

Key results

There are 30 individuals aged 65 and over for every 100 persons of working age (ages 20 to 64) on average across all OECD countries while there were only about 20 30 years ago. Population ageing has been accelerating as this average old-age to working-age demographic ratio – computed by keeping age thresholds constant – is projected to reach 53 over the next 30 years.

The evolution of old-age to working-age ratios depends on mortality rates, fertility rates and migration. OECD countries have seen prolonged increases in life expectancy that most analysts project to continue, implying an increasing number of older people and most likely of pensioners too.

Currently, the demographically oldest OECD country is Japan, with an old-age to working-age ratio equal to 52.0 (meaning 52 individuals aged 65 and over for 100 persons of working age defined as 20 to 64). Finland and Italy also have high old-age ratios, of about 40. By 2050, the old-age to working-age ratio is expected to reach more than 70 in Greece (75.0), Italy (74.4), Japan (80.7), Korea (78.8), Portugal (71.4) and Spain (78.4).

By contrast, Colombia, Costa Rica and Turkey are the youngest countries based on this indicator, with old-age to working-age ratios of 15.0, 16.6 and 15.2 respectively. In the second half of this century, however, these countries are expected to age considerably. By 2080, the old-age ratio would rise above the OECD average in Chile (67.5 compared to 61.1) and closer to the average in Mexico and Turkey (50.9 and 58.2, respectively).

Four Anglo-Saxon OECD countries – Australia, Canada, Ireland and the United States – have relatively low old-age ratios, between 25 and 30. This is partly due to inward migration of workers and – except for Canada – to comparatively high fertility rates just below replacement level in recent decades.

There have also been substantial declines in fertility, which, of course, will eventually diminish the number of workers entering the labour market. For example, fertility rates fell below the replacement level on average in OECD countries around the mid-1980s, implying shrinking populations in the long term. In the future, however, there is a great deal of uncertainty over how fertility rates will evolve (Figure 6.1).

For the OECD as a whole, the increase in the old-age to working-age ratio is projected to continue according to the medium forecast of United Nations Populations Prospects, from

30.4 in 2020 to 52.7 in 2050 and 61.1 in 2080. By far, Korea is facing the most rapid population ageing among OECD countries. The old-age ratio would increase from 7.6 in 1960, 23.6 in 2020 to 94.6 in 2080 and Korea would move from being the fifth youngest country in the OECD in 2020 to the oldest in 2080.

The projected working-age population (20-64) will decrease by 10% in the OECD on average by 2060, i.e. by 0.26% per year. It will fall by 35% or more in Greece, Japan, Korea, Latvia, Lithuania and Poland, and also by more than 25% in Estonia, Hungary, Italy, Portugal, Slovenia, the Slovak Republic and Spain. It is projected to increase by more than 20% in Australia, Israel and Mexico, with Israel being a clear outlier with an increase of 67% (Figure 6.5). This will have a significant impact on the financing of pay-as-you-go (PAYGO) systems as it is closely related to their internal rates of return. Even funded pension systems might be negatively affected by rapidly declining working-age populations through its effect on labour supply, in turn potentially lowering output growth and equilibrium interest rates.

Projections of the old-age to working-age ratio vary by source (Figure 6.6). Although the projections for the EU22 countries are virtually identical for 2020 and only differ by 2 percentage points in 2050 this is not the case for all the individual countries. In 15 of the countries the UN data is higher for 2050, with seven countries having a higher figure for the Eurostat data. In Latvia the Eurostat data is 9 percentage points higher in 2050, whereas in Spain the UN data is 14 percentage points higher.

Definition and measurement

The old-age to working-age demographic ratio is defined as the number of individuals aged 65 and over per 100 people of working age defined as those at ages 20 to 64.

Table 6.2. Demographic old-age to working-age ratio: Historical and projected values, 1950-2080

