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2027 Ageing Report

Underlying Assumptions and Projection Methodologies



EUROPEAN ECONOMY

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This report was prepared by the European Commission and the Ageing Working Group to deliver on the mandate the Economic and Financial Affairs Council gave to the Economic Policy Committee (EPC) in 2024 to update the triennial projections of age-related public spending. The work to fulfil this mandate is performed within the EPC's Ageing Working Group (AWG).

The Ageing Report provides long-term projections for public expenditure on pensions, health care, long-term care and education in the European Union and Norway. The 2027 Ageing Report is the eighth edition and covers the period up to 2080. The budgetary projections, which will be published in spring 2027 in a separate report, build on the macroeconomic assumptions and methodologies discussed in this report.

This report is presented by the EPC and the European Commission (Directorate-General for Economic and Financial Affairs - DG ECFIN) after discussion and agreement in the AWG. DG ECFIN provided the analysis and calculations underpinning the report. Eurostat prepared the demographic projections.

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CONTENTS

Executive Summary 1

1. 2027 Ageing Report: mandate, general principles and process 1
2. Main results: the economic impact of population ageing 3
3. Comparison with the 2024 Ageing Report assumptions 5

Part I: Underlying assumptions 11

1. Demographic projections 12
   - 1.1. Introduction 12
   - 1.2. Fertility rates 12
   - 1.3. Mortality and life expectancy 14
   - 1.4. Net migration 16
   - 1.5. Overall population projections 19
   - 1.6. Comparison with the demographic projections in the 2024 Ageing Report 22
2. Labour force projections 26
   - 2.1. Introduction 26
   - 2.2. Past trends and main drivers of labour market developments 26
   - 2.3. Pension reforms and older workers' labour market participation 29
   - 2.4. Labour market participation and labour supply projections 32
   - 2.5. Employment projections 38
   - 2.6. Economic dependency ratios 40
   - 2.7. Comparison with the labour market projections in the 2024 Ageing Report 42
3. GDP projections 57
   - 3.1. Introduction 57
   - 3.2. Long-term GDP projections 58
   - 3.3. Comparison with the growth projections in the 2024 Ageing Report 61
4. Inflation and interest rate assumptions 65
   - 4.1. Interest rate assumptions and pension fund projections 65
   - 4.2. Inflation assumptions 66
5. Sensitivity tests and alternative scenarios 67
   - 5.1. Introduction 67
   - 5.2. Sensitivity tests 67
   - 5.3. Alternative pension scenarios 68

Part II: Projection methodologies for age-related spending items 75

1. Pensions 76
   - 1.1. Main features of the pension projections 76
   - 1.2. Coverage of the pension projections 76
   - 1.3. Definition of the variables 76
2. Health care 85
   - 2.1. Introduction 85

2.2. Overview of the projection methodology 85
2.3. Different scenarios for projecting public health care expenditure 87

3. Long-term care 91

3.1. Introduction 91
3.2. Overview of the projection methodology 91
3.3. Different scenarios for projecting public long-term care expenditure 95

4. Education 98

4.1. Introduction 98
4.2. Methodology to project total expenditure on public education 99
4.3. Sensitivity analysis 102

Annexes 103

A1. Cohort Simulation Model 103

A2. EUCAM 107

A3. Pension systems overview 109

A4. Data sources for health care expenditure 114

A5. Mathematical illustration of the health care scenarios 117

A6. Data sources for long-term care expenditure 123

A7. Mathematical illustration of the long-term care scenarios 129

A8. Organisational structure of secondary education 135

A9. Data sources for education expenditure 136

A10. Estimating the education enrolment rate 137

Part III: Statistical Annex 139

1. Belgium 140
2. Bulgaria 141
3. Czechia 142
4. Denmark 143
5. Germany 144
6. Estonia 145
7. Ireland 146
8. Greece 147
9. Spain 148
10. France 149
11. Croatia 150
12. Italy 151
13. Cyprus 152
14. Latvia 153
15. Lithuania 154
16. Luxembourg 155
17. Hungary 156
18. Malta 157
19. The Netherlands 158
20. Austria 159
21. Poland 160
22. Portugal 161
23. Romania 162
24. Slovenia 163
25. Slovakia 164
26. Finland 165
27. Sweden 166
28. Norway 167
29. Euro area 168
30. European Union 169

References 170

GLOSSARY

DEMOGRAPHY

Total fertility rate (TFR)	Average number of children a woman would have over her lifetime if, at each childbearing age, she experienced the age-specific fertility rate of the year in question.
Natural replacement rate	Total fertility rate at which a population replaces itself from one generation to the next in the absence of migration. Around 2.1 live births for developed countries.
Life expectancy at birth	Average number of years a newborn would live if exposed throughout life to the age-specific mortality rates of the year in question.
Life expectancy at 65	Average number of remaining years of life of a person aged 65, given the age-specific mortality rates of the year in question.
Net migration	Immigration minus emigration over a year. Derived as the population change not explained by births and deaths, thus including statistical adjustments, e.g. population revisions.
Old-age dependency ratio (OADR)	Population aged 65 and over as a % of the population aged 20-64.
Very old-age dependency ratio	Population aged 80 and over as a % of the population aged 20-64.
Total dependency ratio	Population aged under 20 and aged 65 and over as a % of the population aged 20-64.

LABOUR MARKET

Labour force (active population)	People who are either employed or unemployed.
Participation rate (activity rate)	Labour force of a given age group as a % of the total population of the same age group.
Employment rate	Employed people of a given age group as a % of the total population of the same age group.
Unemployment rate	Unemployed people as a % of the labour force of the same age group.
Average labour market exit age	Average age at which people leave the labour force.
Effective retirement age	Age at which people actually retire, as opposed to the statutory retirement age.
Statutory retirement age (SRA)	Standard age at which people can draw an old-age pension under the general scheme.
Early retirement age (ERA)	Earliest age at which an old-age or early pension can be drawn, usually subject to a minimum contribution period and/or a reduced benefit.
Old-age economic dependency ratio	Inactive population aged 65 and over as a % of the employed population aged 20-64 (or 15-74).
Total economic dependency ratio	Total inactive population (all ages) as a % of the employed population aged 20-64 (or 15-74).

EXECUTIVE SUMMARY

1. 2027 AGEING REPORT: MANDATE, GENERAL PRINCIPLES AND PROCESS

To assess the long-term sustainability of public finances in the EU Member States, the ECOFIN Council mandated the Economic Policy Committee (EPC) to update its comprehensive long-term budgetary projections by the summer of 2027. The update of the Ageing Report, a joint report by the EPC and the European Commission (DG ECFIN), should be based on new population projections by Eurostat. The report is prepared by the EPC's Ageing Working Group (AWG). The 2027 Ageing Report is the 8th edition.

The Ageing Report's long-term economic and budgetary projections are a unique exercise, covering the EU Member States and Norway for the period 2025-2080. The report provides for these countries a vast set of demographic, labour market, growth and spending indicators. These give insight into the timing of population ageing, its estimated economic implications and the expected budgetary consequences. Such pressures have become tangible already in many countries and will only grow as the number of retirees swells because of the large baby boomer cohorts, in combination with the more lasting features of steady gains in life expectancy and historically low fertility rates.

Being a joint EPC-Commission product, the Ageing Report provides a shared assessment between the Member States and the Commission on how ageing costs might develop in the future. The projections are therefore a cornerstone of various surveillance processes at the EU level. They inform the coordination of economic policies, in particular the European Semester, Member States' medium-term fiscal-structural plans and the assessment of the sustainability of public finances.

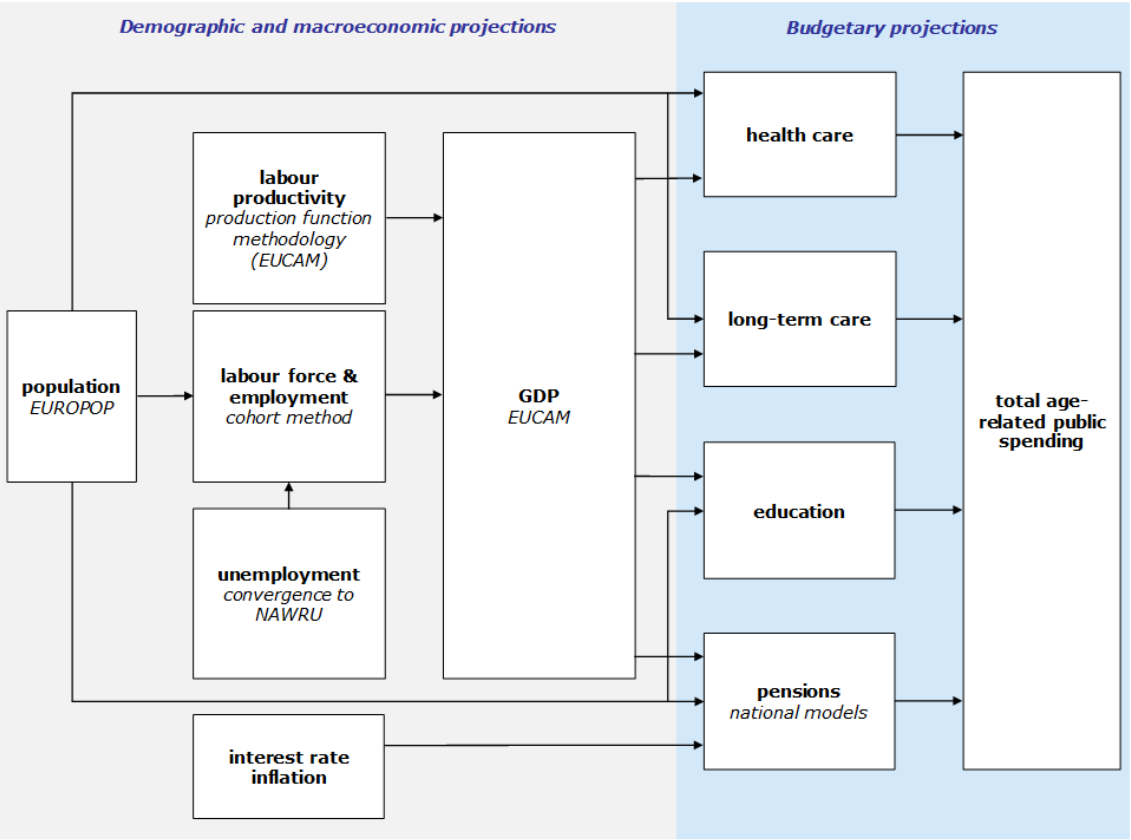
Overview of the projection exercise

Graph 1 summarises the process for the triennial update of the report. In a first phase, the AWG agrees on the underlying assumptions and projection methodologies, which are subsequently endorsed by the EPC. The results of the first phase are summarised in this report. In a second phase, the age-related spending projections are prepared, which are the subject of a separate report, to be published in spring 2027.

Part I of this report gives an overview of the demographic and macroeconomic assumptions. The EUROPOP2025 population projections by Eurostat serve as a starting point. In addition, based on common methodologies, macroeconomic projections are prepared for each country. These cover economic growth and its drivers, namely changes in labour productivity (total factor productivity and capital deepening) and in the labour force (participation, employment and unemployment rates), as well as interest rates and inflation. A statistical annex at the end of the report gives a country-by-country overview of the demographic and macroeconomic projections. The full dataset with annual figures is published online.

Part II details the methodologies used to project age-related expenditure in the second phase of the process. The budgetary projections cover four items: public spending on pensions, health care, long-term care and education. For pensions, Member States prepare projections based on national models, which are the subject of an in-depth peer review by the Commission and the AWG. This approach allows capturing the specificity of each country's public pension system, while ensuring cross-country consistency since the projections are based on shared assumptions and methodologies. The Commission prepares the health care, long-term care and education projections based on common models, the results of which are discussed and agreed within the AWG.

Graph 1: **Overview of the Ageing Report projection exercise**



Source: European Commission, EPC.

The Ageing Report's long-term baseline projections apply a general 'no-policy-change' assumption. Thus, they illustrate what the future might look like if current policies remain unchanged and given a number of realistic assumptions would come to fruition. Projecting economic and budgetary developments fifty years into the future involves much uncertainty. Therefore, a series of sensitivity tests and alternative scenarios is conducted around the baseline to assess the responsiveness of the projections to changes in the main underlying assumptions. In addition to the common tests covering demographic and macroeconomic variables (see Table 1), specific scenarios apply for each expenditure item.

Table 1: **Overview of the common sensitivity tests around the baseline**

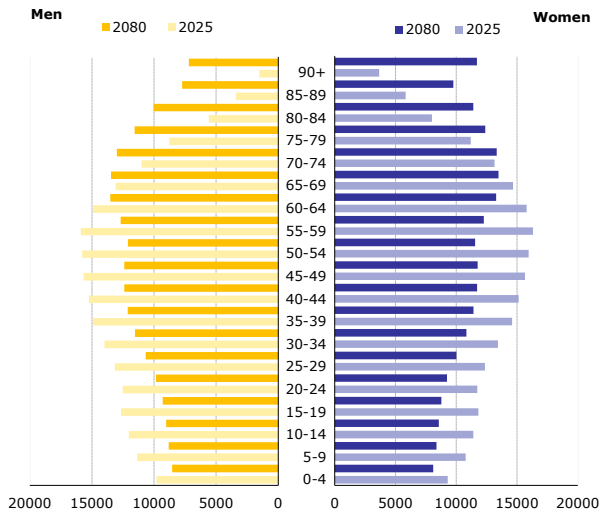
Demography				Labour force	Productivity
Higher life expectancy	**Lower fertility**	**Lower/higher migration**	**Migration: delayed convergence**	**Higher employment rate older workers**	**Lower/higher TFP growth**
Additional gain in life expectancy at birth of two years by 2080	*20% lower fertility rate (phased in)*	*33% less/more non-EU immigration over the entire projection period*	*Later convergence of migration flows and higher working-age feedback mechanism*	*10 pps higher employment rate of older workers (55-74y) compared with baseline*	*TFP growth at 85%/115% of the baseline assumption*

Source: European Commission, EPC.

2. MAIN RESULTS: THE ECONOMIC IMPACT OF POPULATION AGEING

The EU population is projected to start falling in the coming years while the number of older people grows, in particular when measured relative to the number of people of working age

Graph 2: **EU – Population by age group and sex, 2025 and 2080 (thousands)**



Source: European Commission, EPC.

The total EU population is expected to rise from 452 million people in 2025 to 453 million people in 2029. After that, it would fall to 414 million in 2080, a decline by 8% compared with 2025 (see Table 2). This general trend for the EU encompasses heterogeneous developments at country level, with 10 countries for which the 2080 population would exceed current levels. Yet, all of them would experience an upward shift in the age distribution. As shown in Graph 2 for the EU, the oldest age groups will expand, while younger age brackets would shrink. The share of people aged 65 or over would rise from 22% currently to 33% by 2080 and the share of those aged 80 or over would more than double, from 6% to 14%. At the same time, the population share of people aged 20 to 64 would decline in all countries, from 58% to 51% of the total in the EU. The median age would increase from 45 to 51 years.

Relating the 65+ population to the 20-64 year-old population provides the *old-age dependency ratio*. This ratio gives an idea about the relative shift between potential retirees and potential workers and thus of how an ageing population alters the beneficiary-contributor balance. As a result of the projected dynamics, this ratio will rise sharply in all Member States over the coming decades (see Table 2). In the EU, it would rise by about 27 pps, from 38% in 2025 to 65% in 2080, with most of the increase expected already by 2050. Put differently, the EU goes from having 26 people aged between 20 and 64 for every ten people aged 65 or over in 2025, to less than 16 people by 2080.

Projected changes in the size and age profile of the population are determined by assumptions for fertility rates, mortality rates and migration (see Table 3).

- The total **fertility rate** in the EU is projected to rise from an historical low of 1.3 live births per woman in 2024 to 1.5 by 2080. This all-in-all modest recovery reflects convergence, in the very long run, towards the Member States with the most favourable fertility developments. Fertility rates would stay below the natural replacement rate of 2.1 in all countries, ranging between 1.3 and 1.7 by 2080.
- **Life expectancy** at birth for men is expected to increase by 7 years in the EU, from 79 in 2025 to 86 in 2080. Female life expectancy at birth would rise by about 6 years, from 84 in 2025 to 90 in 2080, thus leading to a further convergence between sexes. When looking at the remaining life expectancy at the age of 65, the average increase is about 5 years for both. These projections are based on the hypothesis of a partial upward convergence in longevity between Member States.
- **Net migration** is assumed to decline from the elevated levels of recent years and to stabilise as of the 2030s at around 1.4 million people annually (0.3% of the EU population), closer to pre-2022 levels. Countries' long-term immigration and emigration rates are based on a partial convergence to past trends for the EU as a whole. In addition, in case of a decline in the working-age population, 10% of this decline is assumed to be compensated by additional non-EU immigration, while two thirds of the displaced Ukrainians benefiting from temporary protection are assumed to permanently settle in their host country.

Labour force participation is projected to rise, driven by older workers and women in general, but would only partially compensate for the decline in the working-age population

The macroeconomic implications of the demographic projections depend on how many people take part in the labour market. The Ageing Report's labour force projections follow a cohort approach that captures the current situation in each country. It assumes no further policy changes beyond already legislated pension reforms. The participation rate of the EU working-age population is projected to increase by around 3 pps, from 81% to 84%, and by almost 8 pps for people aged 55-64, to about 78% (see Table 4). Participation among people aged 65-69 would nearly double, from 20% to 38%, with the largest increase expected for those countries that adjust their legal retirement ages for rising life expectancy. The upward trend reflects the combined effect of pension reforms on the exit behaviour of older age groups, lifting the average labour market exit age by about two years, and the progressive increase in the labour market attachment of female cohorts, with participation rising by about 5 pps among women aged between 20 and 64, against 2 pps among men by 2080.

However, in most countries, higher participation is expected to be insufficient to offset the projected decline in the working-age population. As a result, the EU labour force is projected to decrease by 17% (36 million people) between 2025 and 2080, or 0.3% annually. In 11 Member States, the labour force would shrink by more than a quarter by 2080, while just five countries are projected to have a larger labour force in 2080 than in 2025.

Employment rates are projected to increase, though the number of employed people falls relative to the number of inactive people

The employment assumptions are determined by the population, participation and unemployment projections. The unemployment projections are based on estimates of structural unemployment which in most cases lead to a decline in unemployment, by around 1 pp for the EU average (see Table 4). Employment in the EU is projected to increase from around 76% of the working-age population in 2025 to around 80% in 2080. This 4 pps increase includes a 5 pps increase for women and about 2 pps for men, so that by 2080 some 77% of women and 83% of men aged 20-64 would be in employment. The employment rate of people aged 55-64 is expected to rise by about 8 pps.

While a higher share of the population is expected to be employed, a shrinking working-age population means that total employment would nevertheless decline. As a result, the *old-age economic dependency ratio* would rise from 47% in 2025 to 74% in 2080, with a fast increase in the next few decades already (see Table 2). This ratio, which measures the number of inactive people above the age of 65 against employed people aged 20-64 provides a summary indicator of the expected macroeconomic repercussions of demographic ageing. It means that the EU goes from having 21 employed people aged between 20 and 64 for every ten inactive people aged 65 or over in 2025, to just 13 people by 2080.

With labour inputs expected to shrink, labour productivity would become the sole growth driver in most countries, with GDP growth projected at 1% in the EU in 2026-2080

Differently from previous projection rounds, the long-term GDP projections were prepared by the EPC's Potential Output Working Group, extending the methodology used for the Commission's medium-term potential growth estimates (T+10) to the full projection horizon (T+55). The new methodology was applied to the Commission 2026 spring forecast.

Real GDP growth is projected at an average of 1% in the EU in the period 2026-2080 (see Table 5), declining from 1.2% in the second half of the 2020s to 0.9% in the 2070s. On the one hand, the contribution of labour to GDP growth is expected to turn negative as of the early 2030s, reducing growth by 0.3 pps on average over the projection period. This decline results from a lower share of people of working age in a shrinking total population. On the other hand, hourly labour productivity

would grow by 1.3% on average, of which 0.8 pps comes from total factor productivity (TFP) and 0.5 pps from capital deepening.

Beyond growth, the projections rely on common interest rate and inflation assumptions, which matter for the indexation of pension benefits and for the return on pension assets. Long-term interest rates converge from country-specific, market-based expectations towards a common value of 2% in real terms by T+30, while inflation converges to central bank targets by 2030.

3. COMPARISON WITH THE 2024 AGEING REPORT ASSUMPTIONS

In base year 2025, the EU counted about 1.1 million fewer people than anticipated in EUROPOP2023, published in the spring of 2023 (see Table 2), reflecting data revisions for Germany, Poland and Bulgaria. With few exceptions, fertility was weaker than previously assumed (see Table 3). Conversely, migration turned out higher, with 1 million more net arrivals in 2025 than assumed in the previous report. The EU population is projected to shrink more by 2070([1]), counting 9.5 million fewer people compared to the demographic assumptions underpinning the 2024 Ageing Report, though the picture varies significantly across countries, ranging from a 14% larger population in Cyprus by 2070 to a 13% smaller population in Hungary than previously projected by 2070 (see Table 2). Average fertility is generally lower since fertility rates have fallen further in recent years in nearly all countries, including the current best performers (see Table 3). Longevity, though still expected to rise, would do so at a slower pace than assumed before, with a larger revision for men. Net migration, by contrast, would be higher, reflecting both stronger recent outturns and the assumption that a larger share of displaced Ukrainians will stay permanently.

Participation and employment rates being generally higher in 2025 than projected in the 2024 Ageing Report, the labour market starting position is more favourable (see Table 4). Revisions for the base year resonate in the projections, with, for most countries, a larger increase in overall participation and employment rates than previously projected. Revisions in employment are predominantly driven by the revisions in the population projections compared with EUROPOP2023.

Compared with the 2024 Ageing Report, average GDP growth is 0.2 pps lower in the EU in 2026-2070 (see Table 5), stemming from lower hourly labour productivity. Growth in the number of hours worked is similar. The largest downward revisions concern Estonia, Italy and Hungary, the largest upward revisions are for Malta, Cyprus and Poland.

([1]) The comparison is based on 2070, which was the end-year of the 2024 Ageing Report projections.

