was still a colonial society. A further 48 per cent in 2019 had at least one parent who was born overseas.

## ▶ UPDATED DATA

In 2021, more than 27 per cent of Australia's population, or 6.1 million people, were born overseas according to figures released by the ABS. A further 48 per cent in 2021 had at least one parent who was born overseas.

▶ [Profile.id](#)

## ▶ ORIGINAL DATA

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Queenscliff on the Bellarine Peninsula where 19.1 per cent of the population are aged 75 years and over and the median age is 56.3.

## ▶ UPDATED DATA

Queenscliff on the Bellarine Peninsula where 17.9 per cent of the population are aged 75 years and over and the median age is 62.

▶ [ABS](#)

## Updated visual sources

### ▶ ORIGINAL SOURCE

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**Figure 9.2** Australia's population growth and immigration levels, 1967 to 2019.

### ▶ NEW DIGITAL SOURCE

[ABS- births](#)  
[ABS-deaths](#)  
[ABS- migration](#)

### ▶ ORIGINAL SOURCE

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**Figure 9.4** Change in total fertility rate in Australia.

### ▶ NEW DIGITAL SOURCE

[ABS](#)

### ▶ ORIGINAL SOURCE

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**Figure 9.5** Male and female life expectancy at birth, 1905–2055.

### ▶ NEW DIGITAL SOURCE

[ABS](#)

### ▶ ORIGINAL SOURCE

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**Figure 9.6** Infant mortality rate, 1916–2019.

### ▶ NEW DIGITAL SOURCE

[ABS](#)

### ▶ ORIGINAL SOURCE

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**Figure 9.8** The number of older Australians.

### ▶ NEW DIGITAL SOURCE

As of 2021:

- 65-74 years= 2,459,238
- 75-84 years= 1,376,514
- 85 years and over= 542340

### ▶ ORIGINAL SOURCE

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**Figure 9.16** The proportion of migrants in Australia from 2007 to 2017.

### ▶ NEW DIGITAL SOURCE

[Home Affairs](#)

### ▶ UPDATED ACTIVITIES

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#### Figure 9.8 and Activity 3

Using Figure 9.8, describe the change in the number of older Australians in all three age cohorts from 1911 to 2021.

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#### Figure 9.16 and Activity 3

Figure 9.16 shows the proportion of Australia's migrant streams from 2013 to 2024.

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#### Activity 3

Visit the [Victorian Population Statistics website](#) which shows a 'Population map/Demography map' designed as a key tool for planners. Track population changes in your local government area and discuss the demographic challenges that your area faces. How can this geospatial platform contribute to planning decisions?

# 10 Suggested responses for new activities

## ▶ CHAPTER 1: SUGGESTED RESPONSES

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### Figure 1.26 (new) and Activity 7

- In 2023–24, Japan, Germany, Italy, the USA, and Australia are ranked highest. By 2050, the ranking is predicted to be Japan, Italy, Germany, China, and Australia.
- It is the highest-ranked country. The data in this revised table suggests it is being rivalled by Italy. If other countries such as South Korea, Greece, Bulgaria, and Spain were added, the list may be different.
- Niger has a young population; in other words, low old-age dependency that is offset by a younger age dependency and a large proportion of the population in the working-age category. With high birth rates and a falling infant mortality rate, this situation is likely to continue for several decades.

## ▶ CHAPTER 2: SUGGESTED RESPONSES

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### Activity 3

The number of forcibly displaced people has been rising every year for the past 12 years. It was estimated that 117 million people were forcibly displaced. The three new areas of forced displacement in 2023 were Sudan, Myanmar, and the State of Palestine.

## ▶ CHAPTER 3: SUGGESTED RESPONSES

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### Activity 7

Bangladesh is currently ranked 129th out of 193 countries in the world. This represents an improvement of four places since 2020. Life expectancy is now 73.7 years, mean years of schooling are 7.3, and Gross National Income has increased to US\$6510.

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### Activity 2

There is a wide variation in poverty levels in Bangladesh. Between 2010 and 2022, it is evident that there have been widespread changes. The greatest reduction, identified as a large or very large reduction of  $-0.241$  to  $-0.399$ , has occurred in the central northern region of Bangladesh, in the area of Mymensingh, extending through the central regions of the country and into the south-western region of Khulna. Moderate reductions in poverty are scattered throughout central and southern Bangladesh, with Dhaka falling into this category. The western region and the eastern border region of Sylhet have also seen moderate reductions in poverty levels. The western border region, the east-central region, and the south-eastern region of Chattogram have not experienced significant change.

## CHAPTER 4: SUGGESTED RESPONSES

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### Activity 7

**g.** Based on 2025 data: The number of births has stabilised, with five-year cohorts between ages 0 and 15 making up around 8 per cent of the total population. The proportion of people aged over 65 has also increased, as shown by the broadening of the elderly cohorts.