	1950	1960	1990	2020	2050	2080		1950	1960	1990	2020	2050	2080
Australia	14.0	16.0	18.8	27.7	41.6	49.4	Netherlands	13.9	16.8	20.6	34.3	53.3	62.2
Austria	17.3	21.0	24.3	31.3	56.0	60.2	New Zealand	16.3	17.0	19.5	28.3	43.8	57.5
Belgium	18.1	20.3	24.8	33.1	51.3	56.8	Norway	16.0	19.8	28.5	29.6	43.4	53.4
Canada	14.0	15.1	18.4	29.8	44.9	54.0	Poland	9.4	10.5	17.3	30.5	60.3	68.6
Chile	7.2	7.9	10.9	19.7	44.6	67.5	Portugal	13.0	14.8	23.9	38.6	71.4	72.3
Colombia	7.5	7.2	8.4	15.0	36.0	64.3	Slovak Republic	11.9	12.6	18.2	26.5	54.6	58.1
Costa Rica	6.8	7.1	9.0	16.6	41.6	69.4	Slovenia	12.5	13.7	17.3	34.7	65.0	60.7
Czech Republic	13.9	16.3	22.0	33.8	55.9	52.8	Spain	12.8	14.6	23.1	32.8	78.4	74.4
Denmark	15.6	19.0	25.9	34.9	44.6	52.4	Sweden	16.8	20.2	30.9	35.9	45.5	53.4
Estonia	19.3	17.7	19.7	34.9	54.9	63.2	Switzerland	15.8	17.6	23.6	31.3	54.4	56.7
Finland	11.9	13.5	22.0	40.1	51.4	65.0	Turkey	6.5	7.0	9.4	15.2	37.0	58.2
France	19.5	20.8	24.0	37.3	54.5	62.2	United Kingdom	17.9	20.2	26.9	32.0	47.1	55.1
Germany	16.2	19.1	23.5	36.5	58.1	59.5	United States	14.2	17.3	21.6	28.4	40.4	51.1
Greece	12.4	12.2	22.9	37.8	75.0	79.7	OECD	13.6	15.0	20.0	30.4	52.7	61.1
Hungary	13.2	15.5	22.9	33.4	52.6	55.4							
Iceland	14.1	16.4	19.0	26.6	46.2	64.5	Argentina	7.5	10.1	17.3	20.2	30.3	45.5
Ireland	20.9	22.8	21.6	25.0	50.6	60.0	Brazil	6.5	7.1	8.4	15.5	39.5	63.7
Israel	7.1	9.1	17.8	23.9	31.3	39.9	China	8.5	7.6	10.2	18.5	47.5	60.6
Italy	14.3	16.4	24.3	39.5	74.4	79.6	India	6.4	6.4	7.9	11.3	22.5	40.8
Japan	9.9	10.4	19.3	52.0	80.7	82.9	Indonesia	8.6	7.6	7.7	10.6	27.3	41.0
Korea	6.3	7.6	8.9	23.6	78.8	94.6	Russian Federation	8.7	10.5	17.2	25.3	41.7	41.9
Latvia	18.1	17.7	19.9	35.5	53.0	49.9	Saudi Arabia	7.5	8.4	6.1	5.3	28.2	44.8
Lithuania	17.5	14.0	18.4	34.7	55.7	55.7	South Africa	8.5	8.4	8.7	9.6	17.4	26.8
Luxembourg	15.8	17.6	21.1	22.3	43.8	50.1	EU27	14.6	16.0	21.6	33.6	56.7	62.0
Mexico	8.0	8.3	9.6	13.2	28.9	50.9							

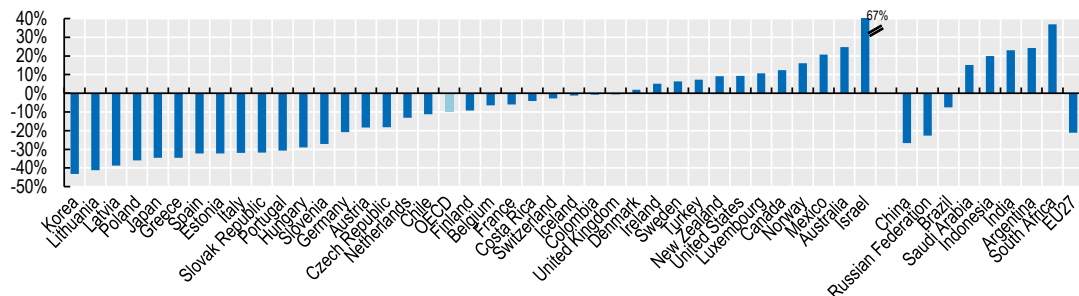
Note: The demographic old-age to working-age ratio is defined as the number of individuals aged 65 and over per 100 people aged between 20 and 64.

Source: United Nations, Department of Economic and Social Affairs (2019), World Population Prospects 2019, Online Edition (for future periods: medium-variant forecast).

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Figure 6.5. The working-age population will decline in a large number of OECD countries

Change in the working age population (20-64), 2020-60

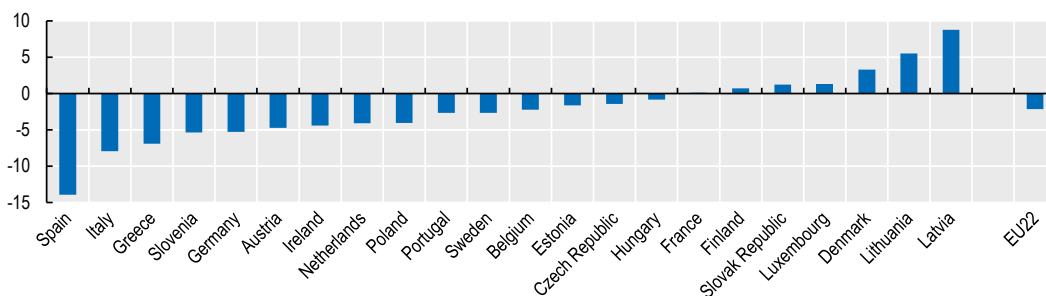


Source: United Nations World Population Prospects: The 2019 Revision.

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Figure 6.6. Demographic old-age to working-age ratio projections differ based on data sources

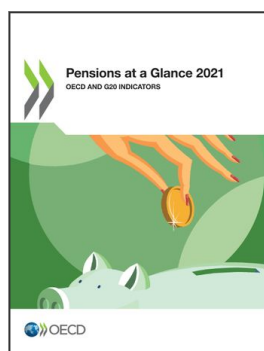
Difference in population projections for 2050 (EU – UN data source), in percentage points



Note: The demographic old-age to working-age ratio is defined as the number of individuals aged 65 and over per 100 people aged between 20 and 64.

Source: United Nations, Department of Economic and Social Affairs (2019), World Population Prospects 2019, Online Edition (for future periods: medium-variant forecast). Eurostat population projections, EUROPOP 2019.

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