Table 2: **Population projections: 2027 Ageing Report and changes compared to 2024 Ageing Report**

	2027 Ageing Report									2027 Ageing Report - 2024 Ageing Report									
	Total population (million)			Old-age dependency ratio (%)[1]			Economic dependency ratio (%)[2]			Total population (thousand)			Old-age dependency ratio (pps)			Economic dependency ratio (pps)			
	2025	2080	% change	2025	2080	change (pps)	2025	2080	change (pps)	2025	2070	difference in % change[3]	2025	2070	difference in change (pps)	2025	2070	difference in change (pps)	
BE	11.9	12.6	6%	35.4	58.8	23.4	46.6	74.4	27.8	60	-80	-1%	-0.2	-0.1	0.1	-0.7	0.2	0.9	BE
BG	6.4	4.7	-27%	42.5	56.9	14.4	51.1	70.4	19.3	-407	-441	-8%	4.7	-3.5	-8.2	4.2	-4.9	-9.1	BG
CZ	10.9	9.9	-10%	35.7	58.3	22.6	39.7	64.5	24.7	-88	-526	-5%	0.5	3.0	2.5	-2.4	1.4	3.8	CZ
DK	6.0	6.2	4%	36.4	61.0	24.6	40.2	55.6	15.4	20	68	1%	-0.3	-0.1	0.2	-2.0	-4.8	-2.8	DK
DE	83.5	76.3	-9%	39.3	58.0	18.7	44.1	64.3	20.2	-1,720	-7,082	-8%	0.3	0.5	0.2	-1.2	-1.4	-0.2	DE
EE	1.4	1.2	-15%	36.6	65.7	29.1	37.5	63.8	26.3	-9	-115	-9%	0.4	3.2	2.8	-1.8	3.2	5.0	EE
IE	5.5	6.5	18%	26.8	67.2	40.4	29.6	72.8	43.2	211	489	8%	-0.5	4.9	5.4	-2.0	2.0	4.1	IE
EL	10.4	7.6	-26%	41.3	69.3	28.0	55.3	79.1	23.8	72	228	3%	-0.1	0.5	0.7	-2.7	-2.2	0.5	EL
ES	49.3	51.6	5%	34.3	69.7	35.4	45.5	86.5	41.0	631	4,702	10%	-0.9	-0.9	0.0	-1.9	1.6	3.5	ES
FR	69.0	69.0	0%	39.8	63.6	23.8	50.7	75.1	24.3	226	-144	0%	-0.3	0.7	1.0	-1.4	-0.9	0.5	FR
HR	3.9	3.0	-23%	40.6	63.2	22.6	52.8	78.7	25.9	76	101	3%	-1.0	-2.6	-1.6	-2.4	-4.1	-1.7	HR
IT	58.9	47.9	-19%	42.8	76.1	33.4	59.8	90.0	30.2	18	-3,430	-6%	0.0	4.1	4.1	-2.3	4.1	6.4	IT
CY	1.0	1.1	12%	30.0	73.2	43.1	33.6	78.0	44.3	47	139	14%	1.6	14.6	13.0	0.1	14.0	13.8	CY
LV	1.9	1.3	-30%	38.6	66.1	27.6	42.4	75.9	33.5	-2	94	7%	0.1	1.5	1.4	-3.2	-2.8	0.4	LV
LT	2.9	2.1	-28%	35.3	76.8	41.5	39.1	84.3	45.3	37	190	9%	-0.4	0.8	1.2	-2.0	-6.0	-4.0	LT
LU	0.7	1.0	41%	24.1	59.9	35.7	31.2	75.7	44.4	-6	-13	-1%	-0.1	-3.3	-3.3	-0.3	-7.2	-6.9	LU
HU	9.5	7.6	-20%	35.2	56.8	21.6	40.5	65.4	24.9	-119	-1,162	-13%	0.0	0.3	0.3	-0.5	1.1	1.6	HU
MT	0.6	0.8	31%	28.2	65.9	37.8	32.0	71.3	39.3	21	-45	-6%	-2.9	-6.1	-3.2	-4.0	-11.9	-7.9	MT
NL	18.1	19.2	6%	35.9	58.2	22.3	38.1	57.0	18.9	1	452	2%	-0.1	-3.6	-3.5	-1.6	-3.7	-2.1	NL
AT	9.2	9.1	-1%	33.9	61.4	27.6	41.6	71.5	29.9	90	-290	-3%	-0.3	0.9	1.2	-0.9	-0.1	0.7	AT
PL	37.5	27.6	-26%	35.4	68.9	33.6	42.2	83.2	40.9	-838	-2,641	-8%	0.6	1.3	0.7	0.1	-1.2	-1.3	PL
PT	10.8	9.3	-14%	42.3	76.7	34.5	48.6	83.1	34.4	449	725	8%	-0.9	9.5	10.4	-2.6	8.9	11.5	PT
RO	19.0	15.0	-21%	34.8	60.0	25.3	49.3	80.2	30.8	248	537	4%	-0.6	-0.5	0.2	-0.1	-2.5	-2.4	RO
SI	2.1	2.0	-9%	38.5	61.7	23.3	46.6	69.2	22.6	12	-10	0%	-0.3	1.0	1.3	-1.0	-0.4	0.7	SI
SK	5.5	4.3	-22%	31.0	61.5	30.4	37.5	67.4	30.0	31	-263	-5%	0.0	0.6	0.6	-0.8	-0.3	0.6	SK
FI	5.6	5.3	-6%	42.2	67.9	25.7	51.1	76.7	25.6	4	194	4%	-0.3	-2.0	-1.6	0.2	-0.3	-0.5	FI
SE	10.6	11.8	11%	37.1	59.3	22.2	40.3	60.1	19.7	-142	-1,141	-9%	0.5	3.2	2.8	-0.7	2.5	3.2	SE
NO	5.6	6.3	13%	32.5	60.8	28.3	35.7	64.4	28.7	90	-199	-3%	-0.6	0.8	1.3	-1.2	-1.7	-0.5	NO
EA	358.7	335.8	-6%	38.6	65.0	26.4	47.8	74.8	27.0	-158	-4,599	-1%	-0.1	0.9	1.0	-1.5	0.3	1.7	EA
EU	452.2	413.9	-8%	38.0	64.5	26.5	46.7	74.3	27.6	-1,076	-9,465	-2%	0.0	1.0	1.0	-1.2	0.1	1.3	EU

The comparison with the 2024 Ageing Report is based on 2025-2070 since the projection period ended in 2070 in the 2024 Ageing Report.
(1) (population 65+) / (population 20-64y).
(2) (inactive population 65+) / (employment 20-64y).
(3) 2070 difference as % of 2070 population according to EUROPOP2023 (2024 Ageing Report).

Source: European Commission, EPC.

Table 3: **Population assumptions: 2027 Ageing Report and changes compared to 2024 Ageing Report**

	2027 Ageing Report												2027 Ageing Report - 2024 Ageing Report											
	Fertility rate (live births/woman)			Life expectancy at birth (y)						Net migration ('000)			Fertility rate (live births/woman)			Life expectancy at birth (y)						Net migration ('000)			
				men			women									men			women						
	2025	2080	avg 2025-80	2025	2080	change 2025-80	2025	2080	change 2025-80	2025	2080	avg 2025-80[1]	2025	2070	change in avg 2025-70	2025	2070	diff in change 2025-70	2025	2070	diff in change 2025-70	2025	2070	avg 2025-2070[1]	
BE	1.44	1.57	1.53	80.4	86.9	6.5	84.5	90.3	5.8	52	29	0.3%	-0.1	-0.1	-0.1	0.4	-0.7	-1.1	-0.2	-1.3	-1.1	13	1	0.0%	BE
BG	1.64	1.72	1.74	72.4	82.1	9.7	79.6	87.4	7.8	22	14	0.2%	0.1	0.0	0.1	0.4	-2.7	-3.1	0.6	-1.8	-2.4	27	-3	0.0%	BG
CZ	1.27	1.62	1.57	77.2	84.9	7.7	83.1	89.3	6.2	42	28	0.3%	-0.5	-0.1	-0.2	0.3	-1.4	-1.7	0.5	-1.1	-1.6	58	3	0.1%	CZ
DK	1.51	1.61	1.59	80.3	86.7	6.4	84.0	89.9	5.9	32	15	0.3%	-0.2	-0.1	-0.1	0.2	-0.9	-1.1	-0.1	-1.3	-1.2	18	3	0.1%	DK
DE	1.31	1.53	1.47	79.0	86.0	7.0	83.6	89.7	6.1	277	225	0.3%	-0.2	-0.1	-0.1	-0.3	-1.4	-1.1	-0.4	-1.5	-1.1	-78	-12	0.0%	DE
EE	1.12	1.51	1.42	75.2	84.0	8.8	83.5	89.8	6.3	1	4	0.3%	-0.5	-0.2	-0.3	0.3	-1.8	-2.1	0.0	-1.2	-1.2	0	0	0.0%	EE
IE	1.50	1.59	1.57	81.5	87.4	5.9	84.8	90.4	5.6	70	21	0.4%	-0.1	-0.1	-0.1	0.5	-0.6	-1.1	0.0	-1.2	-1.2	54	10	0.2%	IE
EL	1.20	1.45	1.36	79.5	86.4	6.9	84.5	90.1	5.6	42	31	0.3%	-0.2	-0.1	-0.1	0.0	-1.4	-1.4	-0.2	-1.4	-1.2	46	10	0.2%	EL
ES	1.11	1.34	1.23	81.5	87.5	6.0	86.6	91.4	4.8	568	247	0.6%	-0.1	-0.1	-0.1	0.1	-0.7	-0.8	-0.4	-1.0	-0.6	244	74	0.2%	ES
FR	1.57	1.70	1.70	80.3	87.0	6.7	85.9	91.2	5.3	175	128	0.2%	-0.2	-0.1	-0.1	0.1	-0.9	-1.0	-0.3	-1.0	-0.7	77	28	0.1%	FR
HR	1.48	1.57	1.55	76.1	84.2	8.1	81.9	88.4	6.5	20	11	0.2%	0.0	0.0	0.0	0.5	-1.6	-2.1	-0.1	-1.8	-1.7	21	0	0.0%	HR
IT	1.14	1.39	1.29	81.7	87.4	5.7	85.8	90.9	5.1	296	209	0.4%	-0.1	-0.1	-0.1	-0.1	-0.7	-0.6	-0.3	-1.1	-0.8	65	-25	0.0%	IT
CY	1.31	1.48	1.42	81.6	87.3	5.7	85.7	90.5	4.8	14	6	0.6%	-0.1	-0.1	0.0	0.5	-0.6	-1.1	0.6	-0.7	-1.3	12	4	0.5%	CY
LV	1.12	1.52	1.43	71.6	81.9	10.3	81.3	88.6	7.3	-4	6	0.2%	-0.4	-0.2	-0.2	0.5	-2.6	-3.1	0.9	-1.2	-2.1	3	4	0.3%	LV
LT	1.03	1.41	1.29	73.2	82.8	9.6	81.7	88.7	7.0	16	14	0.4%	-0.4	-0.3	-0.3	1.4	-1.9	-3.3	0.2	-1.5	-1.7	19	8	0.4%	LT
LU	1.25	1.44	1.36	81.1	87.2	6.1	85.6	90.9	5.3	7	3	0.6%	-0.2	-0.1	-0.1	0.3	-0.9	-1.2	0.3	-0.9	-1.2	-2	-1	0.0%	LU
HU	1.30	1.59	1.54	73.8	82.9	9.1	80.0	87.6	7.6	2	24	0.2%	-0.3	-0.1	-0.2	0.4	-2.5	-2.9	-0.2	-2.4	-2.2	-17	-3	0.0%	HU
MT	1.01	1.31	1.17	81.3	87.2	5.9	84.9	90.4	5.5	11	4	0.8%	-0.2	-0.2	-0.2	0.2	-0.9	-1.1	0.1	-1.4	-1.5	1	1	-0.1%	MT
NL	1.41	1.56	1.51	80.6	86.7	6.1	83.4	89.5	6.1	95	47	0.3%	-0.1	-0.1	-0.1	-0.2	-1.1	-0.9	-0.6	-1.7	-1.1	27	9	0.1%	NL
AT	1.29	1.49	1.42	79.9	86.5	6.6	84.4	90.1	5.7	33	30	0.4%	-0.2	-0.1	-0.1	-0.1	-1.1	-1.0	-0.2	-1.2	-1.0	9	-3	0.0%	AT
PL	1.09	1.42	1.31	75.0	84.0	9.0	82.3	89.2	6.9	95	105	0.2%	-0.3	-0.2	-0.2	0.6	-1.9	-2.5	0.0	-1.6	-1.6	166	24	0.1%	PL
PT	1.45	1.50	1.45	79.8	86.6	6.8	85.3	90.6	5.3	155	38	0.4%	0.0	-0.1	0.0	-1.4	-1.6	-0.2	0.0	-0.8	-0.8	139	1	0.2%	PT
RO	1.29	1.65	1.62	73.0	82.6	9.6	80.4	87.9	7.5	71	47	0.2%	-0.5	-0.1	-0.2	0.8	-2.6	-3.4	0.7	-2.1	-2.8	108	15	0.2%	RO
SI	1.52	1.59	1.57	79.6	86.3	6.7	84.8	90.3	5.5	8	7	0.3%	-0.1	-0.1	-0.1	0.5	-0.9	-1.4	-0.2	-1.2	-1.0	2	1	0.0%	SI
SK	1.33	1.58	1.54	75.3	84.0	8.7	81.8	88.7	6.9	2	9	0.1%	-0.3	-0.1	-0.1	0.8	-1.8	-2.6	0.4	-1.7	-2.1	8	0	0.0%	SK
FI	1.31	1.45	1.38	79.7	86.4	6.7	84.9	90.4	5.5	34	19	0.4%	-0.1	-0.1	-0.1	0.1	-0.9	-1.0	-0.1	-1.0	-0.9	18	6	0.1%	FI
SE	1.42	1.59	1.55	82.4	87.8	5.4	85.4	90.7	5.3	13	33	0.3%	-0.3	-0.2	-0.2	0.7	-0.2	-0.9	-0.1	-1.0	-0.9	-36	3	0.0%	SE
NO	1.48	1.53	1.48	81.7	87.4	5.7	84.9	90.4	5.5	23	22	0.4%	0.0	-0.1	-0.1	-0.5	-1.0	-0.5	-0.5	-1.4	-0.9	8	-4	0.0%	NO
EA	1.32	1.52	1.46	80.0	86.6	6.6	84.8	90.4	5.6	1,894	1,101	0.3%	-0.2	-0.1	-0.1	-0.2	-1.1	-0.9	-0.4	-1.3	-0.8	706	112	0.1%	EA
EU	1.30	1.52	1.46	79.1	86.1	7.0	84.3	90.1	5.8	2,148	1,353	0.3%	-0.2	-0.1	-0.1	0.1	-1.3	-1.4	-0.2	-1.4	-1.2	1,002	157	0.1%	EU

(1) Net migration as % of total population in the previous year.

Source: European Commission, EPC.

Table 4: **Labour force projections: 2027 Ageing Report and changes compared to 2024 Ageing Report**

	2027 Ageing Report															2027 Ageing Report - 2024 Ageing Report															
	Employment rate (%)						Participation rate (%)						Unemployment rate (%)			Employment rate (pps)						Participation rate (pps)						Unemployment rate (pps)			
	(20-64y)			(55-64y)			(20-64y)			(55-64y)			(20-64y)			(20-64y)			(55-64y)			(20-64y)			(55-64y)			(20-64y)			
	2025	2080	pps change	2025	2080	pps change	2025	2080	pps change	2025	2080	pps change	2025	2080	pps change	2025	2070	pps diff	2025	2070	pps diff	2025	2070	pps diff	2025	2070	pps diff	2025	2070	pps diff	
BE	72.9	74.9	2.0	61.5	66.3	4.8	77.4	78.9	1.5	64.1	68.8	4.7	5.9	5.1	-0.8	-0.3	-1.2	-0.8	1.9	-1.1	-3.0	0.1	-1.5	-1.6	2.2	-1.4	-3.6	0.6	-0.3	-0.9	BE
BG	77.0	77.6	0.6	71.3	74.2	2.9	79.8	81.8	2.0	73.5	77.5	4.0	3.5	5.1	1.7	2.0	0.8	-1.2	8.4	3.8	-4.6	1.8	1.2	-0.6	8.4	4.2	-4.3	-0.4	0.4	0.8	BG
CZ	83.1	83.6	0.5	78.4	83.5	5.1	85.3	86.2	0.9	80.3	85.8	5.5	2.6	3.1	0.4	3.2	2.1	-1.1	9.8	3.5	-6.3	3.4	2.9	-0.5	10.1	4.2	-5.9	0.1	0.8	0.7	CZ
DK	79.9	88.2	8.3	75.1	87.8	12.7	84.8	90.7	6.0	78.0	89.4	11.5	5.8	2.8	-3.0	-0.6	3.2	3.8	2.1	2.8	0.7	0.7	2.5	1.8	2.6	2.0	-0.6	1.5	-0.9	-2.4	DK
DE	81.1	83.8	2.6	75.3	77.9	2.6	84.3	86.8	2.5	77.3	79.8	2.5	3.8	3.5	-0.3	0.8	1.9	1.1	4.0	3.0	-1.0	1.5	1.7	0.2	4.0	2.3	-1.7	0.7	-0.3	-1.0	DE
EE	81.6	87.0	5.3	76.9	84.5	7.6	87.9	92.2	4.3	81.0	88.1	7.1	7.1	5.6	-1.5	0.3	0.3	0.0	7.4	-1.4	-8.9	1.7	0.1	-1.6	8.2	-2.3	-10.5	1.5	-0.2	-1.8	EE
IE	80.2	84.5	4.3	69.5	79.3	9.9	83.7	88.3	4.6	71.8	82.2	10.4	4.2	4.3	0.1	1.0	3.1	2.1	3.0	8.2	5.1	1.2	2.5	1.3	3.1	7.8	4.7	0.2	-0.9	-1.0	IE
EL	70.5	75.2	4.7	59.4	73.1	13.7	77.3	80.5	3.1	63.8	77.0	13.2	8.9	6.5	-2.3	3.0	-0.1	-3.0	4.1	-1.7	-5.8	1.5	0.3	-1.2	3.7	-1.3	-5.0	-2.1	0.4	2.5	EL
ES	72.4	76.1	3.7	62.4	71.2	8.9	80.7	82.1	1.3	69.3	76.8	7.4	10.3	7.3	-3.0	1.7	-1.0	-2.7	2.3	-1.9	-4.3	1.0	0.2	-0.7	2.3	-0.5	-2.8	-1.0	1.5	2.5	ES
FR	75.5	80.1	4.6	61.9	71.1	9.1	81.4	84.9	3.5	65.4	74.1	8.7	7.2	5.6	-1.6	1.1	0.8	-0.3	3.9	-0.3	-4.1	1.3	0.4	-0.9	3.7	-1.2	-4.9	0.2	-0.5	-0.7	FR
HR	74.3	77.2	2.8	54.7	65.4	10.7	77.9	81.6	3.7	56.7	68.3	11.7	4.5	5.5	0.9	1.8	0.9	-0.8	3.2	3.0	-0.2	1.0	0.4	-0.6	2.9	3.0	0.1	-1.1	-0.7	0.4	HR
IT	67.4	73.7	6.3	60.9	78.2	17.3	71.8	78.8	7.0	63.2	81.2	18.0	6.1	6.5	0.4	2.0	1.7	-0.3	3.0	3.3	0.3	0.8	2.0	1.2	2.3	3.3	1.0	-1.8	0.2	2.0	IT
CY	80.7	83.5	2.8	71.0	82.5	11.6	84.4	88.2	3.8	72.9	85.5	12.5	4.4	5.3	0.9	2.6	2.1	-0.5	9.5	7.4	-2.0	0.9	1.4	0.5	8.3	6.6	-1.6	-2.1	-0.9	1.2	CY
LV	78.4	80.8	2.4	73.8	76.1	2.3	84.4	86.2	1.8	78.5	80.4	1.9	7.1	6.3	-0.8	1.2	2.5	1.3	6.3	5.8	-0.5	2.1	2.9	0.8	7.4	6.4	-1.0	0.8	0.1	-0.7	LV
LT	79.9	83.7	3.8	70.0	74.9	4.9	85.9	89.1	3.2	76.6	80.9	4.4	7.0	6.0	-1.0	1.0	3.9	2.8	2.4	5.1	2.7	1.9	3.8	1.9	4.0	5.8	1.8	0.9	-0.3	-1.2	LT
LU	73.8	76.6	2.8	49.5	57.1	7.6	78.6	79.4	0.8	51.8	58.8	6.9	6.1	3.5	-2.6	-1.2	1.9	3.1	3.3	7.3	4.0	0.0	0.9	0.9	3.2	6.0	2.8	1.5	-1.4	-2.9	LU
HU	81.0	83.1	2.0	72.2	77.0	4.8	84.7	86.9	2.2	74.4	79.5	5.1	4.3	4.4	0.1	-0.4	-0.7	-0.3	4.1	1.8	-2.3	0.3	0.3	0.0	4.2	2.1	-2.1	0.8	1.1	0.3	HU
MT	83.2	87.5	4.3	60.9	74.7	13.8	86.1	89.4	3.3	62.9	76.3	13.4	3.3	2.1	-1.2	0.2	4.2	4.0	3.9	5.2	1.2	0.6	2.5	1.8	4.9	4.9	-0.1	0.4	-2.1	-2.5	MT
NL	83.5	89.0	5.6	75.8	82.9	7.0	86.3	90.9	4.6	77.6	84.1	6.5	3.3	2.0	-1.3	0.5	1.2	0.7	4.5	1.3	-3.2	0.7	0.4	-0.3	4.1	-0.1	-4.2	0.2	-1.0	-1.1	NL
AT	77.4	82.1	4.6	60.3	69.7	9.4	81.9	85.2	3.3	62.8	71.7	8.9	5.5	3.7	-1.8	0.1	0.8	0.7	3.9	3.3	-0.6	0.8	0.4	-0.3	4.3	3.1	-1.2	0.8	-0.5	-1.3	AT
PL	78.9	79.6	0.7	60.2	63.6	3.4	81.4	82.2	0.8	61.5	65.0	3.5	3.0	3.1	0.1	1.0	2.7	1.8	2.8	4.6	1.8	1.3	3.1	1.8	3.1	5.0	1.9	0.4	0.3	-0.1	PL
PT	79.6	82.6	3.0	69.4	79.0	9.6	84.6	88.3	3.7	73.1	83.6	10.5	5.9	6.4	0.5	1.5	1.6	0.1	3.3	1.6	-1.7	1.7	2.0	0.2	3.6	2.1	-1.6	0.2	0.3	0.2	PT
RO	69.1	70.3	1.3	57.2	64.2	7.0	73.2	74.2	1.0	59.4	66.5	7.1	5.7	5.3	-0.4	-0.5	0.8	1.2	2.7	4.1	1.3	0.2	0.5	0.3	3.1	4.1	1.0	0.9	-0.4	-1.3	RO
SI	79.0	82.4	3.4	58.0	76.0	18.0	81.9	86.6	4.7	59.7	79.2	19.5	3.6	4.9	1.3	0.3	0.6	0.3	-0.2	0.6	0.8	-0.3	0.2	0.5	-1.1	-0.6	0.4	-0.7	-0.5	0.2	SI
SK	78.0	80.9	2.8	66.1	80.6	14.5	82.5	86.1	3.6	69.0	84.4	15.4	5.4	6.1	0.7	0.3	0.3	0.0	4.2	-1.1	-5.3	0.6	0.5	-0.1	4.6	-0.8	-5.4	0.3	0.2	-0.1	SK
FI	76.3	81.3	5.0	72.2	78.6	6.4	83.8	86.0	2.2	79.1	83.1	4.1	9.0	5.5	-3.5	-1.8	0.2	2.0	4.9	-0.6	-5.5	0.8	-0.3	-1.1	6.8	-2.0	-8.8	3.1	-0.6	-3.6	FI
SE	81.8	85.6	3.8	78.7	84.9	6.2	88.5	90.4	1.8	84.0	88.9	4.8	7.6	5.2	-2.3	-0.2	1.1	1.4	2.9	1.9	-1.0	0.9	1.0	0.1	4.0	1.9	-2.1	1.3	-0.1	-1.4	SE
NO	79.4	82.8	3.3	72.5	77.2	4.7	82.3	85.2	2.9	73.9	78.5	4.5	3.4	2.9	-0.6	-0.8	0.6	1.4	1.5	4.8	3.3	-0.7	0.5	1.2	1.7	4.9	3.2	0.2	-0.1	-0.3	NO
EA	75.9	80.1	4.2	66.9	75.2	8.2	80.9	84.4	3.5	70.3	78.3	8.0	6.2	5.2	-1.0	1.4	1.1	-0.3	4.0	1.4	-2.6	1.4	1.2	-0.2	4.0	1.2	-2.7	-0.1	0.0	0.1	EA
EU	76.4	80.2	3.8	67.1	74.9	7.8	81.1	84.3	3.3	70.1	77.8	7.7	5.8	4.9	-0.9	1.3	1.3	0.0	4.2	2.1	-2.2	1.4	1.4	0.0	4.2	2.0	-2.2	0.0	0.0	0.0	EU

Source: European Commission, EPC.