**h.** In 2040 and 2050, the pyramid is roughly the same shape as in 2025, with a larger proportion of males in the working-age groups (25 to 39 years). However, this feature is less pronounced, and overall, the population age-sex distribution is becoming more balanced. The proportion of cohorts in the 65+ categories is also expected to continue increasing as life expectancy rises. Saudi Arabia in 2050 may still be in late Stage 3 or early Stage 4 of the Demographic Transition Model, likely due to population momentum, as the total fertility rate remains at or near the replacement level.

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### Activity 5

Based on the 2024 report: The top remittance-sending countries are spread across four world regions. The United States (North America) sends nearly double the amount of Saudi Arabia, which is ranked second. There are three countries from the Middle East: Saudi Arabia, Kuwait, and Qatar. Five countries are from Europe: Switzerland, Germany, Luxembourg, the Netherlands, and France. China is the only country from Asia. Overall, this represents a fairly even distribution, although there are no countries from South America, Africa, or Australia.

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### Figures 4.18 and 4.19 and Activity 10

**a.** Both total unemployment and youth unemployment rates in Saudi Arabia follow similar broad trends. Both rates decreased significantly from 1991, reaching a trough in 1999. They then experienced a relatively stable period until around 2019. After 2019, the total unemployment rate increased slightly, peaking in 2020 before decreasing sharply, whereas the youth unemployment rate remained relatively stable through 2020 before declining towards 2023.

**b.** Yemen has a very different unemployment trend, rising steadily from 8 per cent in 1991 to 17.2 per cent in 2023. Kuwait also shows a steady increase from 0.89 per cent in 1991 to 2.08 per cent in 2023. Oman, on the other hand, has experienced a steady decrease from 4.15 per cent in 1991 down to 1.46 per cent in 2023. In these three cases, the trends differ significantly from the trend in Saudi Arabia.

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### Activity 7

**a.** Answers will vary. For example:

- The NEOM website claims the city will have no roads and therefore no cars.
- Residents will be able to access everything they need within a five-minute walk, while high-speed rail will transport them the length of the city.
- The city will be powered by 100 per cent renewable energy.
- Its vertical design will allow 95 per cent of the desert environment to be preserved.
- It will house 9 million people within just 34 square kilometres.

**b.** The construction timeline is behind schedule. The first section was supposed to be finished by 2025 but won't be completed until at least 2030. The full project will take at least 50, and perhaps even 100, years to complete. The cost was originally estimated at US\$500 billion but is now projected to be US\$8.8 trillion—more than 17 times greater than the initial estimate. Due to the extreme cost and extended completion time, it seems unlikely that this city will contribute significantly to solving Saudi Arabia's population distribution challenge in the short or medium term. However, the investment it attracts and the jobs it creates will likely contribute positively to Saudi Arabia's economy and help to reduce unemployment.

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### Activity 8

Answers will vary based on research and recent updates. Responses should include general information about updates, as well as specific developments within individual industries. Impacts should encompass economic effects across various sectors, social implications for foreign workers, and social impacts on Saudi nationals, including updates to unemployment rates for women, youth, and the overall Saudi population.



## CHAPTER 6: SUGGESTED RESPONSES

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### Figure 6.1 and Activity 4

China is no longer the most populous country in the world, as India now has the largest population. Pakistan has replaced Brazil as the fifth most populous nation, and Nigeria is now sixth, while Brazil has slipped to seventh. Mexico is no longer in the top ten and has been replaced by Ethiopia.

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### Figure 6.11 and Activity 5

**g.** The predicted change in the size of the reproductive-age group will mean that there are fewer females to give birth to children. Hence, the birth rate is likely to fall in the future.

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### Figure 6.13 and Activity 4

Between 1970 and 2020, the rural population declined gradually from 676 million to approximately 544 million, whereas the urban population increased gradually between 1970 and 1980 from 142 million to 190 million, and then rose rapidly to 867 million.

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### Figure 6.15 and Activity 11

**a.** Between 1980 and 2005, the ratio of boys to girls increased from 107 to 119 boys for every 100 girls. Since 2005, this ratio has declined to 110.

**b.** Due to the higher number of males compared to females, there are fewer women available to marry and have children, which could reduce the birth rate.

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### Figure 6.18 and Activity 4

The main trend is that the population size will decline. There will be a decrease in both the 0–14 and 15–64 age groups, whereas the 65 years and over age group will increase in size. The 0–14 age group will decline from about 250 million to around 100 million, and the 15–64 age group will decline from 1,000 million to about 450 million. The over-65 age group will increase from approximately 100 million to 350 million.

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### Figure 6.21 and Activity 5

Both the Basic Old Age Insurance and the Resident Pension are part of the first pillar. The Enterprise Annuity represents the second pillar, while the Commercial Annuity Insurance and Individual Retirement Accounts form the third pillar.