Table 5: **GDP projections: 2027 Ageing Report and changes compared to 2024 Ageing Report**

	2027 Ageing Report									2027 Ageing Report - 2024 Ageing Report									
	Average real GDP growth (2026-2080)									Average real GDP growth (2026-2070; pps difference)									
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)						Labour productivity (GDP/hour worked)			Labour input (Total hours worked)					
			contribution from			contribution from						contribution from			contribution from				
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee	
	(1) = (2)+(5)	(2) = (3)+(4)	(3)	(4)	(5) = (6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(1) = (2)+(5)	(2) = (3)+(4)	(3)	(4)	(5) = (6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	
BE	**1.1**	1.1	0.7	0.4	0.0	0.1	-0.2	0.0	0.0	**-0.1**	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	**BE**
BG	**1.4**	2.0	1.1	0.9	-0.6	-0.6	-0.2	0.1	0.0	**0.1**	0.0	-0.2	0.2	0.1	0.0	0.0	0.1	0.0	**BG**
CZ	**1.1**	1.4	0.9	0.5	-0.3	-0.2	-0.2	0.0	0.0	**-0.4**	-0.3	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	**CZ**
DK	**1.4**	1.3	0.9	0.4	0.1	0.1	-0.2	0.2	0.0	**0.2**	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	**DK**
DE	**0.9**	1.2	0.8	0.4	-0.2	-0.2	-0.2	0.1	0.0	**-0.3**	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.0	**DE**
EE	**0.9**	1.2	0.7	0.5	-0.3	-0.3	-0.2	0.1	0.0	**-0.7**	-0.6	-0.4	-0.1	-0.2	-0.2	0.0	0.0	0.0	**EE**
IE	**1.7**	1.6	1.1	0.5	0.1	0.3	-0.2	0.0	0.0	**0.2**	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	**IE**
EL	**0.8**	1.4	0.9	0.5	-0.6	-0.5	-0.2	0.2	0.0	**-0.3**	-0.3	-0.2	-0.1	0.0	0.1	0.0	-0.1	0.0	**EL**
ES	**1.3**	1.4	0.9	0.4	-0.1	0.1	-0.2	0.1	0.0	**0.1**	-0.1	0.0	-0.1	0.2	0.2	0.0	-0.1	0.0	**ES**
FR	**1.0**	1.1	0.7	0.4	0.0	0.0	-0.2	0.1	0.0	**-0.1**	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	**FR**
HR	**1.1**	1.6	0.9	0.7	-0.5	-0.5	-0.2	0.1	0.0	**-0.2**	-0.3	-0.3	0.1	0.0	0.0	0.0	0.0	0.0	**HR**
IT	**0.7**	1.0	0.7	0.4	-0.3	-0.4	-0.2	0.3	0.0	**-0.5**	-0.3	-0.2	-0.1	-0.2	-0.1	0.0	-0.1	0.0	**IT**
CY	**1.6**	1.6	0.9	0.8	0.0	0.2	-0.2	0.0	0.0	**0.3**	0.2	0.0	0.2	0.0	0.2	0.0	-0.1	0.0	**CY**
LV	**1.1**	1.9	1.1	0.8	-0.8	-0.7	-0.2	0.0	0.0	**0.2**	-0.1	-0.1	0.0	0.3	0.2	0.1	0.1	0.0	**LV**
LT	**0.9**	1.8	1.0	0.8	-0.8	-0.6	-0.2	0.0	0.0	**0.1**	-0.1	-0.2	0.1	0.3	0.2	0.0	0.1	0.0	**LT**
LU	**1.3**	1.0	0.6	0.3	0.3	0.6	-0.2	-0.1	0.0	**-0.3**	-0.2	-0.1	-0.1	-0.1	0.0	0.1	-0.1	0.0	**LU**
HU	**1.1**	1.6	1.0	0.6	-0.5	-0.4	-0.2	0.1	0.0	**-0.5**	-0.4	-0.3	-0.1	-0.2	-0.3	0.0	0.0	0.0	**HU**
MT	**2.3**	2.0	1.0	0.9	0.3	0.5	-0.2	0.0	0.0	**0.7**	0.6	0.1	0.5	0.1	-0.2	0.1	0.2	0.1	**MT**
NL	**1.2**	1.1	0.7	0.4	0.1	0.1	-0.2	0.1	0.0	**0.0**	-0.1	-0.1	0.0	0.1	0.1	0.0	0.0	0.0	**NL**
AT	**0.9**	1.1	0.7	0.4	-0.1	0.0	-0.2	0.1	0.0	**-0.3**	-0.3	-0.2	-0.1	0.0	-0.1	0.0	0.0	0.0	**AT**
PL	**1.5**	2.4	1.4	1.0	-0.9	-0.5	-0.2	-0.1	0.0	**0.3**	0.4	0.1	0.3	-0.1	-0.1	0.1	0.1	-0.1	**PL**
PT	**0.8**	1.3	0.9	0.4	-0.5	-0.3	-0.3	0.1	0.0	**-0.4**	-0.3	-0.2	-0.1	0.0	0.1	0.0	0.0	0.0	**PT**
RO	**1.1**	1.7	1.0	0.8	-0.6	-0.4	-0.2	0.0	0.0	**-0.4**	-0.5	-0.5	0.0	0.2	0.1	0.1	0.0	0.0	**RO**
SI	**1.5**	1.7	1.1	0.7	-0.2	-0.2	-0.2	0.1	0.0	**0.1**	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	**SI**
SK	**1.1**	1.7	1.0	0.7	-0.6	-0.4	-0.2	0.1	0.0	**-0.2**	-0.2	-0.2	0.0	-0.1	-0.1	0.0	0.0	0.0	**SK**
FI	**1.0**	1.1	0.7	0.4	-0.2	-0.1	-0.2	0.1	0.0	**-0.1**	-0.2	-0.1	-0.1	0.2	0.1	0.0	0.1	0.0	**FI**
SE	**1.4**	1.2	0.8	0.4	0.2	0.2	-0.1	0.1	0.0	**-0.2**	0.0	0.0	0.0	-0.1	-0.2	0.0	0.1	0.0	**SE**
NO	**1.2**	1.1	0.8	0.4	0.1	0.2	-0.2	0.0	0.0	**-0.2**	-0.1	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	**NO**
EA	**1.0**	1.2	0.8	0.4	-0.2	-0.1	-0.2	0.1	0.0	**-0.2**	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	**EA**
EU	**1.0**	1.3	0.8	0.5	-0.3	-0.2	-0.2	0.1	0.0	**-0.2**	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	**EU**

GDP growth is potential growth, which coincides with actual growth as of 2031 in the projections (see Part I – Chapter 3).

Source: European Commission, EPC.

Part I

Underlying assumptions

1. DEMOGRAPHIC PROJECTIONS

1.1. INTRODUCTION

Demography – population change – is shaped by three fundamental factors: births (+), deaths (-), and net migration (+/-). Hence, dynamics in fertility, mortality and migration drive the ageing of societies, reshaping economic and social structures. This chapter outlines the key demographic assumptions and projections underpinning the 2027 Ageing Report, based on EUROPOP2025 ([2]), Eurostat's latest 2025-based population projections published in April 2026 covering the 27 EU Member States and, amongst others, Norway.

EUROPOP2025 applies a 'partial convergence' approach, meaning that the country-specific key demographic determinants converge in the very long term towards common values. Setting the convergence point far into the future – even beyond the endpoint of the projections – has the advantage of taking due account of recent country-specific trends at the start, while assuming that Member States' demographic drivers will converge over time. These demographic determinants are the fertility rate (impacting the number of births), the mortality rate (impacting the number of deaths and life expectancy) and net migration (impacting the population growth beyond the 'natural' growth due to births and deaths).

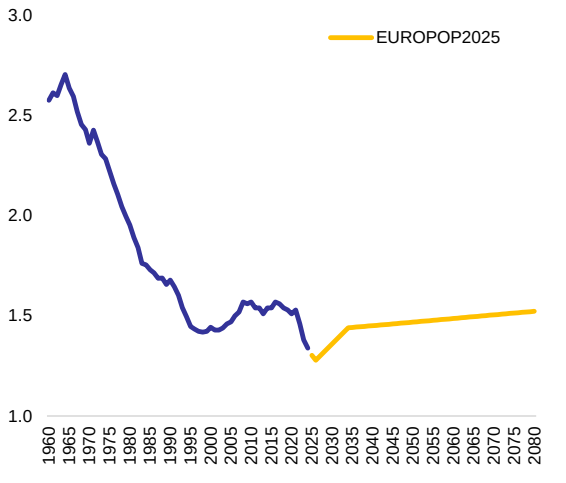
The projection methodology assumes that fertility and mortality rates converge to those of the 'best performing' Member States. As a result, fertility rates would rise in all Member States between 2025 and 2080, faster in the countries that currently have the lowest rates. Similarly, life expectancy follows an upward convergence trajectory, with longevity increasing relatively faster in countries with currently the lowest levels of life expectancy. Net migration is estimated through separate emigration and immigration flows, based on past trends, the latest empirical evidence, long-term partial convergence and intra-EU flows consistency. Moreover, when the working-age population shrinks, additional 'partially compensating' immigration is assumed.

1.2. FERTILITY RATES

Total fertility rate is assumed to rise in all Member States over the projection horizon but to remain persistently low, well below the natural replacement rate, recovering from 1.3 to 1.5 on average in the EU.

Total fertility rates (TFR([3])) declined sharply in EU Member States following the post-war 'baby boom'. From an EU average of 2.6 in 1960, the number of live births per woman declined steadily in nearly all countries, to less than two children on average in 1980, thus below the natural replacement rate of 2.1 (see Table I.1.1). By the mid-1990s, fertility rates fell below the natural replacement rate in all Member States. The total fertility rate in the EU seemed to have reached its nadir by the turn of the century, hovering around 1.5 for about two decades (the

Graph I.1.1: **Total fertility rate, EU, 1960-2080**



Source: Eurostat, see below.

([2]) For the methodology, see Eurostat (2026).

([3]) Fertility rates reflect the average number of children a woman would have, should she, at each childbearing age, have the fertility rates of the year under review. This number is obtained by summing the fertility rates by age and is called the Total Fertility Rate or TFR.

average masking temporary increases in a number of Member States) but total fertility rates decreased again in nearly all Member States in the last 10 years and have eventually decreased to below 1.5 in all but three Member States. The EU average has plummeted to an all-time low of 1.3 in 2024.

Table I.1.1: **Past trends in total fertility rates 1960-2024**

	1960	1980	2000	2024	*1960-2024*	*2000-2024*
BE	2.54	1.68	1.67	1.44	*-1.10*	*-0.23*
BG	2.31	2.05	1.26	1.72	*-0.59*	*0.46*
CZ	2.09	2.08	1.15	1.36	*-0.73*	*0.21*
DK	2.57	1.55	1.77	1.47	*-1.10*	*-0.30*
DE	2.37	1.56	1.38	1.36	*-1.01*	*-0.02*
EE	1.98	2.02	1.36	1.18	*-0.80*	*-0.18*
IE	3.78	3.21	1.89	1.47	*-2.31*	*-0.42*
EL	2.23	2.23	1.25	1.24	*-0.99*	*-0.01*
ES	2.86	2.22	1.22	1.10	*-1.76*	*-0.12*
FR	2.73	1.95	1.89	1.61	*-1.12*	*-0.28*
HR	2.38	1.90	1.46	1.46	*-0.92*	*0.00*
IT	2.40	1.64	1.26	1.18	*-1.22*	*-0.08*
CY	3.51	2.48	1.64	1.38	*-2.13*	*-0.26*
LV	1.95	1.88	1.25	1.24	*-0.71*	*-0.01*
LT	2.60	1.99	1.39	1.11	*-1.49*	*-0.28*
LU	2.29	1.50	1.76	1.25	*-1.04*	*-0.51*
HU	2.02	1.91	1.32	1.41	*-0.61*	*0.09*
MT	3.62	1.99	1.68	1.01	*-2.61*	*-0.67*
NL	3.12	1.60	1.72	1.43	*-1.69*	*-0.29*
AT	2.69	1.65	1.36	1.31	*-1.38*	*-0.05*
PL	2.98	2.28	1.37	1.14	*-1.84*	*-0.23*
PT	3.16	2.25	1.55	1.41	*-1.75*	*-0.14*
RO	2.74	2.43	1.31	1.39	*-1.35*	*0.08*
SI	2.18	2.11	1.26	1.52	*-0.66*	*0.26*
SK	3.04	2.32	1.30	1.46	*-1.58*	*0.16*
FI	2.72	1.63	1.73	1.25	*-1.47*	*-0.48*
SE	2.20	1.68	1.54	1.43	*-0.77*	*-0.11*
NO	2.90	1.72	1.85	1.45	*-1.45*	*-0.40*
EA	2.58	1.83	1.47	1.35	*-1.23*	*-0.11*
EU	2.59	1.90	1.44	1.34	*-1.25*	*-0.10*

DE: time series does not include the former GDR until 1991. CY: 1980 value is from 1982; LV: 1960 based on UN data; RO: 1960 based on UN data; HR: 2000 value is from 2001.

Source: European Commission based on Eurostat data.

Table I.1.2: **Projection of total fertility rates, 2025-2080**

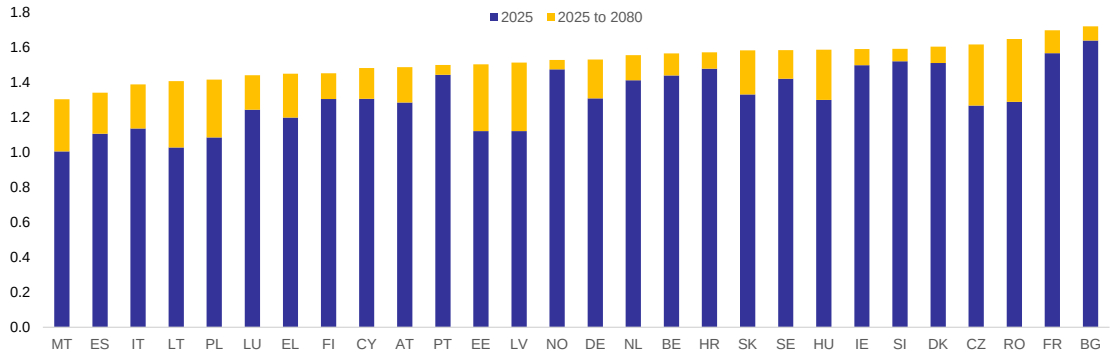
	2025	2040	2060	2080	*change 2025-2080*	*avg 2025-2080*
BE	1.44	1.53	1.55	1.57	*0.13*	*1.53*
BG	1.64	1.77	1.75	1.72	*0.08*	*1.74*
CZ	1.27	1.61	1.61	1.62	*0.35*	*1.57*
DK	1.51	1.59	1.60	1.61	*0.09*	*1.59*
DE	1.31	1.47	1.50	1.53	*0.22*	*1.47*
EE	1.12	1.43	1.47	1.51	*0.38*	*1.42*
IE	1.50	1.57	1.58	1.59	*0.09*	*1.57*
EL	1.20	1.34	1.40	1.45	*0.25*	*1.36*
ES	1.11	1.17	1.26	1.34	*0.24*	*1.23*
FR	1.57	1.73	1.72	1.70	*0.13*	*1.70*
HR	1.48	1.54	1.56	1.57	*0.09*	*1.55*
IT	1.14	1.25	1.32	1.39	*0.25*	*1.29*
CY	1.31	1.40	1.44	1.48	*0.18*	*1.42*
LV	1.12	1.44	1.48	1.52	*0.39*	*1.43*
LT	1.03	1.28	1.34	1.41	*0.38*	*1.29*
LU	1.25	1.33	1.39	1.44	*0.20*	*1.36*
HU	1.30	1.56	1.57	1.59	*0.29*	*1.54*
MT	1.01	1.11	1.21	1.31	*0.30*	*1.17*
NL	1.41	1.51	1.53	1.56	*0.14*	*1.51*
AT	1.29	1.40	1.45	1.49	*0.20*	*1.42*
PL	1.09	1.29	1.35	1.42	*0.33*	*1.31*
PT	1.45	1.42	1.46	1.50	*0.06*	*1.45*
RO	1.29	1.66	1.65	1.65	*0.36*	*1.62*
SI	1.52	1.57	1.58	1.59	*0.07*	*1.57*
SK	1.33	1.55	1.57	1.58	*0.25*	*1.54*
FI	1.31	1.35	1.40	1.45	*0.15*	*1.38*
SE	1.42	1.56	1.57	1.59	*0.16*	*1.55*
NO	1.48	1.47	1.50	1.53	*0.05*	*1.48*
EA	1.32	1.44	1.48	1.52	*0.20*	*1.46*
EU	1.30	1.45	1.49	1.52	*0.22*	*1.46*

Source: EUROPOP2025 (Eurostat).

Fertility assumptions for EUROPOP2025 are driven by two hypotheses: first, the current, very low fertility rates observed in most EU Member States are at least partially due to the deferment of births. This means that due to individual preferences, as well as uncertain conditions, persons delay having children. In addition, societal attitudes have shifted, and births at older ages have become more accepted. While some of the births that have not taken place in recent years may thus take place later, there is evidence that delaying births generally leads to a lower overall fertility rate, particularly in countries where mothers' age at first birth is high. The implications for the EUROPOP2025 round are that there is an expectation of some recovery of TFR on average, but that in the long run, fertility will remain relatively low.

The assumptions on future values of total fertility rates (TFR) are based on three components: a country-specific trend extrapolation covering the time period 2025 and 2026, a return to a mid-term value (average of last 5 observed years) between 2027 and 2034, and a partial convergence assumption from 2035 onwards. For EUROPOP2025, the ultimate convergence value – reached only in 2150 – is 1.64 live births per woman, derived from projecting TFR of the EU frontrunners in fertility development, notably Ireland, Sweden, France, Denmark, Finland, Belgium, and the Netherlands.

Graph I.1.2: **Total fertility rate projections, 2025-2080**



Source: EUROPOP2025 (Eurostat).

1.3. MORTALITY AND LIFE EXPECTANCY

Following the recovery from the impact of the COVID-19 pandemic, life expectancy at birth is assumed to increase by 7 and 6 years for men and women, respectively, and by around 5 years at the age of 65 for both sexes over the projection horizon for the EU as a whole.

Table I.1.3: **Past trends in life expectancy at birth, 1960-2024**

	Men						*Women*						
	1960	1980	2000	2024	*1960-2024 (1)*	*2000-2024*	1960	1980	2000	2024	*1960-2024 (1)*	*2000-2024*	
BE	66.8	69.9	74.6	80.3	*13.5*	*5.7*	72.8	76.7	81.0	84.4	*11.6*	*3.4*	BE
BG	67.5	68.4	68.4	72.2	*4.7*	*3.8*	71.1	73.9	75.0	79.5	*8.4*	*4.5*	BG
CZ	67.8	66.9	71.6	77.1	*9.3*	*5.5*	73.5	74.0	78.5	83.0	*9.5*	*4.5*	CZ
DK	70.4	71.2	74.5	80.2	*9.8*	*5.7*	74.4	77.3	79.2	83.9	*9.5*	*4.7*	DK
DE	66.5	69.6	75.1	78.9	*12.4*	*3.8*	71.7	76.2	81.2	83.5	*11.8*	*2.3*	DE
EE	64.7	64.2	65.6	75.1	*10.4*	*9.5*	73.1	74.3	76.4	83.4	*10.3*	*7.0*	EE
IE	68.1	70.1	74.0	81.4	*13.3*	*7.4*	71.9	75.6	79.2	84.7	*12.8*	*5.5*	IE
EL	67.3	73.0	75.9	79.4	*12.1*	*3.5*	72.4	77.5	81.3	84.4	*12.0*	*3.1*	EL
ES	67.4	72.3	75.8	81.4	*14.0*	*5.6*	72.2	78.4	82.8	86.5	*14.3*	*3.7*	ES
FR	66.9	70.2	75.3	80.2	*13.3*	*4.9*	73.6	78.4	83.0	85.8	*12.2*	*2.8*	FR
HR	:	:	70.9	76.0	*:*	*5.1*	:	:	78.1	81.8	*:*	*3.7*	HR
IT	67.2	70.6	76.9	81.6	*14.4*	*4.7*	72.3	77.4	82.8	85.7	*13.4*	*2.9*	IT
CY	:	72.3	75.4	81.5	*9.2*	*6.1*	:	77.0	80.1	85.6	*8.6*	*5.5*	CY
LV	65.2	63.6	65.0	71.4	*6.2*	*6.4*	72.4	74.2	76.1	81.2	*8.8*	*5.1*	LV
LT	64.9	65.4	66.7	73.0	*8.1*	*6.3*	71.4	75.4	77.4	81.6	*10.2*	*4.2*	LT
LU	66.5	70.0	74.6	81.0	*14.5*	*6.4*	72.2	75.6	81.3	85.5	*13.3*	*4.2*	LU
HU	65.9	65.5	67.5	73.7	*7.8*	*6.2*	70.2	72.8	76.2	79.9	*9.7*	*3.7*	HU
MT	66.5	68.0	76.3	81.2	*14.7*	*4.9*	70.5	72.8	80.5	84.8	*14.3*	*4.3*	MT
NL	71.5	72.7	75.6	80.5	*9.0*	*4.9*	75.5	79.3	80.7	83.3	*7.8*	*2.6*	NL
AT	66.2	69.0	75.2	79.8	*13.6*	*4.6*	72.7	76.1	81.2	84.3	*11.6*	*3.1*	AT
PL	64.9	66.9	69.6	74.8	*9.9*	*5.2*	70.6	75.4	78.0	82.2	*11.6*	*4.2*	PL
PT	61.1	67.9	73.3	79.7	*18.6*	*6.4*	66.7	74.9	80.4	85.2	*18.5*	*4.8*	PT
RO	:	66.6	67.7	72.8	*6.2*	*5.1*	:	71.9	74.8	80.3	*8.4*	*5.5*	RO
SI	66.1	67.4	72.2	79.5	*13.4*	*7.3*	72.0	75.2	79.9	84.7	*12.7*	*4.8*	SI
SK	67.9	66.7	69.2	75.2	*7.3*	*6.0*	72.7	74.4	77.5	81.7	*9.0*	*4.2*	SK
FI	65.5	69.2	74.2	79.6	*14.1*	*5.4*	72.5	78.0	81.2	84.8	*12.3*	*3.6*	FI
SE	71.2	72.8	77.4	82.3	*11.1*	*4.9*	74.9	79.0	82.0	85.3	*10.4*	*3.3*	SE
NO	71.6	72.4	76.0	81.6	*10.0*	*5.6*	76.0	79.3	81.5	84.8	*8.8*	*3.3*	NO
EA	66.9	70.2	75.0	79.9	*13.0*	*4.9*	72.3	77.1	81.6	84.7	*12.4*	*3.2*	EA
EU	66.8	69.6	73.9	79.0	*12.2*	*5.1*	72.2	76.5	80.7	84.2	*12.0*	*3.5*	EU

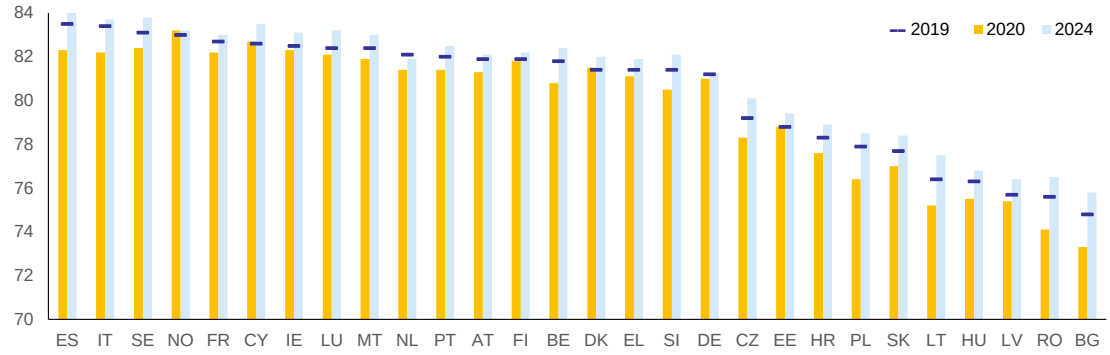
(1) 1980-2024 for CY and RO
HR: 2000 values are from 2001

Source: European Commission based on Eurostat data.

Life expectancy has been increasing substantially since 1960 in all EU Member States (see Table I.1.3). The average life expectancy at birth increased by around 12 years in the EU, from around 67 years in 1960 to 79 years in 2024 for men and from 72 to 84 years for women.

The COVID-19 pandemic had a massive impact on mortality leading to drops or stagnation of life expectancy in all Member States but the upward trend resumed afterwards and life expectancy at birth has recovered since, with the 2024 level reaching or exceeding the 2019 level in all but one Member State (the Netherlands). In this context, no specific adjustment to assumptions is made due to the effect of COVID-19.

Graph I.1.3: **Life expectancy at birth, 2019, 2020 & 2024 – impact of COVID-19 pandemic**



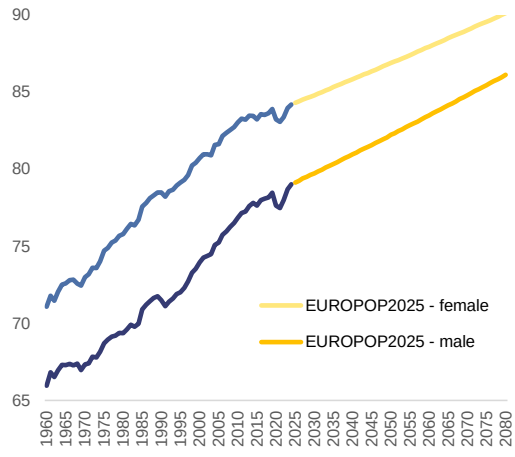
Source: Eurostat.

There is no consensus among demographers on very long-term trends, e.g. whether there is a natural biological limit to longevity, the impact of future medical breakthroughs or the long-term effect of public health programmes and societal behaviour such as the reduction of smoking rates or a higher/lower prevalence of obesity. On the one hand, most demographic projections assume that gains in life expectancy at birth will slow down compared with historical trends. This is because mortality rates at younger ages are already very low and future gains in life expectancy would require improvements in mortality rates at older ages, which statistically have a smaller impact on life expectancy at birth. On the other hand, the wide range of life expectancies across EU Member States, also compared with developed non-EU countries, points to considerable scope for future gains.

EUROPOP2025 assumes, from 2025 on, age- and sex-specific mortality rates to partially converge towards common (sex-specific) mortality profiles, which incorporate some information from previous trends of selected countries. These differ significantly from common mortality profiles used in previous projection rounds due to the recent slowdown in improvements in mortality of neonates and persons below the age of 20 ([4]).

In the EU, life expectancy at birth is projected to increase by 7 years for men, from 79 to 86, and by 6 years for women, reaching 90 years by 2080. Remaining life expectancy at the age of 65 is projected to increase by around 5 years for both men and women in the EU over the projection period.

Graph I.1.4: **Life expectancy, EU, 1960-2080**



Source: Eurostat.

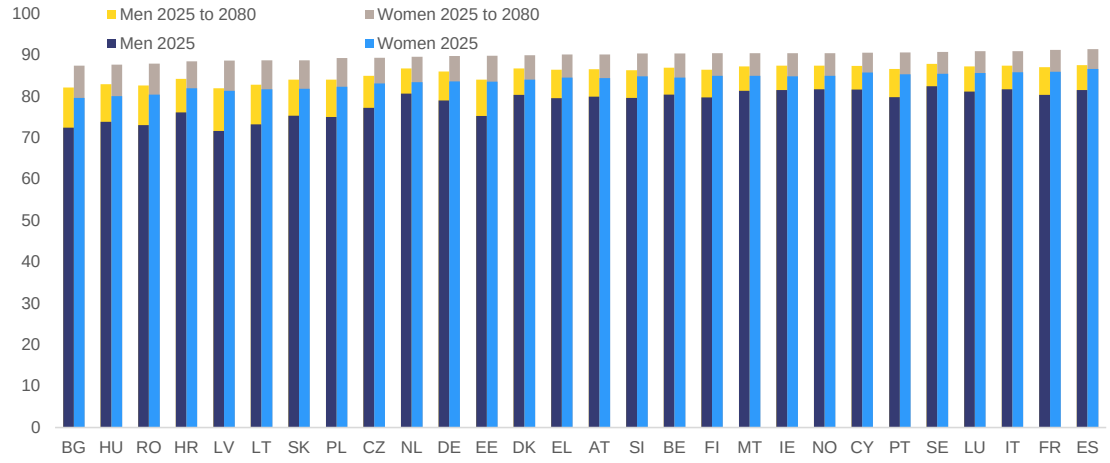
([4]) The previous common mortality profiles were derived in 2008. In the input data for these past common profiles, declines in child and youth mortality were still driving gains in life expectancy to a larger extent than in the input data for the common profiles derived for EUROPOP2025.

Table I.1.4: **Projection of life expectancy at birth and at 65, 2025-2080**

	Life expectancy at birth								*Life expectancy at 65*								
	Men				Women				Men				Women				
	2025	2055	2080	*change 2025-2080*	2025	2055	2080	*change 2025-2080*	2025	2055	2080	*change 2025-2080*	2025	2055	2080	*change 2025-2080*	
BE	80.4	83.9	86.9	*6.5*	84.5	87.6	90.3	*5.8*	19.2	21.7	24.1	*4.9*	22.1	24.6	26.8	*4.7*	BE
BG	72.4	77.4	82.1	*9.7*	79.6	83.7	87.4	*7.8*	14.7	17.8	21.0	*6.3*	18.8	21.7	24.5	*5.7*	BG
CZ	77.2	81.3	84.9	*7.7*	83.1	86.4	89.3	*6.2*	16.9	19.8	22.6	*5.7*	20.7	23.3	25.8	*5.1*	CZ
DK	80.3	83.7	86.7	*6.4*	84.0	87.2	89.9	*5.9*	18.8	21.3	23.8	*5.0*	21.4	23.9	26.3	*4.9*	DK
DE	79.0	82.7	86.0	*7.0*	83.6	86.8	89.7	*6.1*	18.1	20.8	23.3	*5.2*	21.2	23.8	26.1	*4.9*	DE
EE	75.2	79.8	84.0	*8.8*	83.5	86.9	89.8	*6.3*	16.3	19.4	22.4	*6.1*	21.4	24.0	26.4	*5.0*	EE
IE	81.5	84.7	87.4	*5.9*	84.8	87.8	90.4	*5.6*	19.8	22.2	24.4	*4.6*	22.1	24.6	26.8	*4.7*	IE
EL	79.5	83.2	86.4	*6.9*	84.5	87.5	90.1	*5.6*	18.7	21.4	23.8	*5.1*	21.8	24.2	26.4	*4.6*	EL
ES	81.5	84.7	87.5	*6.0*	86.6	89.2	91.4	*4.8*	19.9	22.3	24.5	*4.6*	23.7	25.8	27.6	*3.9*	ES
FR	80.3	84.0	87.0	*6.7*	85.9	88.8	91.2	*5.3*	19.9	22.4	24.6	*4.7*	23.7	25.9	27.7	*4.0*	FR
HR	76.1	80.3	84.2	*8.1*	81.9	85.2	88.4	*6.5*	16.3	19.2	22.1	*5.8*	19.6	22.3	24.8	*5.2*	HR
IT	81.7	84.8	87.4	*5.7*	85.8	88.5	90.9	*5.1*	19.8	22.2	24.4	*4.6*	22.8	25.1	27.1	*4.3*	IT
CY	81.6	84.6	87.3	*5.7*	85.7	88.2	90.5	*4.8*	19.9	22.2	24.3	*4.4*	22.5	24.6	26.6	*4.1*	CY
LV	71.6	76.9	81.9	*10.3*	81.3	85.2	88.6	*7.3*	15.0	18.3	21.5	*6.5*	20.0	22.8	25.5	*5.5*	LV
LT	73.2	78.2	82.8	*9.6*	81.7	85.4	88.7	*7.0*	15.4	18.6	21.8	*6.4*	20.3	23.0	25.6	*5.3*	LT
LU	81.1	84.4	87.2	*6.1*	85.6	88.4	90.9	*5.3*	19.5	22.0	24.2	*4.7*	22.7	25.0	27.1	*4.4*	LU
HU	73.8	78.5	82.9	*9.1*	80.0	84.0	87.6	*7.6*	14.9	18.1	21.3	*6.4*	18.7	21.7	24.5	*5.8*	HU
MT	81.3	84.4	87.2	*5.9*	84.9	87.8	90.4	*5.5*	19.5	21.9	24.1	*4.6*	22.1	24.5	26.6	*4.5*	MT
NL	80.6	83.8	86.7	*6.1*	83.4	86.6	89.5	*6.1*	19.0	21.4	23.7	*4.7*	21.0	23.6	25.9	*4.9*	NL
AT	79.9	83.4	86.5	*6.6*	84.4	87.4	90.1	*5.7*	18.7	21.3	23.7	*5.0*	21.7	24.2	26.4	*4.7*	AT
PL	75.0	79.7	84.0	*9.0*	82.3	86.0	89.2	*6.9*	16.4	19.5	22.5	*6.1*	20.5	23.3	25.9	*5.4*	PL
PT	79.8	83.4	86.6	*6.8*	85.3	88.1	90.6	*5.3*	19.3	21.8	24.1	*4.8*	22.7	24.9	26.9	*4.2*	PT
RO	73.0	77.9	82.6	*9.6*	80.4	84.3	87.9	*7.5*	15.2	18.4	21.5	*6.3*	19.1	22.0	24.8	*5.7*	RO
SI	79.6	83.2	86.3	*6.7*	84.8	87.7	90.3	*5.5*	18.5	21.1	23.6	*5.1*	22.0	24.4	26.5	*4.5*	SI
SK	75.3	79.9	84.0	*8.7*	81.8	85.4	88.7	*6.9*	16.2	19.3	22.2	*6.0*	20.0	22.7	25.4	*5.4*	SK
FI	79.7	83.3	86.4	*6.7*	84.9	87.9	90.4	*5.5*	18.8	21.3	23.7	*4.9*	22.3	24.6	26.8	*4.5*	FI
SE	82.4	85.3	87.8	*5.4*	85.4	88.2	90.7	*5.3*	20.3	22.6	24.7	*4.4*	22.4	24.8	26.9	*4.5*	SE
NO	81.7	84.8	87.4	*5.7*	84.9	87.8	90.4	*5.5*	19.8	22.2	24.3	*4.5*	22.0	24.4	26.6	*4.6*	NO
EA	80.0	83.5	86.6	*6.6*	84.8	87.8	90.4	*5.6*	19.0	21.6	24.0	*4.9*	22.3	24.8	26.8	*4.5*	EA
EU	79.1	82.9	86.1	*7.0*	84.3	87.4	90.1	*5.8*	18.5	21.3	23.7	*5.2*	21.9	24.4	26.6	*4.7*	EU

Source: EUROPOP2025 (Eurostat).

Graph I.1.5: **Projection of life expectancy at birth, 2025 to 2080**



Source: EUROPOP2025 (Eurostat).

1.4. NET MIGRATION

Migration is the most volatile component in population projections, and, at the same time, for many countries the only driver of population growth. Annual net migration inflows into the EU are projected to decrease in the next few years from the current high levels and to stabilise at around 1.4 million people, more comparable to pre-2022 levels (0.3% of the population).

From 1960 through the mid-1980s, net migration was mostly positive with annual net inflows averaging around 130 000, though certain years saw large net outflows. Since 1985, annual net migration has been consistently positive for the EU. Despite high volatility, it rose significantly: annual net entries averaged 622 000 people in 1990-1999 and around 1.1 million in 2000-2008. Following a slowdown to around 500 000 people in 2009-2011 in the wake of the global economic crisis, net migration started to rise again. In 2015 it peaked at 1.4 million due to large inflows because of instability in North Africa and the Middle East. Net inflows have remained high ever since. After a brief decrease, they rose again over 1 million in 2018 and increased to all-time highs in the bulk of Member States, to several millions overall in 2022 mainly due to the inflow of displaced people fleeing Ukraine ([5]). Since that historic high, migration flows have slowed down somewhat in the EU, and in many countries, recent data indicate a reversal of the record high levels towards lower net migration ([6]).

Table I.1.5: **Average annual net migration flows (including statistical adjustment), 1960-2024**

	Average net migration ('000)					*Average net migration (% of population)*					
	1960-1979	1980-1999	2000-2019	2020-2024	total 1960-2024	1960-1979	1980-1999	2000-2019	2020-2024	total 1960-2024	
BE	12	8	47	75	1,704	0.1	0.1	0.5	0.6	18.6	BE
BG	-8	-25	-36	35	-1,205	-0.1	-0.3	-0.4	0.5	-15.3	BG
CZ	-9	0	22	108	796	-0.1	0.0	0.2	1.0	8.3	CZ
DK	3	8	17	32	723	0.1	0.2	0.3	0.5	15.8	DK
DE	142	275	279	369	15,779	0.2	0.4	0.3	0.4	21.7	DE
EE	8	-4	-1	13	112	0.6	-0.3	-0.1	1.0	9.3	EE
IE	-4	-6	25	64	629	-0.1	-0.2	0.7	1.3	22.2	IE
EL	-11	42	3	8	701	-0.1	0.4	0.0	0.1	8.4	EL
ES	-31	56	294	487	8,812	-0.1	0.1	0.7	1.0	28.9	ES
FR	137	37	91	231	6,446	0.3	0.1	0.2	0.3	14.1	FR
HR	-1	-10	-9	10	-350	0.0	-0.2	-0.2	0.3	-8.5	HR
IT	-45	8	204	167	4,173	-0.1	0.0	0.4	0.3	8.3	IT
CY	-4	4	7	13	207	-0.6	0.7	1.0	1.4	36.1	CY
LV	12	-5	-14	4	-109	0.6	-0.2	-0.6	0.2	-5.1	LV
LT	5	-5	-23	36	-300	0.2	-0.2	-0.7	1.3	-10.8	LT
LU	2	3	8	9	291	0.7	0.7	1.7	1.5	92.7	LU
HU	-0	-1	12	35	396	0.0	0.0	0.1	0.4	4.0	HU
MT	-4	1	6	12	116	-1.1	0.3	1.4	2.3	35.6	MT
NL	19	28	35	128	2,287	0.2	0.2	0.2	0.7	19.9	NL
AT	7	18	43	69	1,705	0.1	0.2	0.5	0.8	24.2	AT
PL	-36	-24	-8	-143	-2,064	-0.1	-0.1	0.0	-0.4	-7.0	PL
PT	-51	2	14	118	-113	-0.6	0.0	0.1	1.1	-1.3	PT
RO	-11	-41	-108	47	-2,969	-0.1	-0.2	-0.5	0.2	-16.1	RO
SI	3	1	5	12	252	0.2	0.1	0.3	0.6	15.9	SI
SK	1	-4	-0	0	-54	0.0	-0.1	0.0	0.0	-1.3	SK
FI	-9	5	12	36	338	-0.2	0.1	0.2	0.6	7.6	FI
SE	15	18	57	40	1,988	0.2	0.2	0.6	0.4	26.6	SE
NO	2	8	28	35	924	0.0	0.2	0.6	0.7	25.8	NO
EA	180	429	988	1,897	41,422	0.1	0.1	0.3	0.5	15.0	EA
EU	142	390	979	2,015	40,292	0.0	0.1	0.2	0.5	11.3	EU

CY: 1961-1979 average

Source: European Commission based on Eurostat data.

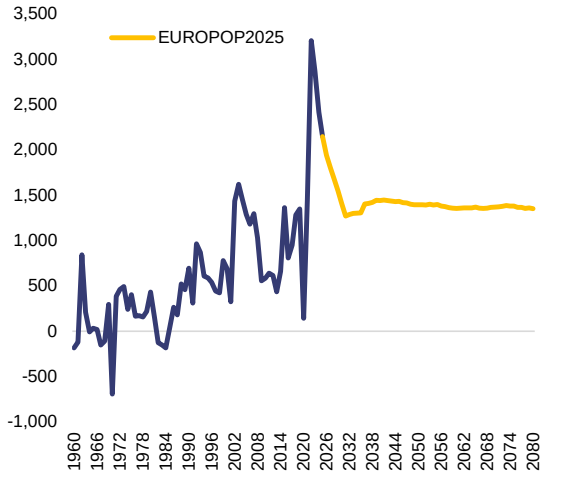
([5]) Eurostat online table on decisions granting temporary protection by citizenship, age and sex – annual data (migr_asytpfa). The 2020-2024 average figure in the table is an underestimation, as the downward revision of German population figures in 2022 is implicitly included in and thus absorbed by net migration (including statistical adjustment); while net migration per se was roughly 1.5 million in 2022. They furthermore do not include refugees under temporary protection in Poland and Slovakia as the data transmitted to Eurostat for population and migration data exclude this group. For the purpose of population projections, Eurostat has added the stock of beneficiaries of temporary protection on 1 January 2025 to the jump-off population for Poland and Slovakia.

([6]) Due to the lack of revisions of migration flows data for many Member States, net migration measured as the difference between the total population stocks on 31 December and 1 January for a given calendar year, minus the natural change (the difference between births and deaths) is used in population projections as the benchmark for production of migration assumptions. The population stocks that Member States transmit to Eurostat represent the number of persons with usual residence in the country for at least 12 months (or legal or registered persons), including refugees and, in some cases, asylum seekers who are resident in the country for at least 12 months. This method is different from the approach of subtracting recorded emigration flows from immigration flows. Please note that while the above-described method for the projections that is based on averages of intercensal periods is the more reliable measure of net migration overall, net migration figures derived this way for individual years are not. This is for example visible in the year 2022 for Germany and in 2020 for Poland, where the break in series of population figures due to the 2021 Population and Housing Census impacts significantly the derived annual net migration.

Compared to fertility and mortality, migration is the most volatile component of population projections. Immigration and emigration are generally determined by push and pull factors that are not explicitly modelled in population projections (such as crises, wars, see above). In the future, climate change is expected to become a prominent driver of demographic changes, specifically of global migration flows. Over the long horizon, the levels of immigration and emigration are also determined by the age distribution of the population and the capacity of a population to absorb immigration.

Trends derived from past data are used to capture the overall development of migration flows. In particular, net migration assumptions are derived most importantly from EU immigration and emigration, and non-EU immigration and emigration, by single age and sex. For these 4 series, migration flows data from the values derived for 2025 is interpolated with a country specific mid-term year value in 2031, and from 2032 to 2100, values are derived by interpolation with common emigration hazard rates and common per capita immigration levels and shares, to which all countries converge, but which they do not reach during the projection horizon. In addition, the 'working-age feedback mechanism' ensures that in case of a decline in the working-age population (people aged 15-64 in this case), 10% of the decrease is compensated by additional non-EU immigration.

Graph I.1.6: **Net migration flows (including statistical adjustment), 1960-2080 ('000)**



Source: European Commission based on Eurostat data.