### Activity 6

Since 1990, China's annual population growth has gradually declined each year, falling from 13 million to 6 million by 2010. Between 2011 and 2017, the change in population was erratic, with annual growth fluctuating between 7 and 10 million. From 2018 onwards, the rate of change dropped from 5 million to almost no growth. Since 2022, China has experienced a population decline. In 2024, the population decreased by 1.39 million.

### Activity 7

The population has continued to decline due to persistently low birth rates and a falling total fertility rate. There are also fewer women of reproductive age as the population structure changes. In addition, China now has declining marriage rates and a rise in single-person households, indicating that birth rates are likely to remain low. Many couples consider having children to be an expense they cannot afford.

### Activity 8

Following the disastrous famine of the 'Great Leap Forward', life expectancy rapidly increased from 33.3 years in 1960 to 50.8 years in 1962—a dramatic rise in a very short period of time. Since then, there has been a steady increase in life expectancy, reaching 78.6 years in 2022.

### Figure 6.3 and Activity 9

Generally, areas with a high population density (over 100 persons per square kilometre) are located in the south-east of China and along the coast. Similarly, areas with over 10 per cent of the population aged over 65 years are found in the south-east of China near the coast. Areas in the north-east of China also have moderately high numbers of elderly people (15–20 per cent). High concentrations (20–25 per cent) of the elderly are located near major cities such as Beijing, Shanghai, Chengdu and Chongqing. Hence, there is a moderately strong spatial association between high population density and high numbers of people aged over 65 years in China.



## CHAPTER 7: SUGGESTED RESPONSES

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### Figure 7.7 and Activity 6

Male workforce participation rates showed little change for most age groups between 2006 and 2023, whilst those for females generally increased. For example, males aged 25–55 years had consistent rates of approximately 90 per cent. Those for females showed the largest increase in the 30–34 age group, from around 60 to 80 per cent. Rates for both sexes were similar in the under-24 age group at about 78 per cent. Participation rates for women peak in the 25–29 age bracket (just under 90 per cent). Participation for both sexes aged 55 and over decreases, although there has been an increase in participation between 2006 and 2023, especially for women, rising from 60 per cent to almost 80 per cent in that age bracket.

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### Activity 8

- Monthly payments for children: seeks to address the cost of child-rearing to encourage births.
- Housing provision for families: addresses the issue of empty dwellings and the cost of living for families.
- Addressing societal values in a visible way hopes to normalise family life and children.
- Increasing the family leave allowance if both parents take leave not only reduces the financial burden but also spreads the load of child-rearing more equitably across the sexes.

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### Activity 9

Figure 1 shows the decline in Japan's population in number and rate of growth. In 1950, the population grew by 14 million (1.8%), peaking at 15 million growth in the 1970s (although at a lower percentage of 1.4%). Negative growth (population loss) occurred from 2005 onwards, with the greatest decline of 6.5 million in 2020 (-0.5%). An exception was the minimal increase in 2009.



## CHAPTER 8: SUGGESTED RESPONSES

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### Figure 8.7 and Activity 6

- a. Turkey (1.5 million), Ukraine (1.2 million), Syria (970,000)
- b. Political factors have a major influence on movement from Ukraine and Syria to Germany, notably the push factor of wars forcing people to flee as refugees. Turkey has some political disruption (particularly in relation to ethnic groups such as the Kurds), but most likely movement from this country is due to economic reasons and the pull of employment.
- c. EU member states contribute over 5 million people to Germany's population. This is more than half of those moving from within the region of Europe and more than a third of the overall foreign population. Members of EU countries are allowed to move freely from one to another; therefore, this has a positive influence on migration numbers to Germany.

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### Activity 7

The highest proportions of those aged 65 and over are found in the east and northeast of the country. For example, locations around Dresden have over 30 per cent aged (65 and over) population. The lowest proportions are in the south (Munich) and northwest (Bremen), with under 18 per cent aged. Exceptions include small clusters of over 40 per cent aged along sections of the north coast.

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### Activity 7

- Porsche (Frankfurt): use of special chairs and exo-skeleton frames to support those on the production line.
- Use of robotics (Berlin): in kebab shops; factories such as Rolex can operate longer hours using robots.

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### Activity 3

#### Sample survey:

Strengths – less costly, quicker to conduct so results are available sooner, and a random sample can be designed with parameters to allow for variations across regions.

However, a weakness is that it may not be as accurate overall, especially if there are unexpected changes. It should provide good broad data, but at a local scale it may be problematic for successful planning.

#### Compulsory survey:

A major weakness is that it is much more expensive and time-consuming to undertake and to collate the results. It may also be difficult to truly capture the entire population.

However, on the positive side, the resulting data should be very accurate, enabling more successful mapping and planning.