Table I.1.6: **Net migration flow projections, 2025-2080**

	Net migration ('000)			*Net migration (% of population)*			
	2025	2055	2080	2025	2055	2080	2025-80 (%2025)[(1)]
BE	52	34	29	0.4	0.3	0.2	16.8
BG	22	11	14	0.3	0.2	0.3	9.5
CZ	42	28	28	0.4	0.3	0.3	13.8
DK	32	17	15	0.5	0.3	0.2	16.7
DE	277	247	225	0.3	0.3	0.3	16.0
EE	1	5	4	0.1	0.4	0.4	15.5
IE	70	25	21	1.3	0.4	0.3	27.6
EL	42	24	31	0.4	0.3	0.4	12.7
ES	568	281	247	1.2	0.5	0.5	35.1
FR	175	126	128	0.3	0.2	0.2	10.6
HR	20	8	11	0.5	0.2	0.4	11.9
IT	296	210	209	0.5	0.4	0.4	21.2
CY	14	6	6	1.4	0.6	0.5	38.0
LV	-4	5	6	-0.2	0.3	0.5	10.4
LT	16	13	14	0.6	0.6	0.7	20.5
LU	7	4	3	1.0	0.5	0.3	44.1
HU	2	22	24	0.0	0.3	0.3	11.8
MT	11	5	4	1.8	0.7	0.6	55.2
NL	95	56	47	0.5	0.3	0.2	18.5
AT	33	36	30	0.4	0.4	0.3	21.7
PL	95	81	105	0.3	0.3	0.4	9.8
PT	155	41	38	1.4	0.4	0.4	24.2
RO	71	35	47	0.4	0.2	0.3	9.8
SI	8	7	7	0.4	0.3	0.4	18.2
SK	2	7	9	0.0	0.2	0.2	6.0
FI	34	20	19	0.6	0.4	0.3	19.7
SE	13	41	33	0.1	0.4	0.3	20.5
NO	23	25	22	0.4	0.4	0.3	23.8
EA	1,894	1,172	1,101	0.5	0.3	0.3	19.0
EU	2,148	1,397	1,353	0.5	0.3	0.3	17.6

(1) Cumulative net migration as % of 2025 population

Source: EUROPOP2025 (Eurostat).

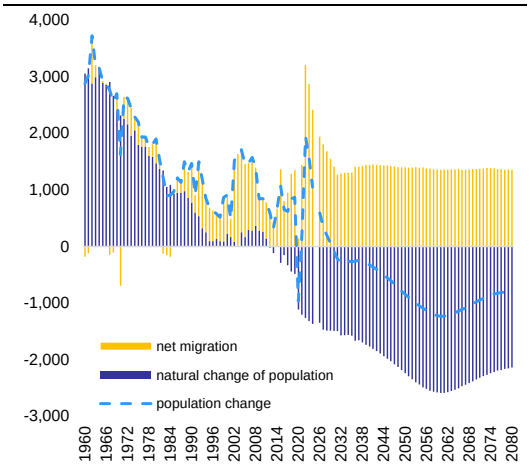
In EUROPOP2025, the expected outflows of refugees from Ukraine which currently benefit from temporary protection are in addition modelled explicitly. The assumption is that 67% of refugees who are currently beneficiaries of temporary protection will remain permanently in the host country, while 33% will return. The return period is modelled over 10 years, such that the number of returns per year decreases linearly, until two thirds of the beneficiaries registered in the EU at the end of 2024 remain.

For the EU, annual net inflows are assumed to decrease from the still historically high levels and return closer to pre-2022 levels as of the 2030s, to around 1.4 million people (0.3% of the EU population). Total net migration in the period up to 2080 would amount to around 80 million people in cumulated terms, equivalent to 18% of the 2025 population.

1.5. OVERALL POPULATION PROJECTIONS

The EU population is projected to decline from 452 million people in 2025 to 414 million in 2080. During this period, Member States' population will age dramatically given the dynamics in fertility, mortality and migration. The median age would rise by 6 years over the next decades. The old-age dependency ratio is projected to increase by 27 pps, from 38% in 2025 to 65% in 2080 for the EU, that is, the beneficiary-contributor balance will change completely.

Graph I.1.7: **Population change, EU, 1960-2080 ('000)**



Source: European Commission based on Eurostat data.

Looking back and putting the three components together, there was a downward trending but continuous total population growth between 1960 and 2020 in the EU. In 2020, population growth turned negative but bounced back immediately and increased again to highly positive figures (see Graph I.1.7). This is the result of counteracting developments. A volatile but overall, first slightly, then increasingly upward trend of net migration inflows, on the one hand, and an overall more clearly decreasing trend of natural population change on the other. The latter turned negative only in 2012 because the impact of decreasing fertility rates on births had partly been offset by the impact of decreasing mortality rates on deaths.

Table I.1.7: **Projected total population, 2025-2080**

	Total population (annual average - millions)			*% change*		
	2025	2055	2080	2025-55	2055-80	2025-80
BE	11.9	12.6	12.6	6%	-1%	6%
BG	6.4	5.3	4.7	-18%	-10%	-27%
CZ	10.9	10.5	9.9	-4%	-6%	-10%
DK	6.0	6.3	6.2	5%	-1%	4%
DE	83.5	79.3	76.3	-5%	-4%	-9%
EE	1.4	1.3	1.2	-8%	-8%	-15%
IE	5.5	6.5	6.5	19%	-1%	18%
EL	10.4	8.9	7.6	-14%	-14%	-26%
ES	49.3	53.8	51.6	9%	-4%	5%
FR	69.0	70.6	69.0	2%	-2%	0%
HR	3.9	3.3	3.0	-14%	-10%	-23%
IT	58.9	54.2	47.9	-8%	-12%	-19%
CY	1.0	1.1	1.1	15%	-3%	12%
LV	1.9	1.5	1.3	-20%	-13%	-30%
LT	2.9	2.4	2.1	-17%	-13%	-28%
LU	0.7	0.9	1.0	36%	3%	41%
HU	9.5	8.4	7.6	-12%	-9%	-20%
MT	0.6	0.7	0.8	27%	3%	31%
NL	18.1	19.1	19.2	6%	0%	6%
AT	9.2	9.4	9.1	3%	-3%	-1%
PL	37.5	32.0	27.6	-15%	-14%	-26%
PT	10.8	10.4	9.3	-4%	-11%	-14%
RO	19.0	16.7	15.0	-12%	-10%	-21%
SI	2.1	2.1	2.0	-3%	-6%	-9%
SK	5.5	5.0	4.3	-10%	-13%	-22%
FI	5.6	5.6	5.3	-2%	-4%	-6%
SE	10.6	11.6	11.8	9%	2%	11%
NO	5.6	6.2	6.3	11%	2%	13%
EA	358.7	354.2	335.8	-1%	-5%	-6%
EU	452.2	439.6	413.9	-3%	-6%	-8%

Source: European Commission based on EUROPOP2025 (Eurostat).

Table I.1.7 presents an overview of the population projections for the period 2025-2080 ([7]). These provide the basis for the age-related expenditure projections in the 2027 Ageing Report. According to the baseline demographic projections, the EU population would reach a peak by the end of this decade. It is projected to increase by only one million in the next years to 453 million people in 2029. Thereafter, the population would start to shrink, to 414 million in 2080. This is a projected decline by 8% compared to the base year level, most of which would take place in the second half of the projection period.

The overall downward trend comprises rather heterogeneous developments at the country level. While population is projected to decrease in most Member States, it would stagnate e.g. in France, and limited growth is projected in some such as Spain. As a result, the most populous Member States in 2025 (Germany, France, Italy, Spain then Poland) are projected to remain the same in 2080 but Spain is projected to have more inhabitants than Italy by the end of the projection period.

The age structure of the population will change dramatically in all Member States. The share of the age groups above 65 years in the overall population is projected to rise (see Table I.1.8), from 22% in

([7]) The population projections published by Eurostat refer to the population on 1 January. The projections in this report for year t are calculated as the average of the Eurostat projections on 1 January for year t and those for year t+1.

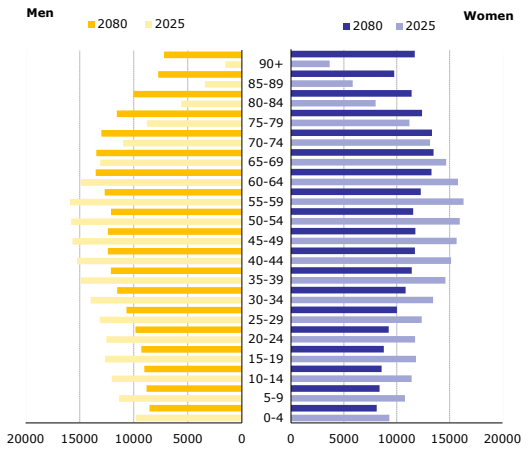
2025 to 33% in 2080 for the EU, i.e. one in three persons is projected to be at least 65 years old at the end of the projection period. The share of people aged 80 years and above would roughly double or more in all Member States (increasing from 6% to 14% for the EU as a whole). At the same time, the population share of the youngest age group (0-19) would shrink in all Member States but Bulgaria (from 20% to 17% for the EU). Finally, the population of working age (20-64 year-olds), would also shrink in all Member States relative to the overall population, from 58% in 2025 to 51% in 2080 for the EU as a whole.

Table I.1.8: **Composition of the population by age group (%)**

	2025				*2080*				*pps change 2025-2080*				
	(0-19)	(20-64)	(65+)	(80+)	(0-19)	(20-64)	(65+)	(80+)	(0-19)	(20-64)	(65+)	(80+)	
BE	22%	58%	20%	6%	18%	52%	30%	13%	-3.8	-6.1	9.9	7.1	BE
BG	19%	57%	24%	5%	20%	51%	29%	12%	0.6	-5.6	5.0	6.2	BG
CZ	21%	58%	21%	5%	18%	52%	30%	12%	-2.9	-6.5	9.4	7.3	CZ
DK	21%	58%	21%	6%	18%	51%	31%	13%	-3.3	-6.8	10.1	7.5	DK
DE	19%	58%	23%	7%	18%	52%	30%	13%	-1.1	-6.3	7.3	5.8	DE
EE	21%	58%	21%	6%	16%	51%	33%	14%	-5.0	-7.1	12.1	8.3	EE
IE	25%	59%	16%	4%	17%	50%	34%	14%	-8.5	-9.2	17.7	10.5	IE
EL	18%	58%	24%	7%	15%	50%	35%	15%	-2.7	-8.0	10.7	7.7	EL
ES	18%	61%	21%	6%	15%	50%	35%	15%	-3.5	-10.6	14.1	8.6	ES
FR	23%	55%	22%	6%	19%	50%	32%	14%	-3.7	-5.8	9.5	7.6	FR
HR	19%	58%	23%	5%	15%	52%	33%	13%	-3.4	-5.9	9.4	8.0	HR
IT	17%	58%	25%	8%	14%	49%	37%	16%	-2.5	-9.6	12.1	8.2	IT
CY	20%	62%	18%	5%	14%	50%	36%	17%	-5.8	-12.0	17.8	12.1	CY
LV	20%	57%	22%	6%	16%	51%	33%	14%	-4.5	-6.8	11.3	8.0	LV
LT	19%	60%	21%	6%	13%	49%	38%	17%	-6.2	-10.6	16.7	11.1	LT
LU	21%	64%	15%	4%	16%	52%	31%	13%	-4.6	-11.4	16.0	9.1	LU
HU	19%	60%	21%	5%	18%	52%	30%	12%	-1.7	-7.1	8.8	7.0	HU
MT	16%	66%	18%	4%	12%	53%	35%	15%	-4.4	-12.3	16.6	10.8	MT
NL	21%	58%	21%	5%	18%	52%	30%	12%	-2.4	-6.8	9.1	7.0	NL
AT	19%	60%	20%	6%	17%	52%	32%	14%	-2.5	-8.8	11.3	7.7	AT
PL	21%	59%	21%	4%	15%	50%	35%	15%	-5.5	-8.4	13.9	10.9	PL
PT	17%	58%	25%	7%	16%	48%	36%	17%	-1.4	-10.5	11.9	10.0	PT
RO	21%	59%	20%	4%	17%	52%	31%	12%	-3.8	-6.9	10.7	7.7	RO
SI	20%	58%	22%	6%	17%	51%	32%	13%	-2.6	-6.8	9.3	7.6	SI
SK	21%	60%	19%	4%	17%	51%	31%	14%	-3.7	-9.0	12.8	10.0	SK
FI	20%	56%	24%	6%	16%	50%	34%	15%	-4.4	-6.0	10.4	8.4	FI
SE	23%	56%	21%	6%	18%	51%	31%	13%	-4.6	-5.0	9.6	6.7	SE
NO	22%	59%	19%	5%	17%	51%	31%	13%	-4.7	-7.4	12.1	8.3	NO
EA	19%	58%	22%	7%	17%	50%	33%	14%	-2.6	-7.7	10.3	7.5	EA
EU	20%	58%	22%	6%	17%	51%	33%	14%	-2.9	-7.6	10.5	7.8	EU

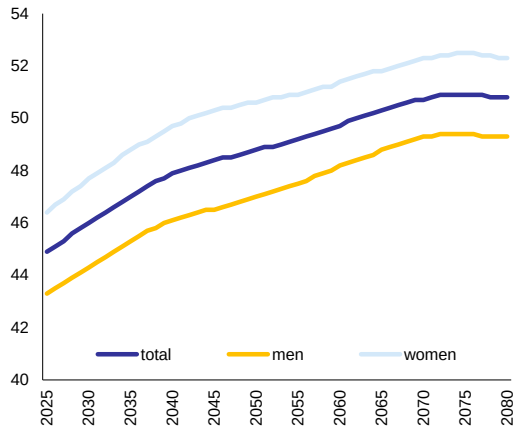
Source: European Commission based on EUROPOP2025 (Eurostat).

Graph I.1.8: **EU population by age group, sex ('000)**



Source: European Commission based on EUROPOP2025 (Eurostat).

Graph I.1.9: **Median age in the EU, 2025-2080**



Source: EUROPOP2025 (Eurostat).

Drivers are similar to the above-mentioned trends. First, the increasing weight of older age groups is due to the combination of large cohorts born in the 1950s and 1960s and continued gains in life

expectancy. Second, the size of the working-age population shrinks significantly between 2025 and 2080 (see Graph I.1.8) due to the low fertility rates and a shrinking number of women in childbearing ages. Finally, net migration flows would not suffice to offset the trends towards an ageing population.

The strong upward shift in the age distribution over the next decades can also be seen on the population pyramid (Graph I.1.8). While in 2025 the largest age groups for both men and women were people aged 50-59, in 2080 the 60-69 age groups would be the largest for both sexes. Overall, the median age is projected to rise from 45 to 51 years in 2080 (see Graph I.1.9).

Table I.1.9: **Dependency ratios 2025-2080 (%)**

	Old-age dependency ratio (65+/20-64)				*Very old-age dependency ratio (80+/20-64)*				*Total dependency ratio ((0-19 & 65+)/20-64)*				
	2025	2055	2080	2025-2080 (pps change)	2025	2055	2080	2025-2080 (pps change)	2025	2055	2080	2025-2080 (pps change)	
BE	35.4	47.5	58.8	23.4	9.8	18.3	24.6	14.9	73.3	82.9	93.9	20.6	BE
BG	42.5	63.7	56.9	14.4	9.6	21.4	22.8	13.2	76.0	103.6	95.4	19.3	BG
CZ	35.7	56.4	58.3	22.6	8.4	19.3	23.5	15.2	71.9	93.1	93.4	21.5	CZ
DK	36.4	46.8	61.0	24.6	10.1	18.3	26.2	16.1	73.4	81.3	96.4	23.0	DK
DE	39.3	52.7	58.0	18.7	12.3	20.5	24.9	12.7	71.1	86.3	91.7	20.5	DE
EE	36.6	58.9	65.7	29.1	10.0	20.1	27.7	17.7	73.4	92.0	97.9	24.4	EE
IE	26.8	52.1	67.2	40.4	6.5	17.5	28.8	22.2	69.2	85.9	100.4	31.2	IE
EL	41.3	70.6	69.3	28.0	12.4	29.0	29.8	17.4	72.4	101.5	99.9	27.5	EL
ES	34.3	60.3	69.7	35.4	10.2	24.5	29.6	19.4	64.4	88.9	99.2	34.9	ES
FR	39.8	54.7	63.6	23.8	11.2	22.5	27.8	16.6	80.8	93.7	101.9	21.1	FR
HR	40.6	53.8	63.2	22.6	9.3	18.3	25.8	16.4	73.0	83.0	92.7	19.7	HR
IT	42.8	68.2	76.1	33.4	13.4	30.4	32.9	19.5	71.5	96.2	105.4	33.9	IT
CY	30.0	57.1	73.2	43.1	7.3	19.2	33.6	26.3	62.5	84.3	101.8	39.2	CY
LV	38.6	63.5	66.1	27.6	10.5	21.9	27.7	17.2	74.1	96.2	97.5	23.4	LV
LT	35.3	62.0	76.8	41.5	9.5	21.3	34.0	24.5	67.0	86.6	102.8	35.8	LT
LU	24.1	40.8	59.9	35.7	6.2	14.0	24.9	18.7	56.8	71.2	91.0	34.1	LU
HU	35.2	53.0	56.8	21.6	8.2	17.4	22.7	14.5	67.8	87.0	90.6	22.7	HU
MT	28.2	39.8	65.9	37.8	6.7	11.2	28.5	21.8	52.6	58.9	87.8	35.2	MT
NL	35.9	44.9	58.2	22.3	8.9	17.5	23.7	14.8	71.0	79.3	93.3	22.3	NL
AT	33.9	52.5	61.4	27.6	10.0	20.3	26.6	16.6	65.6	84.0	93.7	28.1	AT
PL	35.4	60.9	68.9	33.6	7.3	19.5	30.3	22.9	70.5	91.1	98.9	28.4	PL
PT	42.3	71.8	76.7	34.5	12.4	29.8	36.2	23.9	72.3	103.6	110.5	38.2	PT
RO	34.8	54.3	60.0	25.3	7.6	18.2	23.4	15.8	70.7	88.2	93.4	22.7	RO
SI	38.5	60.1	61.7	23.3	10.0	22.5	26.2	16.2	72.1	93.9	94.8	22.7	SI
SK	31.0	60.4	61.5	30.4	6.2	19.2	26.7	20.6	66.0	95.5	95.3	29.3	SK
FI	42.2	50.6	67.9	25.7	11.1	18.3	29.1	18.0	78.1	81.0	99.4	21.3	FI
SE	37.1	48.0	59.3	22.2	11.1	18.3	25.3	14.1	77.1	83.6	94.3	17.2	SE
NO	32.5	47.6	60.8	28.3	8.4	17.9	25.7	17.3	70.1	80.9	94.6	24.5	NO
EA	38.6	57.2	65.0	26.4	11.3	23.0	28.0	16.7	72.0	90.1	98.2	26.3	EA
EU	38.0	56.8	64.5	26.5	10.6	22.2	27.6	17.0	71.9	89.8	97.7	25.8	EU

Source: European Commission based on EUROPOP2025 (Eurostat).

Due to the demographic shift from younger to older age groups, demographic dependency ratios are projected to increase significantly in all countries (see Table I.1.9). The old-age dependency ratio (OADR), i.e. the number of people aged at least 65 divided by those aged 20-64, gives an idea about the relative shift between potential retirees and potential workers and thus of how an ageing population alters the beneficiary-contributor balance ([8]). The OADR is projected to increase from 38% in 2025 to 65% in 2080 in the EU. This increase would predominantly take place during the first half of the projection period. The change in the OADR means that the EU would move from having, for every person aged over 65 years, nearly three (2.6) people of working age to less than two (1.6). Similarly, the very old-age dependency ratio (people aged 80 or above relative to those aged 20-64) is projected to rise, from 11% to 28% on average in the EU. Finally, the total dependency ratio (the sum of people younger than 20 and older than 64 years relative to the population aged 20-64) is projected to rise from 72% to 98% for the EU. This measure relates the theoretical inactive population – people that have not yet entered or have already left the labour market – to the theoretical contributory base.

([8]) Economic dependency ratios are discussed in Chapter 2.

1.6. COMPARISON WITH THE DEMOGRAPHIC PROJECTIONS IN THE 2024 AGEING REPORT

The EUROPOP2025 projects a sharper decline in the EU population (9.5 million people less by 2070) than assumed in the 2024 Ageing Report. The impact of lower fertility rates is only partly offset by higher net migration assumptions. A greater decline is projected for the working age population and especially for the youngest age group that is only marginally compensated by a slightly higher projection for the older age group. As a result, the old-age dependency ratios based on the new demographic projections show an even more dramatic increase than in the 2024 Ageing Report.

Table I.1.10: **Old-age dependency ratio – difference between EUROPOP2025 and EUROPOP2023 (pps)**

	2025	2055	2070	2025-2070
BE	-0.2	-0.5	-0.1	0.1
BG	4.7	-0.7	-3.5	-8.2
CZ	0.5	2.0	3.0	2.5
DK	-0.3	-0.9	-0.1	0.2
DE	0.3	1.1	0.5	0.2
EE	0.4	1.9	3.2	2.8
IE	-0.5	1.8	4.9	5.4
EL	-0.1	-4.0	0.5	0.7
ES	-0.9	-4.2	-0.9	0.0
FR	-0.3	0.1	0.7	1.0
HR	-1.0	-4.2	-2.6	-1.6
IT	0.0	2.6	4.1	4.1
CY	1.6	10.5	14.6	13.0
LV	0.1	-3.0	1.5	1.4
LT	-0.4	-3.0	0.8	1.2
LU	-0.1	-2.6	-3.3	-3.3
HU	0.0	1.0	0.3	0.3
MT	-2.9	-4.0	-6.1	-3.2
NL	-0.1	-2.6	-3.6	-3.5
AT	-0.3	-0.2	0.9	1.2
PL	0.6	-1.0	1.3	0.7
PT	-0.9	3.4	9.5	10.4
RO	-0.6	-5.5	-0.5	0.2
SI	-0.3	-0.7	1.0	1.3
SK	0.0	-0.1	0.6	0.6
FI	-0.3	-2.5	-2.0	-1.6
SE	0.5	2.5	3.2	2.8
NO	-0.6	0.4	0.8	1.3
EA	-0.1	-0.1	0.9	1.0
EU	0.0	-0.2	1.0	1.0

Old-age dependency ratio: persons aged 65 and over in relation to persons aged 20-64

Source: European Commission based on EUROPOP2023 and EUROPOP2025 (Eurostat).

The starting point of the demographic projections based on EUROPOP2025 is lower by a million people in 2025 than in the 2024 Ageing Report (EUROPOP2023), mainly due to the inclusion of revised population figures for a number of countries, notably Germany ([9]). This is mainly reflected in fewer young people at the start of the projection, then population decreases faster in the working age group and even more so in the youngest age group resulting in 9.5 million fewer people by 2070, which was the end-year of the previous report (see Table I.1.11). These changes result in a slightly lower projected old-age dependency ratio in the beginning but higher levels by the end of the projection period (see Table I.1.10).

The main driver of these differences in the population projections is the lower assumption on fertility rates that plummeted in recent years. Even if recovery is assumed, figures are lower throughout the projection horizon as, in addition to the lower starting point, the convergence value became lower, too, since the decline in fertility rates was encompassing (including "best performers"). Assumptions on life expectancy are lower across the board, with a slower increase in longevity. Finally, net migration is assumed to be higher than in the 2024 Ageing Report. A main source of that difference is due to higher outturn data for the most recent years, showing higher net migration even beyond the shock caused by Russia's prolonged aggression against Ukraine as well as different assumptions on the outflow of refugees from Ukraine, namely a twice as high proportion assumed to remain (see Table I.1.12).

([9]) Revised levels following the 2021 Population and Housing Census have been included for all countries in EUROPOP2025.

Table I.1.11: **Population - difference between EUROPOP2025 and EUROPOP2023 ('000)**

	Total population			Population 0-19			Population 20-64			Population 65+			
	2025	2070	*diff.* [1]	2025	2070	*diff.* [1]	2025	2070	*diff.* [1]	2025	2070	*diff.* [1]	
BE	60	-80	*-1%*	2	-103	*-4%*	51	18	*0%*	7	5	*0%*	BE
BG	-407	-441	*-8%*	-125	-4	*0%*	-330	-218	*-8%*	48	-219	*-13%*	BG
CZ	-88	-526	*-5%*	-74	-271	*-13%*	-32	-273	*-5%*	18	18	*1%*	CZ
DK	20	68	*1%*	-19	-68	*-6%*	36	90	*3%*	3	46	*3%*	DK
DE	-1,720	-7,082	*-8%*	-773	-2,201	*-14%*	-788	-3,293	*-7%*	-159	-1,588	*-7%*	DE
EE	-9	-115	*-9%*	-7	-49	*-21%*	-3	-55	*-8%*	2	-11	*-3%*	EE
IE	211	489	*8%*	48	-15	*-1%*	140	217	*7%*	23	288	*16%*	IE
EL	72	228	*3%*	-12	-121	*-9%*	64	197	*5%*	20	152	*6%*	EL
ES	631	4,702	*10%*	48	206	*3%*	627	2,884	*12%*	-44	1,612	*10%*	ES
FR	226	-144	*0%*	-303	-720	*-5%*	459	210	*1%*	70	366	*2%*	FR
HR	76	101	*3%*	5	2	*0%*	66	87	*6%*	5	12	*1%*	HR
IT	18	-3,430	*-6%*	-47	-1,035	*-13%*	41	-2,073	*-8%*	24	-321	*-2%*	IT
CY	47	139	*14%*	-4	-19	*-11%*	32	48	*9%*	19	110	*38%*	CY
LV	-2	94	*7%*	-15	-11	*-5%*	9	59	*9%*	5	47	*12%*	LV
LT	37	190	*9%*	-16	-30	*-10%*	44	123	*12%*	10	98	*14%*	LT
LU	-6	-13	*-1%*	-2	-18	*-10%*	-3	15	*3%*	-1	-9	*-3%*	LU
HU	-119	-1,162	*-13%*	-58	-350	*-20%*	-45	-535	*-11%*	-16	-277	*-11%*	HU
MT	21	-45	*-6%*	-4	-33	*-27%*	27	8	*2%*	-2	-21	*-8%*	MT
NL	1	452	*2%*	-24	-7	*0%*	29	532	*5%*	-5	-72	*-1%*	NL
AT	90	-290	*-3%*	-15	-153	*-9%*	89	-116	*-2%*	15	-21	*-1%*	AT
PL	-838	-2,641	*-8%*	-266	-1,255	*-23%*	-526	-968	*-6%*	-46	-418	*-4%*	PL
PT	449	725	*8%*	84	22	*1%*	293	158	*4%*	71	545	*18%*	PT
RO	248	537	*4%*	-55	-176	*-6%*	275	482	*6%*	29	231	*5%*	RO
SI	12	-10	*0%*	0	-17	*-5%*	11	-2	*0%*	1	9	*1%*	SI
SK	31	-263	*-5%*	-8	-151	*-16%*	31	-79	*-3%*	9	-33	*-2%*	SK
FI	4	194	*4%*	-9	-6	*-1%*	17	158	*6%*	-4	42	*2%*	FI
SE	-142	-1,141	*-9%*	-100	-473	*-18%*	-51	-579	*-8%*	10	-89	*-3%*	SE
NO	90	-199	*-3%*	22	-60	*-5%*	65	-107	*-3%*	3	-32	*-2%*	NO
EA	-158	-4,599	*-1%*	-1,177	-4,465	*-7%*	905	-1,123	*-1%*	114	989	*1%*	EA
EU	-1,076	-9,465	*-2%*	-1,748	-7,059	*-9%*	561	-2,907	*-1%*	111	500	*0%*	EU

(1) Difference in 2070 as percentage of EUROPOP2023 projection for 2070

Source: European Commission based on EUROPOP2023 and EUROPOP2025 (Eurostat).

Table I.1.12: **Total fertility rate, life expectancy at birth and net migration – difference between EUROPOP2025 and EUROPOP2023**

	Fertility rate			Life expectancy at birth						Net migration ('000)				
				Men			Women							
	2025	2070	avg 2025-2070	2025	2070	change 2025-2070	2025	2070	change 2025-2070	2025	2070	*sum 2025-2070*	*sum 2025-2070* [1]	
BE	-0.1	-0.1	-0.1	0.4	-0.7	-1.1	-0.2	-1.3	-1.1	13	1	*151*	*1.2%*	BE
BG	0.1	0.0	0.1	0.4	-2.7	-3.1	0.6	-1.8	-2.4	27	-3	*43*	*0.8%*	BG
CZ	-0.5	-0.1	-0.2	0.3	-1.4	-1.7	0.5	-1.1	-1.6	58	3	*306*	*2.9%*	CZ
DK	-0.2	-0.1	-0.1	0.2	-0.9	-1.1	-0.1	-1.3	-1.2	18	3	*251*	*4.1%*	DK
DE	-0.2	-0.1	-0.1	-0.3	-1.4	-1.1	-0.4	-1.5	-1.1	-78	-12	*-908*	*-1.1%*	DE
EE	-0.5	-0.2	-0.3	0.3	-1.8	-2.1	0.0	-1.2	-1.2	0	0	*16*	*1.2%*	EE
IE	-0.1	-0.1	-0.1	0.5	-0.6	-1.1	0.0	-1.2	-1.2	54	10	*618*	*10.2%*	IE
EL	-0.2	-0.1	-0.1	0.0	-1.4	-1.4	-0.2	-1.4	-1.2	46	10	*691*	*8.9%*	EL
ES	-0.1	-0.1	-0.1	0.1	-0.7	-0.8	-0.4	-1.0	-0.6	244	74	*5,021*	*10.5%*	ES
FR	-0.2	-0.1	-0.1	0.1	-0.9	-1.0	-0.3	-1.0	-0.7	77	28	*2,019*	*2.9%*	FR
HR	0.0	0.0	0.0	0.5	-1.6	-2.1	-0.1	-1.8	-1.7	21	0	*96*	*3.2%*	HR
IT	-0.1	-0.1	-0.1	-0.1	-0.7	-0.6	-0.3	-1.1	-0.8	65	-25	*-1,187*	*-2.2%*	IT
CY	-0.1	-0.1	0.0	0.5	-0.6	-1.1	0.6	-0.7	-1.3	12	4	*257*	*25.8%*	CY
LV	-0.4	-0.2	-0.2	0.5	-2.6	-3.1	0.9	-1.2	-2.1	3	4	*226*	*18.0%*	LV
LT	-0.4	-0.3	-0.3	1.4	-1.9	-3.3	0.2	-1.5	-1.7	19	8	*425*	*21.1%*	LT
LU	-0.2	-0.1	-0.1	0.3	-0.9	-1.2	0.3	-0.9	-1.2	-2	-1	*14*	*1.4%*	LU
HU	-0.3	-0.1	-0.2	0.4	-2.5	-2.9	-0.2	-2.4	-2.2	-17	-3	*-215*	*-2.4%*	HU
MT	-0.2	-0.2	-0.2	0.2	-0.9	-1.1	0.1	-1.4	-1.5	1	1	*-33*	*-4.1%*	MT
NL	-0.1	-0.1	-0.1	-0.2	-1.1	-0.9	-0.6	-1.7	-1.1	27	9	*772*	*4.1%*	NL
AT	-0.2	-0.1	-0.1	-0.1	-1.1	-1.0	-0.2	-1.2	-1.0	9	-3	*27*	*0.3%*	AT
PL	-0.3	-0.2	-0.2	0.6	-1.9	-2.5	0.0	-1.6	-1.6	166	24	*1,118*	*3.5%*	PL
PT	0.0	-0.1	0.0	-1.4	-1.6	-0.2	0.0	-0.8	-0.8	139	1	*985*	*11.0%*	PT
RO	-0.5	-0.1	-0.2	0.8	-2.6	-3.4	0.7	-2.1	-2.8	108	15	*1,476*	*9.8%*	RO
SI	-0.1	-0.1	-0.1	0.5	-0.9	-1.4	-0.2	-1.2	-1.0	2	1	*33*	*1.7%*	SI
SK	-0.3	-0.1	-0.1	0.8	-1.8	-2.6	0.4	-1.7	-2.1	8	0	*-16*	*-0.3%*	SK
FI	-0.1	-0.1	-0.1	0.1	-0.9	-1.0	-0.1	-1.0	-0.9	18	6	*323*	*6.2%*	FI
SE	-0.3	-0.2	-0.2	0.7	-0.2	-0.9	-0.1	-1.0	-0.9	-36	3	*-137*	*-1.1%*	SE
NO	0.0	-0.1	-0.1	-0.5	-1.0	-0.5	-0.5	-1.4	-0.9	8	-4	*-126*	*-1.9%*	NO
EA	-0.2	-0.1	-0.1	-0.2	-1.1	-1.0	-0.4	-1.3	-0.9	706	112	*9,572*	*2.8%*	EA
EU	-0.2	-0.1	-0.1	0.1	-1.3	-1.4	-0.2	-1.4	-1.2	1002	157	*12,371*	*2.9%*	EU

(1) Difference in total net migration in 2025 as a percentage of EUROPOP2023 population projection for 2025

Source: European Commission based on EUROPOP2023 and EUROPOP2025 (Eurostat).

Box I.1.1: **Demographic ageing in a global context**

The EU's share of the world population is projected to shrink further, from 6% in 2020 to 4% by 2080. The projected increase in dependency ratios is comparatively high for the EU, in particular given the current demographic balance compared to 'younger' continents.

The UN population statistics and projections provide a global perspective of demographic trends ([1]). The combined share of EU Member States in the world population halved since 1960, when the EU27 represented almost 12% of the world population (see Table 1). While the EU population grew by 25% over six decades, demographic growth was even (much) faster in the rest of the world, with the global population increasing by more than 150% over the same period. The shares of China, Japan, Russia and the US in the global population also declined compared to 1960, in contrast with the rising shares of India, Latin America and, particularly, Africa.

Given that fast population growth is expected to continue, the African continent's share in the world population would increase further, to about a third of the world population by 2080. While staying the most populous continent, Asia's share would decline over the decades to around 50%. This fall is driven by India, Japan and, in particular, China. By 2080, the EU's share in the global population is projected to reach 3.6%, shrinking by 2 pps relative to the current situation ([2]). This is comparable to the projected share of the US, whose share would remain broadly stable.

Table 1: **Geographical distribution of world population, 1960-2080 (% of total population)**

	1960	1990	2020	2050	2080	(pps change) 1960-2020	(pps change) 2020-2080
Africa	9.4%	12.1%	17.5%	25.5%	33.3%	8.1	15.8
Asia	56.1%	60.2%	59.4%	54.6%	48.8%	3.3	-10.6
China	21.7%	21.7%	18.1%	13.0%	8.5%	-3.6	-9.6
Japan	3.2%	2.3%	1.6%	1.1%	0.8%	-1.6	-0.8
India	14.5%	16.2%	17.8%	17.4%	16.0%	3.3	-1.8
Europe	20.1%	13.6%	9.5%	7.3%	6.1%	-10.6	-3.4
EU	11.8%	7.9%	5.7%	4.4%	3.6%	-6.1	-2.1
EA	9.2%	6.1%	4.5%	3.5%	2.9%	-4.7	-1.6
Russian Federation	4.0%	2.8%	1.9%	1.4%	1.2%	-2.1	-0.6
Latin America and the Caribbean	7.3%	8.3%	8.2%	7.6%	6.7%	0.9	-1.5
Northern America	6.6%	5.3%	4.8%	4.4%	4.5%	-1.8	-0.3
US	6.0%	4.8%	4.3%	3.9%	4.0%	-1.7	-0.3
Oceania	0.5%	0.5%	0.6%	0.6%	0.7%	0.0	0.1

Source: UN World Population Prospects 2024.

Global ageing shows in the projected changes of median ages. In 2020, the median age in the EU was 44 years, more than 10 years higher than 50 years ago. This compares to 38 years in Northern America, 31 years in Asia and 30 years in Latin America, as well as worldwide, with just 19 years in Africa. By 2080, half of the EU population would be above 51 years according to EUROPOP2025, compared to 47 years in Latin America, 44 years in Northern America, 45 years in Asia and 40 for the world, based on the UN projections.

Looking at the age structure in the UN projections, the EU currently has already a comparatively high old-age dependency ratio (OADR). At 35%, it is below the Japanese ratio of 53% but considerably above that in other large countries, with a higher increase in recent decades. Ratios and projected changes for the EU are comparable to those based on the Eurostat projections (see Table 2). Globally, the UN demographic projections show an increase in the OADR by 24 pps, from

([1]) The latest projections are the UN World Population Prospects 2024.
([2]) The UN projections and Eurostat's EUROPOP2025 projections differ notably due to the different methodologies. The former expects the EU population to decrease over the entire projection horizon to 370 million people in 2080, i.e. 44 million below the Eurostat baseline.

(Continued on the next page)

Box (continued)

16% in 2020 to 40% in 2080. The EU ratio would increase by close to 30 pps, reaching almost 65% in 2080. All continents are expected to see an increase and, in some cases, e.g. Asia and Latin America, the projected change in the balance between potential retirees and potential contributors is similar to or even somewhat worse than what is anticipated for the EU. However, given that the current situation is generally more favourable in those other regions, it can be concluded that EU Member States will on average undergo a more radical ageing process than the rest of the world, notable exceptions such as Japan and China aside. Looking at developments for the very old-age dependency ratio leads to broadly the same conclusion.

Table 2: **Global demographic dependency ratios, 1960-2080 (%)**

	Old-age dependency ratio (65+/20-64)						*Very old-age dependency ratio (80+/20-64)*					
	1960	1990	2020	2080	(pps change) 1960-2020	2020-2080	1960	1990	2020	2080	(pps change) 1960-2020	2020-2080
World	10.1	11.9	16.4	40.3	6.3	23.9	1.2	2.0	3.4	13.5	2.1	10.2
Africa	7.2	7.5	7.5	18.5	0.3	10.9	0.7	0.8	1.0	3.5	0.3	2.5
Asia	7.8	9.5	15.2	51.0	7.4	35.8	0.8	1.3	2.8	18.0	2.1	15.2
China	8.4	9.7	19.8	103.0	11.5	83.2	0.7	1.2	3.6	44.1	2.8	40.6
Japan	10.5	19.8	53.4	80.1	42.9	26.7	1.3	3.9	17.1	38.3	15.7	21.2
India	7.0	8.5	11.1	49.1	4.1	38.0	0.7	1.1	1.7	16.0	1.1	14.2
Europe	15.2	21.3	31.8	60.3	16.6	28.4	2.2	4.7	8.8	25.0	6.6	16.2
EU	16.7	22.7	34.9	64.2	18.2	29.4	2.4	5.2	10.1	28.0	7.6	17.9
EA	17.5	23.2	35.8	64.2	18.3	28.4	2.6	5.4	10.8	28.1	8.2	17.3
Russian Federation	10.4	16.6	25.0	46.2	14.6	21.2	1.3	3.3	6.2	16.0	5.0	9.8
Latin America and the Caribbean	7.4	9.5	15.0	55.4	7.6	40.4	0.8	1.5	2.9	20.4	2.1	17.5
Northern America	16.7	20.5	27.5	52.4	10.8	24.9	2.5	4.6	6.3	21.1	3.7	14.8
US	16.8	20.8	27.2	51.8	10.4	24.6	2.6	4.7	6.2	20.6	3.6	14.4
Oceania	14.0	16.4	21.9	41.1	7.8	19.2	2.1	3.1	5.2	15.7	3.1	10.5

Source: UN World Population Prospects 2024.

2. LABOUR FORCE PROJECTIONS

Labour force participation among the population aged 20 to 64 years in the EU is projected to rise from around 81% in 2025 to 84% in 2080. Higher participation of older workers and of women in general are the main factors behind this projected trend. The labour supply, however, is projected to shrink by 17% over the same period, as higher labour force participation would only partly offset the steep projected fall in the working-age population. The employment rate in the EU is projected to increase from 76% in 2025 to 80% in 2080. Revisions versus the 2024 Ageing Report in employment are driven by the updated demographic projections.

2.1. INTRODUCTION

The macroeconomic repercussions of the demographic trends described in the previous chapter will depend in large part on future labour force developments, namely how many people take part in the labour market and for how long. More people working and doing so on average for a longer period broadens the contributory basis, generating more resources to finance the rising pension, health care and long-term care costs that are generally associated with population ageing, without crowding out other government spending.

How long people will work in the future depends, among other factors, on the incentives created by public and private pension schemes. It is therefore important to consider the likely impact of adopted pension reforms on labour market exit behaviour ([10]).

This chapter starts with a comparison of recent trends in labour force participation, followed by an overview of the estimated effects of legislated pension reforms. Thereafter, the participation rate and employment rate projections are presented ([11]). An analysis of the economic dependency ratio and a comparison with the 2024 Ageing Report conclude the chapter. The boxes and annexes focus on the underlying assumptions and provide a detailed overview of the methodology.

2.2. PAST TRENDS AND MAIN DRIVERS OF LABOUR MARKET DEVELOPMENTS

The composition of the labour force has changed fundamentally in recent decades. Younger cohorts have tended to enter the labour market later, while women and older people have steadily increased labour market participation. These dynamics have several drivers:

- Demographic factors, e.g. a delay in childbearing and a decline in fertility rates.
- Sociocultural factors, e.g. longer schooling and the fading of the breadwinner model.
- Institutional factors, e.g. increases in legal retirement ages and stricter labour market legislation.
- Economic factors, e.g. more part-time employment and a shift to a service-based economy.

Labour market participation has been trending upwards. Among all EU people of working age (aged 20-64) it rose from 74% in 2005 to 77% in 2015 and to 81% in 2025 (see Table I.2.1). Compared to 2015, participation rose in all EU Member States, with the largest increases for Hungary and Malta, at about 10-15 pps, followed by Poland with an 8 pps increase. Intra-EU differences have been narrowing but are still substantial with a difference of almost 17 pps in 2025 (down from 23 pps in 2005)

([10]) Other aspects that may affect labour supply are health and disability conditions, as well as active labour market policies to increase demand for older workers and the flexibility of working in old age.

([11]) To project participation rates by sex and single age, the Cohort Simulation Model (CSM) developed by the European Commission (DG ECFIN) is used (see Box I.2.1 and Annex 1).

between the Member States with the highest and lowest participation rates among people aged between 20 and 64.

Rising female labour force participation has been the predominant driver behind rising overall participation. Among men, labour participation in the EU was stable at around 82% in the 2000s but has been rising slowly since. Given the fast rise in women's participation, the sex gap has narrowed (from almost 17 pps in 2005 to about 9 pps in 2025). Yet, a considerable gap remains, also because male participation has picked up. Even though women's participation has been steadily increasing, it stays below male participation for all age groups in nearly all countries. In general:

- Prime-age men (aged 25-54) have the highest participation rates of all age groups, at over 90% in nearly all countries.
- The participation rates of men aged 55 to 64 years rose considerably in the past twenty years, given a general increase in statutory retirement ages and tightened access to early exit pathways. For women aged 55-64, the increase was even stronger, though starting from a lower level, reflecting higher female participation at lower ages and a convergence in retirement conditions with those for men in most countries.
- Compared with 2005, participation rates of young people (aged 20-24) have declined in a majority of countries as people tend to study longer. This trend has reversed over the past decade, though, with higher participation in most countries in 2025 compared with 2015.
- Given these ongoing trends, a further increase in total labour market participation can be expected, thanks to prime-age women and older workers in general.

Table I.2.1: **Historical participation rates – total (%)**

	total (20-64y)			young (20-24y)			prime-age (25-54y)			older (55-64y)			
	2005	2015	2025	2005	2015	2025	2005	2015	2025	2005	2015	2025	
BE	72.4	73.3	77.4	59.6	51.0	50.9	84.6	85.1	85.9	33.3	46.6	64.1	BE
BG	68.6	73.8	79.8	51.3	42.1	37.3	80.2	83.2	87.1	38.0	58.0	73.5	BG
CZ	76.5	78.7	85.3	57.3	52.1	52.2	88.3	88.6	90.8	46.9	58.0	80.3	CZ
DK	81.7	80.2	84.8	77.3	70.2	80.6	88.1	86.4	87.8	62.8	65.9	78.0	DK
DE	78.1	81.8	84.3	69.8	68.4	75.9	86.4	87.6	88.4	52.1	69.4	77.3	DE
EE	78.2	81.1	87.9	63.7	63.1	72.9	85.8	87.6	91.8	58.9	68.3	81.0	EE
IE	75.7	77.3	83.7	74.8	74.0	76.1	80.9	82.0	88.1	53.1	60.2	71.8	IE
EL	71.5	73.1	77.3	53.0	47.4	50.2	81.5	85.4	86.2	43.6	41.6	63.8	EL
ES	73.9	79.1	80.7	67.3	56.7	57.1	81.2	87.4	87.9	46.0	57.6	69.3	ES
FR	75.6	77.3	81.4	61.2	62.3	68.7	87.3	87.5	88.9	40.4	52.6	65.4	FR
HR	68.3	71.6	77.9	59.6	50.4	50.1	80.6	84.5	89.1	35.1	44.0	56.7	HR
IT	66.4	68.6	71.8	52.7	44.1	40.5	77.4	76.8	79.7	32.5	51.1	63.2	IT
CY	78.5	79.8	84.4	71.6	64.5	64.3	85.7	87.9	89.9	52.4	57.4	72.9	CY
LV	76.5	80.5	84.4	64.2	65.1	69.7	85.2	87.6	88.3	53.1	65.5	78.5	LV
LT	77.0	80.8	85.9	48.4	58.8	67.1	87.8	89.3	91.4	53.2	66.2	76.6	LT
LU	72.1	75.7	78.6	50.4	52.0	46.1	83.9	87.7	90.2	32.4	40.3	51.8	LU
HU	66.9	73.8	84.7	47.4	51.4	53.6	78.7	85.8	91.7	34.3	48.1	74.4	HU
MT	60.8	72.6	86.1	76.5	71.9	76.3	66.4	81.7	91.8	33.0	44.6	62.9	MT
NL	76.8	81.5	86.3	77.8	76.1	87.0	85.4	87.1	89.3	45.4	67.1	77.6	NL
AT	74.3	78.7	81.9	73.6	73.7	74.9	85.7	88.0	90.0	31.2	48.6	62.8	AT
PL	70.9	73.2	81.4	59.1	55.3	58.9	82.5	85.1	89.4	30.5	46.9	61.5	PL
PT	78.3	79.0	84.6	62.9	57.0	58.8	87.0	88.7	92.3	53.7	57.1	73.1	PT
RO	68.4	70.8	73.2	48.9	49.2	42.7	78.2	82.5	81.8	40.4	42.7	59.4	RO
SI	76.0	76.0	81.9	61.9	53.4	58.4	88.8	90.8	92.6	32.1	39.7	59.7	SI
SK	76.5	76.2	82.5	63.2	51.9	47.5	88.0	87.3	90.3	35.0	51.8	69.0	SK
FI	79.0	79.9	83.8	69.7	70.2	70.3	87.7	86.6	87.4	56.6	65.2	79.1	FI
SE	83.4	86.2	88.5	70.5	72.0	74.0	88.8	90.9	92.1	72.7	78.7	84.0	SE
NO	81.2	82.4	82.3	72.9	72.1	74.7	86.5	86.5	86.0	66.5	73.4	73.9	NO
EA	74.1	77.0	80.9	63.6	59.7	66.3	83.8	85.3	87.3	43.3	57.8	70.3	EA
EU	73.7	76.6	81.1	62.0	58.9	65.2	83.5	85.4	87.6	43.1	56.3	70.1	EU

Source: Eurostat, LFS.

Table I.2.2: **Historical participation rates – men (%)**

	total (20-64y)			young (20-24y)			prime-age (25-54y)			older (55-64y)			
	2005	2015	2025	2005	2015	2025	2005	2015	2025	2005	2015	2025	
BE	80.2	78.3	81.6	63.1	55.5	55.5	92.2	89.9	89.9	43.4	52.2	69.0	BE
BG	74.2	78.0	83.7	58.3	49.6	44.1	83.3	86.4	90.4	49.9	62.7	77.6	BG
CZ	85.3	86.6	90.6	65.6	60.2	58.6	94.8	95.4	96.3	62.1	68.3	84.0	CZ
DK	85.8	84.2	88.1	80.1	71.7	82.0	91.7	90.3	91.0	68.7	71.2	82.3	DK
DE	85.4	86.7	88.0	73.0	70.3	78.1	93.6	92.5	92.1	61.2	75.3	81.3	DE
EE	81.8	85.4	88.8	72.5	69.6	75.8	88.4	92.5	93.4	60.5	67.4	78.5	EE
IE	86.5	85.0	88.6	79.1	77.5	77.3	92.1	89.6	93.0	67.7	70.7	79.0	IE
EL	84.5	81.7	85.1	57.6	49.5	52.8	94.6	93.1	93.4	60.8	54.9	75.1	EL
ES	85.5	84.8	84.8	72.4	58.9	59.6	92.3	92.6	91.6	62.9	66.2	75.1	ES
FR	81.4	81.7	84.5	65.7	66.7	72.5	94.0	92.5	92.3	43.6	55.1	67.3	FR
HR	75.9	76.7	80.9	67.7	58.5	57.0	85.9	86.9	91.1	47.2	54.7	59.8	HR
IT	79.4	79.5	81.5	59.6	51.0	47.1	91.3	87.7	89.4	44.3	63.3	74.2	IT
CY	89.3	85.2	89.1	74.9	63.2	63.9	95.3	92.6	93.9	73.2	70.0	83.1	CY
LV	82.3	84.0	86.2	74.1	70.2	72.2	89.1	90.6	90.5	60.1	68.0	78.0	LV
LT	81.6	83.0	86.5	56.6	63.5	68.6	89.9	90.4	92.3	64.2	69.8	74.4	LT
LU	82.2	81.3	82.0	54.4	53.6	48.0	95.5	93.9	93.0	39.4	45.5	58.9	LU
HU	74.2	81.0	88.9	52.8	56.2	57.9	85.5	92.0	94.5	42.3	57.8	83.2	HU
MT	84.2	86.4	91.9	80.7	75.5	78.2	93.4	95.4	96.4	54.2	63.4	75.2	MT
NL	84.8	87.2	90.1	79.5	75.7	86.9	93.2	92.1	92.9	56.8	77.6	83.9	NL
AT	81.0	83.4	85.9	76.3	76.7	77.3	92.0	91.6	93.0	40.4	57.4	69.7	AT
PL	78.1	80.5	87.0	65.0	63.9	64.3	88.7	90.6	93.2	40.9	57.5	73.2	PL
PT	84.5	82.9	87.1	67.9	58.1	61.7	92.5	91.7	94.0	62.4	65.1	77.1	PT
RO	76.2	80.7	83.0	55.2	57.9	50.4	85.8	91.6	91.2	48.4	53.8	70.4	RO
SI	80.6	79.7	84.4	67.1	59.4	64.3	91.1	92.9	94.0	45.4	46.4	63.0	SI
SK	85.1	83.4	86.8	70.7	63.0	57.3	93.8	93.6	93.8	55.1	58.4	73.5	SK
FI	81.3	81.6	85.2	72.7	70.7	72.9	90.3	89.6	89.3	56.9	63.2	78.3	FI
SE	86.4	88.7	90.7	73.4	73.4	76.0	91.7	93.3	94.1	76.4	81.8	86.6	SE
NO	85.0	85.0	85.1	75.3	73.6	76.3	89.9	89.0	88.4	72.1	76.9	78.6	NO
EA	82.8	83.1	85.4	68.4	63.3	69.0	92.5	91.3	91.7	53.4	65.0	75.7	EA
EU	82.1	83.0	85.8	67.0	63.3	68.1	91.7	91.4	92.1	53.1	64.2	76.0	EU

Source: Eurostat, LFS.

Table I.2.3: **Historical participation rates – women (%)**

	total (20-64y)			young (20-24y)			prime-age (25-54y)			older (55-64y)			
	2005	2015	2025	2005	2015	2025	2005	2015	2025	2005	2015	2025	
BE	64.6	68.2	73.2	56.1	46.3	46.1	76.8	80.2	81.9	23.4	41.2	59.3	BE
BG	63.1	69.6	75.8	44.1	34.1	30.1	77.2	79.8	83.6	27.8	53.8	69.5	BG
CZ	67.7	70.7	79.9	48.6	43.6	45.6	81.6	81.4	85.0	32.9	48.3	76.7	CZ
DK	77.6	76.2	81.4	74.5	68.7	79.2	84.5	82.4	84.4	56.8	60.7	73.7	DK
DE	70.7	76.8	80.5	66.4	66.5	73.5	79.1	82.5	84.5	43.2	63.8	73.3	DE
EE	74.9	77.0	86.9	54.7	56.6	69.9	83.3	82.7	90.3	57.7	69.0	83.3	EE
IE	64.8	69.8	79.0	70.5	70.5	74.8	69.6	74.6	83.5	38.2	49.7	64.9	IE
EL	58.6	64.7	69.5	48.4	45.1	47.1	68.4	77.7	78.8	27.1	29.5	53.3	EL
ES	62.2	73.4	76.6	62.0	54.5	54.4	69.8	82.0	84.1	29.9	49.4	63.8	ES
FR	70.0	73.0	78.4	56.7	58.0	64.7	80.9	82.7	85.6	37.4	50.3	63.5	FR
HR	61.0	66.7	74.7	50.8	42.2	42.3	75.3	82.1	86.9	24.9	34.1	53.8	HR
IT	53.6	57.8	62.0	45.7	36.9	33.2	63.7	65.9	69.9	21.5	39.6	52.6	IT
CY	68.2	74.9	79.8	68.5	65.7	64.8	76.5	83.8	86.0	32.8	45.3	63.5	CY
LV	71.4	77.3	82.7	54.1	59.7	67.2	81.5	84.6	86.1	48.0	63.5	78.9	LV
LT	72.8	78.7	85.4	40.0	53.8	65.4	85.8	88.2	90.5	44.8	63.3	78.4	LT
LU	61.9	70.0	75.1	46.4	50.4	43.9	72.2	81.3	87.4	25.1	35.0	44.4	LU
HU	59.9	66.7	80.3	42.0	46.2	49.2	72.1	79.6	88.8	27.7	39.9	66.1	HU
MT	37.2	58.1	78.9	72.1	68.0	73.9	38.7	67.2	85.9	12.7	26.0	49.7	MT
NL	68.8	75.9	82.5	76.0	76.6	87.1	77.4	82.1	85.7	33.9	56.7	71.4	NL
AT	67.6	74.0	77.9	71.0	70.7	72.3	79.4	84.4	87.0	22.5	40.2	56.0	AT
PL	63.9	66.0	75.8	53.0	46.2	53.5	76.4	79.6	85.6	21.5	37.3	50.9	PL
PT	72.4	75.4	82.3	57.7	56.0	55.7	81.7	86.0	90.6	46.0	50.0	69.6	PT
RO	60.8	60.7	63.0	42.4	39.9	34.4	70.7	72.9	71.7	33.5	32.8	49.1	RO
SI	71.2	72.0	79.1	56.4	47.4	51.8	86.4	88.6	91.0	18.9	32.9	56.4	SI
SK	68.0	69.0	78.0	55.5	40.4	37.3	82.1	80.8	86.7	18.1	45.8	64.8	SK
FI	76.7	78.2	82.3	66.8	69.7	67.6	85.1	83.6	85.4	56.4	67.2	79.8	FI
SE	80.3	83.7	86.3	67.5	70.6	71.8	85.9	88.4	89.9	69.0	75.5	81.5	SE
NO	77.3	79.6	79.4	70.7	70.4	73.0	82.9	83.9	83.5	60.9	69.8	69.1	NO
EA	65.5	71.0	76.5	58.8	55.9	63.8	75.1	79.3	83.0	33.8	51.0	65.4	EA
EU	65.4	70.3	76.5	56.9	54.4	62.4	75.4	79.4	83.2	33.7	49.0	64.9	EU

Source: Eurostat, LFS.

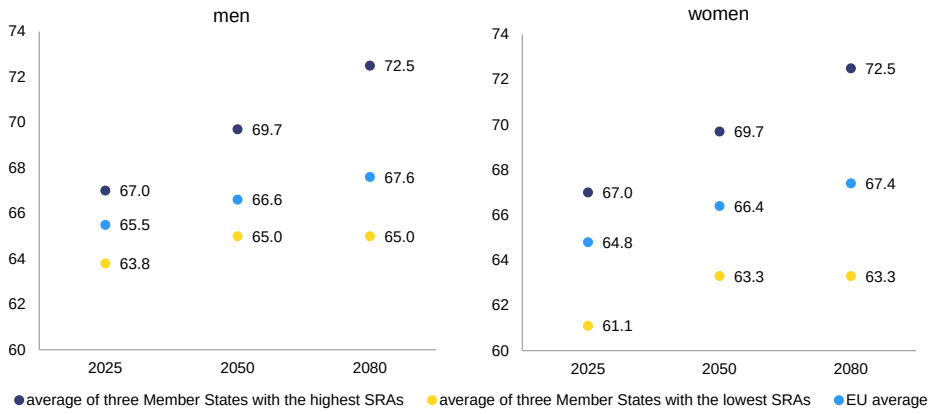
2.3. PENSION REFORMS AND OLDER WORKERS' LABOUR MARKET PARTICIPATION

Tighter eligibility criteria and stronger retirement disincentives will induce older workers to stay longer in the workforce and delay retirement. As a result, participation among older age groups is projected to rise strongly in many countries and the age at which people exit the labour market is expected to increase by about two years on average in the EU by 2080.

Pension reforms in EU Member States

The vast majority of Member States has legislated pension reforms in recent decades. Some countries enacted systemic reforms, which revise the fundamental design of the public pension scheme, for example when moving from the traditional defined benefit scheme to a point system or notional defined contribution scheme. Most changes have been parametric, though: altering certain settings without touching on the overall framework. Two broad types of parametric interventions can be distinguished: altering the eligibility requirements such as age and contributory period or changing benefits' generosity by adapting the pension formula (e.g. accrual rate, pensionable earnings, valorisation of accrued rights) and indexation rules. Some countries also increased the contributions for current workers to strengthen the internal financial balance of their pension systems or created pension reserve funds.

Graph I.2.1: **Statutory retirement ages (SRA)**



For a comprehensive overview, see Table II.A3.2 in Annex 3.

Source: European Commission, EPC.

Among eligibility measures, the most frequent reform consists in raising the statutory and early retirement ages. It is the measure with the largest direct impact on labour market exit behaviour as it forces people to delay retirement. Nearly all Member States have already increased their early and statutory retirement ages or are in the process of doing so in the coming years (see Annex 3 - Table II.A3.2). As a result, the average statutory retirement age for men (women) is expected to rise from 65.5 years (64.8) in 2025 to 66.6 years (66.4) in 2050, and to 67.6 years (67.4) in 2080 (see Graph I.2.1), with often similar increases in the early retirement age.

Some countries have introduced an automatic indexation of legal retirement ages to longevity to make their pension system more robust to the expected continuous increase in life expectancy (see Table I.2.4). It forces people to delay retirement. The adoption of an automatic balancing mechanism within the pension system or a sustainability factor, which instead corrects the pension benefit for longevity, are other types of adjustment mechanisms found in some Member States. While they contribute to the financial sustainability of pension schemes, they have at most an indirect impact on labour market participation.

Box I.2.2 at the end of the chapter provides an overview of ongoing reforms with an expected impact on effective retirement ages in the 27 Member States and Norway. These reforms are incorporated in the Cohort Simulation Model which the AWG uses to project participation rates in the context of the

Ageing Report (see Box I.2.1). At the same time, there have been several cases of adopted reforms being partially or fully reversed. For instance,

- In *Poland*, the 2016 reform lowered the statutory retirement age to 60 years for women and to 65 years for men, restoring the situation that existed before the 2012 reform, which envisaged a gradual increase in the statutory retirement age to 67 years.
- In *Czechia*, the 2017 reform capped the statutory retirement age at 65 years, undoing the permanent increase in the retirement age, which was roughly equivalent to changes in life expectancy, adopted in 2011. However, the 2024 reform brings the retirement age to 67 years in the long term.
- In *Croatia*, the 2019 reform capped the early/statutory retirement age at 60/65 years as of 2030, lowered the penalty for early retirement and reversed the acceleration of the equalisation of retirement ages between men and women. As a result, the 2014 and 2018 reforms, which would have increased the early/statutory retirement age to 62/67 years by 2038, were partly reversed.

Table I.2.4: **Automatic adjustment mechanisms**

	Automatic balancing mechanism	Sustainability factor(3)	Retirement age linked to life expectancy	Legislated
IT		X	X	1995 & 2010
LV		X		1996
SE	X	X	X	1998, 2001 & 2022
PL		X		1999
DE(1)	X			2004
FI		X	X	2005 & 2015
PT		X	X	2007 & 2013
NO		X	X	2009 & 2024
EL(2)	X		X	2012 & 2010
DK			X	2011
CY			X	2012
LU	X			2012
NL			X	2012
LT	X			2016
EE			X	2018
SK			X	2023
RO			X	2023

(1) Effectively suspended until 2031.
(2) The auxiliary pension system has an automatic balancing mechanism.
(3) Benefit linked to life expectancy. In NDC systems (IT, LV, SE, PL & NO), this is done through the annuity factor.

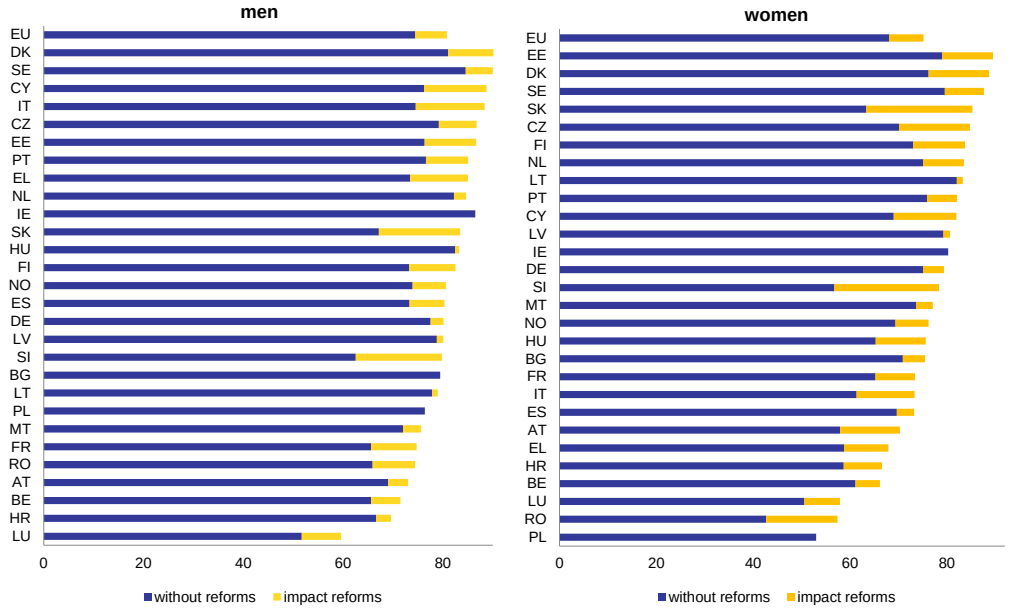
Source: European Commission, EPC.

- In *Slovakia*, the 2019 reform capped the statutory retirement age at 64 years, lower for mothers, thus abolishing the link to life expectancy adopted in 2012. However, in 2023, the link to longevity was reintroduced.
- *Spain* suspended the application of the index for pension revaluation and the sustainability factor and eventually repealed both mechanisms in 2021. Instead, a 'closure clause' (*cláusula de cierre*) was introduced, which could trigger an automatic increase in social security contributions if pension spending net of revenue measures is projected to exceed a specific threshold. This mechanism, which upon its first evaluation was not activated, is not accounted for in the projections.
- *The Netherlands* introduced a full adjustment of its statutory retirement age to longevity in 2012, to be enacted as of 2024. The 2019 reform lessened the link to 2/3rd of the gain in life expectancy.
- In *Bulgaria*, the 2015 reform stipulates that, once the statutory retirement ages for men and women will have equalised at 65 years in 2037, they should be automatically extended in line with changes in life expectancy. The precise way such link would be enacted has not been legislated, though. As a result, the link is not included in the Ageing Report's pension projections for Bulgaria.

Reform-induced changes in participation rates and exit ages

The age group 55-64 is the most affected by measures aimed at postponing retirement. Table I.2.1 showed how average participation rate for this age bracket in the EU rose from 43% in 2005 to around 70% in 2025. Graph I.2.2 shows the estimated impact of pension reforms by 2080. Reforms adopted across Member States should lift participation among men aged 55-64 years by about 6 pps on average by 2080. Among women the projected increase is 7 pps on average. Also for the age group 65-69, legislated reforms are expected to lift participation (see Graph I.2.3), with an average increase of about 17 pps for both men and women by 2080, though mainly in countries that adjust their legal retirement ages to life expectancy.

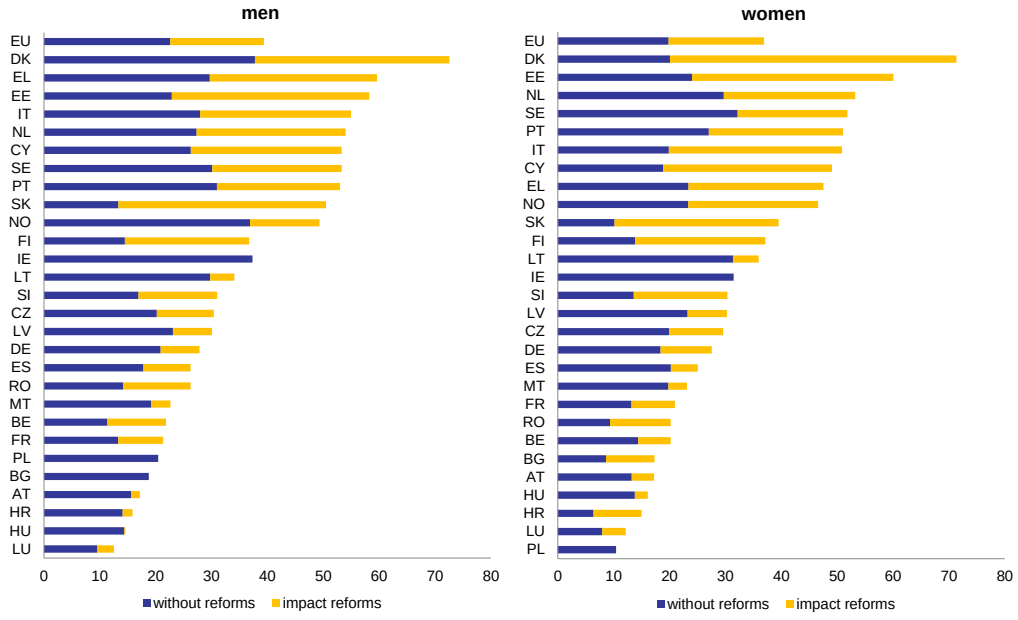
Graph I.2.2: **Impact of pension reforms on the participation rate of the age group 55-64 in 2080 (%)**



The reform impact is the difference between the participation rate projection in the baseline and that in the 'constant retirement age scenario' (see Chapter 5).

Source: European Commission, EPC.

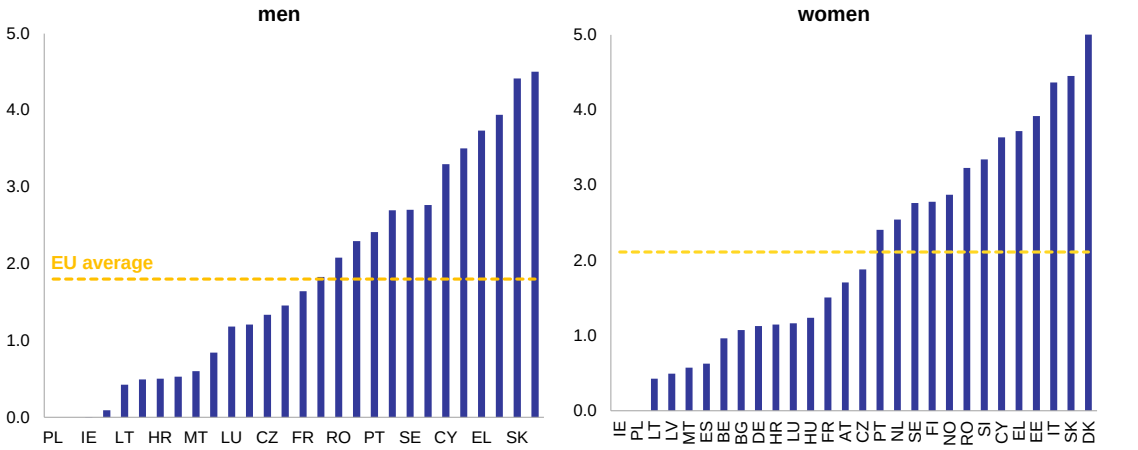
Graph I.2.3: **Impact of pension reforms on the participation rate of the age group 65-69 in 2080 (%)**



Source: European Commission, EPC.

Graph I.2.4 shows the change in the average labour market exit ages for men and women between 2025 and 2080. It provides a summary measure of the long-term impact of enacted pension reforms. The projections show an average increase of around two years in the age at which people exit the labour market, which is an approximation for the expected change in the effective retirement age. Again, those countries that introduced an automatic link between retirement ages and gains in life expectancy show the highest increases.

Graph I.2.4: **Projected change of the average labour market exit age by 2080 (years)**



Based on the age group 51-74.
Source: European Commission, EPC.

2.4. LABOUR MARKET PARTICIPATION AND LABOUR SUPPLY PROJECTIONS

Social and institutional factors such as a higher attachment to the labour market of younger women and adopted pension reforms are expected to push up participation rates. This increase somewhat offsets the impact of a decrease in the working-age population on the labour supply.

2.4.1. Participation rate projections

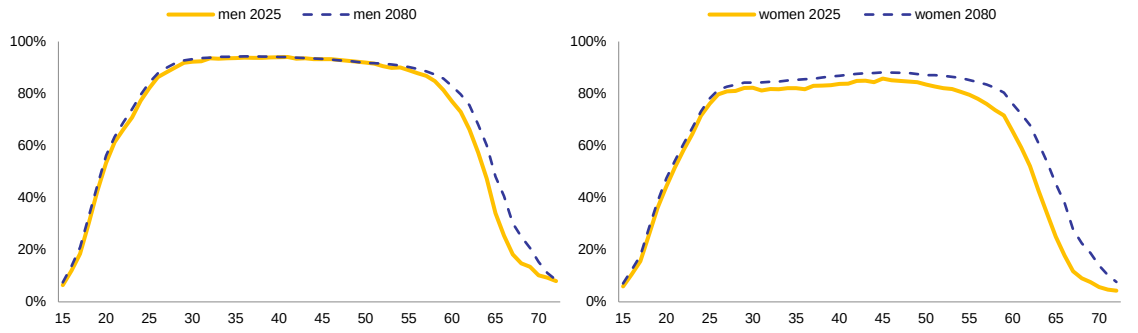
The total participation rate in the EU is projected to increase by around 3 pps by 2080, with women's labour market participation anticipated to rise by 5 pps compared with 2 pps for men, and large increases (8 pps on average) among the older labour market segments.

As discussed in Chapter 1, the population of working age is projected to decline substantially in the coming decades as large cohorts of retiring people are replaced by smaller cohorts of younger workers. Other things being equal and given the age profile of participation rates, the increasing share of older workers in the labour force pulls down the total participation rate.

The projections nevertheless reveal a rightward shift in the age profile of both male and female participation, particularly at ages over 60 years (see Graph I.2.5). For female participation, there is in addition a general upward shift. These broad trends reflect the combined effect of pension reforms and the rising attachment of younger generations of women to the labour market.

Tables I.2.5, I.2.6 and I.2.7 provide an overview of the main projected developments for the participation rates, broken down by broad age group and sex. In the EU, the labour market participation of those of working age (20-64y) would increase by about 3 pps between 2025 and 2080: from 81% to 84%. This increase is dominated by rising participation of women, with a change of close to 5 pps compared with less than 2 pps for men. With 81% of the female working-age population expected to be active in the labour market in 2080, women's participation would nevertheless remain 6 pps below that of men, compared with 9 pps at present.

Graph I.2.5: **Age profile of participation rate by sex, EU, 2025 & 2080**



Source: European Commission, EPC.

Participation among people aged 20 to 64 is expected to rise in all countries. The largest increases are projected for Italy, Denmark, Slovenia, Ireland, the Netherlands and Estonia, with participation projected to rise by between 4 and 7 pps by 2080. Estonia, the Netherlands, Denmark and Sweden are the countries with the highest projected participation rate in 2080, at above 90%. This compares with rates that remain below 80% for Romania, Italy, Belgium and Luxembourg by 2080.

When comparing projections for male and female participation for the 20-64 age group, aside from Romania, all countries show a higher increase for women. Despite the resulting convergence, overall participation of women would remain below that of men throughout the projection period in all Member States except Estonia and Lithuania, the only countries where female participation would exceed 90%.

Participation among the youngest age bracket (20-24y) is expected to rise in all countries, by around 2 pps on average. Differences between countries and between sexes remain substantial for this age group considering the assumptions made in the Cohort Simulation Model for this age group (see Box I.2.1).

For the prime-age group (25-54y) an average increase of close to 2 pps is projected in the EU, with a maximum rise of around 4 pps for Denmark, the Netherlands, Ireland and Estonia. Decreases of less

Table I.2.5: **Participation rate projections by age group – total (%)**

	total		*young*		*prime-age*		*older*		*change 2025-2080 (pps)*				
	20-64		20-24		25-54		55-64		total	young	prime-age	older	
	2025	2080	2025	2080	2025	2080	2025	2080	20-64	20-24	25-54	55-64	
BE	77.4	78.9	50.9	53.2	85.9	86.1	64.1	68.8	1.5	2.3	0.2	4.7	BE
BG	79.8	81.8	37.3	39.7	87.1	89.9	73.5	77.5	2.0	2.4	2.8	4.0	BG
CZ	85.3	86.2	52.2	54.9	90.8	90.8	80.3	85.8	0.9	2.7	0.0	5.5	CZ
DK	84.8	90.7	80.6	83.5	87.8	92.2	78.0	89.4	6.0	2.8	4.5	11.5	DK
DE	84.3	86.8	75.9	76.2	88.4	90.9	77.3	79.8	2.5	0.3	2.5	2.5	DE
EE	87.9	92.2	72.9	78.6	91.8	95.6	81.0	88.1	4.3	5.8	3.8	7.1	EE
IE	83.7	88.3	76.1	79.1	88.1	92.0	71.8	82.2	4.6	3.0	3.9	10.4	IE
EL	77.3	80.5	50.2	52.7	86.2	85.7	63.8	77.0	3.1	2.6	-0.6	13.2	EL
ES	80.7	82.1	57.1	58.1	87.9	87.1	69.3	76.8	1.3	1.1	-0.8	7.4	ES
FR	81.4	84.9	68.7	69.9	88.9	90.9	65.4	74.1	3.5	1.2	1.9	8.7	FR
HR	77.9	81.6	50.1	51.7	89.1	90.5	56.7	68.3	3.7	1.6	1.4	11.7	HR
IT	71.8	78.8	40.5	41.6	79.7	82.5	63.2	81.2	7.0	1.1	2.8	18.0	IT
CY	84.4	88.2	64.3	70.4	89.9	91.6	72.9	85.5	3.8	6.1	1.8	12.5	CY
LV	84.4	86.2	69.7	72.1	88.3	90.6	78.5	80.4	1.8	2.4	2.2	1.9	LV
LT	85.9	89.1	67.1	70.8	91.4	94.9	76.6	80.9	3.2	3.7	3.4	4.4	LT
LU	78.6	79.4	46.1	51.1	90.2	90.6	51.8	58.8	0.8	5.1	0.4	6.9	LU
HU	84.7	86.9	53.6	55.7	91.7	94.2	74.4	79.5	2.2	2.0	2.4	5.1	HU
MT	86.1	89.4	76.3	80.7	91.8	95.3	62.9	76.3	3.3	4.4	3.5	13.4	MT
NL	86.3	90.9	87.0	88.4	89.3	93.5	77.6	84.1	4.6	1.4	4.2	6.5	NL
AT	81.9	85.2	74.9	76.8	90.0	91.6	62.8	71.7	3.3	1.9	1.5	8.9	AT
PL	81.4	82.2	58.9	61.4	89.4	92.1	61.5	65.0	0.8	2.4	2.8	3.5	PL
PT	84.6	88.3	58.8	59.6	92.3	94.1	73.1	83.6	3.7	0.8	1.8	10.5	PT
RO	73.2	74.2	42.7	44.8	81.8	81.1	59.4	66.5	1.0	2.1	-0.7	7.1	RO
SI	81.9	86.6	58.4	59.7	92.6	93.1	59.7	79.2	4.7	1.3	0.5	19.5	SI
SK	82.5	86.1	47.5	50.8	90.3	91.8	69.0	84.4	3.6	3.4	1.5	15.4	SK
FI	83.8	86.0	70.3	72.1	87.4	88.9	79.1	83.1	2.2	1.8	1.6	4.1	FI
SE	88.5	90.4	74.0	77.4	92.1	92.8	84.0	88.9	1.8	3.5	0.7	4.8	SE
NO	82.3	85.2	74.7	79.2	86.0	88.5	73.9	78.5	2.9	4.5	2.4	4.5	NO
EA	80.9	84.4	66.3	68.3	87.3	89.3	70.3	78.3	3.5	1.9	2.0	8.0	EA
EU	81.1	84.3	65.2	67.5	87.6	89.5	70.1	77.8	3.3	2.3	1.9	7.7	EU

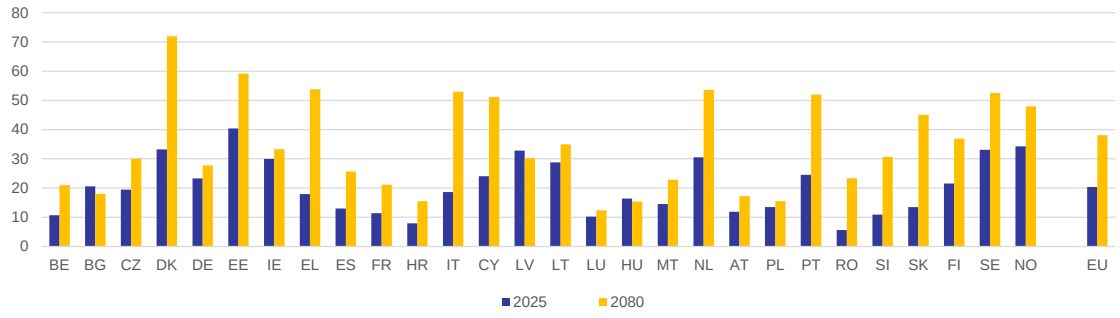
Source: European Commission, EPC.

than 1 pp are projected for Greece, Spain and Romania. By 2080, only Italy and Romania would have prime-age participation rates below 85%, while twenty Member States would have a participation rate over 90% among people aged 25-54. Male participation in the 25-54 age bracket is expected to remain broadly stable at an elevated level, with the EU average participation rate rising slightly to around 93% and projected changes limited to ±2.5 pps in all countries. In contrast, female participation is projected to rise by 3 pps on average among the same age group, with an increase in all countries aside from Czechia, Greece, Spain and Romania. The average difference in participation for prime-age men and women would still amount to 6 pps in 2080, compared with 9 pps in 2025. Only in Estonia and Lithuania, women aged 25 to 54 years are projected to become more active than men of the same age.

Participation among the group of older workers (55-64y) is expected to increase in all countries, often substantially. The EU average rises by almost 8 pps by 2080, to around 78%. The projected increase exceeds 15 pps for Italy, Slovenia and Slovakia. Participation would remain below 70% by 2080 in Belgium, Croatia, Luxembourg, Poland and Romania. With higher increases for women (+10 pps) than for men (+5 pps), the gender gap is projected to narrow substantially and even to be closed for several countries, which is currently already the case for Estonia, Latvia, Lithuania and Finland. By 2080 this would also be the case for Malta and Slovakia.

As Graph I.2.5 showed, the increase in labour market participation extends beyond the age of 64, also considering the envisaged rise in legal retirement ages in many countries. Indeed, when considering the 65-69 age group, there is a similar upward trend in participation (see Graph I.2.6). From 20% in 2025, the average participation rate rises to 38% in 2080, though with large differences between Member States. The largest increases occur for countries with a link to life expectancy, with participation projected to rise by 25 pps or more in Denmark, Greece, Italy, Cyprus, Portugal and Slovakia.

Graph I.2.6: **Participation rate projections – 65-69y (%)**



Source: European Commission, EPC.

Table I.2.6: **Participation rate projections by age group – men (%)**

	total 20-64		*young* 20-24		*prime-age* 25-54		*older* 55-64		*change 2025-2080 (pps)* total 20-64	young 20-24	prime-age 25-54	older 55-64	
	2025	2080	2025	2080	2025	2080	2025	2080					
BE	81.6	82.5	55.5	57.6	89.9	90.0	69.0	71.5	0.9	2.1	0.1	2.5	BE
BG	83.7	84.7	44.1	45.2	90.4	92.7	77.6	79.4	1.0	1.1	2.3	1.8	BG
CZ	90.6	91.0	58.6	62.1	96.3	96.6	84.0	86.8	0.3	3.5	0.3	2.8	CZ
DK	88.1	91.7	82.0	83.9	91.0	93.4	82.3	90.1	3.6	1.9	2.3	7.9	DK
DE	88.0	88.5	78.1	78.6	92.1	92.9	81.3	80.1	0.4	0.5	0.8	-1.2	DE
EE	88.8	91.5	75.8	81.7	93.4	94.7	78.5	86.7	2.7	5.9	1.4	8.1	EE
IE	88.6	90.8	77.3	79.6	93.0	95.0	79.0	84.1	2.3	2.3	2.0	5.1	IE
EL	85.1	87.3	52.8	55.5	93.4	92.4	75.1	85.0	2.1	2.7	-0.9	9.9	EL
ES	84.8	85.4	59.6	61.1	91.6	90.4	75.1	80.3	0.6	1.5	-1.2	5.2	ES
FR	84.5	86.8	72.5	74.1	92.3	92.8	67.3	74.7	2.3	1.6	0.5	7.5	FR
HR	80.9	84.0	57.0	59.7	91.1	92.5	59.8	69.6	3.1	2.7	1.4	9.8	HR
IT	81.5	86.5	47.1	48.2	89.4	90.6	74.2	88.4	5.0	1.1	1.2	14.1	IT
CY	89.1	91.3	63.9	71.8	93.9	94.7	83.1	88.8	2.1	8.0	0.9	5.6	CY
LV	86.2	87.6	72.2	74.6	90.5	92.3	78.0	80.1	1.4	2.4	1.8	2.0	LV
LT	86.5	88.3	68.6	71.4	92.3	94.3	74.4	79.0	1.8	2.8	2.0	4.6	LT
LU	82.0	81.1	48.0	52.8	93.0	92.6	58.9	59.6	-0.8	4.8	-0.3	0.7	LU
HU	88.9	88.8	57.9	60.4	94.5	95.0	83.2	83.2	-0.1	2.6	0.4	0.0	HU
MT	91.9	89.7	78.2	81.1	96.4	96.0	75.2	75.6	-2.2	2.8	-0.3	0.4	MT
NL	90.1	91.8	86.9	87.9	92.9	94.8	83.9	84.7	1.7	1.0	1.9	0.8	NL
AT	85.9	87.3	77.3	79.0	93.0	93.8	69.7	73.0	1.4	1.7	0.7	3.3	AT
PL	87.0	87.4	64.3	67.1	93.2	94.6	73.2	76.4	0.5	2.9	1.4	3.2	PL
PT	87.1	89.7	61.7	63.0	94.0	95.2	77.1	85.1	2.6	1.2	1.1	8.0	PT
RO	83.0	84.0	50.4	53.0	91.2	91.7	70.4	74.4	1.0	2.6	0.4	4.1	RO
SI	84.4	87.9	64.3	65.3	94.0	94.0	63.0	79.8	3.5	1.0	0.0	16.8	SI
SK	86.8	88.1	57.3	62.0	93.8	93.8	73.5	83.5	1.3	4.6	0.0	9.9	SK
FI	85.2	86.7	72.9	75.1	89.3	89.7	78.3	82.5	1.4	2.2	0.5	4.2	FI
SE	90.7	92.1	76.0	80.7	94.1	94.5	86.6	90.0	1.4	4.7	0.3	3.4	SE
NO	85.1	87.0	76.3	81.0	88.4	90.1	78.6	80.6	2.0	4.8	1.8	2.0	NO
EA	85.4	87.3	69.0	71.1	91.7	92.3	75.7	80.7	1.9	2.1	0.6	5.0	EA
EU	85.8	87.5	68.1	70.6	92.1	92.7	76.0	80.8	1.7	2.5	0.6	4.8	EU

Source: European Commission, EPC.

Table I.2.7: **Participation rate projections by age group – women (%)**

	total 20-64		*young* 20-24		*prime-age* 25-54		*older* 55-64		*change 2025-2080 (pps)* total 20-64	young 20-24	prime-age 25-54	older 55-64	
	2025	2080	2025	2080	2025	2080	2025	2080					
BE	73.2	75.2	46.1	48.6	81.9	82.1	59.3	66.2	2.0	2.5	0.2	6.9	BE
BG	75.8	78.8	30.1	33.8	83.6	87.0	69.5	75.5	3.0	3.8	3.4	6.0	BG
CZ	79.9	81.2	45.6	47.3	85.0	84.6	76.7	84.8	1.3	1.7	-0.4	8.1	CZ
DK	81.4	89.7	79.2	83.0	84.4	91.0	73.7	88.7	8.3	3.8	6.6	15.0	DK
DE	80.5	85.0	73.5	73.7	84.5	88.7	73.3	79.4	4.5	0.2	4.3	6.1	DE
EE	86.9	92.8	69.9	75.5	90.3	96.5	83.3	89.6	5.9	5.6	6.3	6.3	EE
IE	79.0	85.8	74.8	78.5	83.5	88.9	64.9	80.3	6.8	3.7	5.5	15.4	IE
EL	69.5	72.7	47.1	49.5	78.8	77.7	53.3	67.9	3.2	2.4	-1.1	14.6	EL
ES	76.6	78.6	54.4	55.0	84.1	83.7	63.8	73.3	2.1	0.6	-0.4	9.5	ES
FR	78.4	83.0	64.7	65.5	85.6	88.9	63.5	73.5	4.6	0.8	3.3	9.9	FR
HR	74.7	78.4	42.3	42.7	86.9	87.9	53.8	66.6	3.7	0.4	1.0	12.8	HR
IT	62.0	70.3	33.2	34.3	69.9	73.6	52.6	73.4	8.3	1.1	3.7	20.7	IT
CY	79.8	84.9	64.8	68.7	86.0	88.2	63.5	82.0	5.1	4.0	2.2	18.5	CY
LV	82.7	84.8	67.2	69.4	86.1	88.6	78.9	80.7	2.1	2.2	2.5	1.8	LV
LT	85.4	90.1	65.4	70.2	90.5	95.5	78.4	83.3	4.7	4.8	5.0	5.0	LT
LU	75.1	77.6	43.9	49.4	87.4	88.5	44.4	58.0	2.5	5.5	1.1	13.5	LU
HU	80.3	84.8	49.2	50.6	88.8	93.3	66.1	75.6	4.5	1.4	4.5	9.5	HU
MT	78.9	88.9	73.9	80.3	85.9	94.4	49.7	77.1	10.0	6.3	8.5	27.4	MT
NL	82.5	89.9	87.1	88.9	85.7	92.3	71.4	83.6	7.4	1.8	6.5	12.2	NL
AT	77.9	83.1	72.3	74.5	87.0	89.3	56.0	70.3	5.2	2.2	2.2	14.3	AT
PL	75.8	76.6	53.5	55.4	85.6	89.5	50.9	53.0	0.8	1.9	3.9	2.1	PL
PT	82.3	87.0	55.7	56.2	90.6	93.1	69.6	82.1	4.7	0.4	2.5	12.6	PT
RO	63.0	63.1	34.4	36.0	71.7	69.0	49.1	57.4	0.1	1.6	-2.7	8.3	RO
SI	79.1	85.1	51.8	53.6	91.0	92.0	56.4	78.4	6.0	1.8	1.0	22.1	SI
SK	78.0	84.0	37.3	39.2	86.7	89.8	64.8	85.3	5.9	1.9	3.1	20.5	SK
FI	82.3	85.3	67.6	68.8	85.4	88.1	79.8	83.8	3.0	1.3	2.7	4.0	FI
SE	86.3	88.6	71.8	74.0	89.9	91.0	81.5	87.7	2.3	2.2	1.1	6.2	SE
NO	79.4	83.3	73.0	77.2	83.5	86.7	69.1	76.2	3.9	4.2	3.2	7.2	NO
EA	76.5	81.6	63.8	65.6	83.0	86.3	65.4	76.0	5.1	1.7	3.3	10.6	EA
EU	76.5	81.2	62.4	64.5	83.2	86.3	64.9	75.2	4.7	2.1	3.1	10.3	EU

Source: European Commission, EPC.

2.4.2. Breakdown of changes in participation rates

Table I.2.8 applies a shift-share analysis to the change in the participation rate by 2080 along age and sex dimension. The overall change in the participation rate is broken down in a pure participation rate effect, a demographic effect and a residual interaction effect.

The participation rate effect captures changes in participation rates of specific age and gender groups. It is positive for all Member States. This reflects the trend increase in the participation rates of women and older workers, with a small decrease in participation among prime-aged people in some countries.

The demographic effect, capturing changes in the structure of the working-age population, is negative in most Member States because of shrinking cohorts of prime-aged people and women in general. Women are thus associated with both positive participation effects and negative demographic effects. The former reflects the upward transmission of younger cohorts' higher participation rates, as captured by the CSM. The latter reflects the ageing of the population, with a stronger impact on women, mostly because they leave the labour force, on average, earlier than men.

Table I.2.8: **Breakdown of overall change in labour market participation (pps)**

	Change in participation rate 2025-2080 (pps)	Effect of group-specific participation rate changes												Demographic effect						Interaction effect	
		Total				*Men*				*Women*											
		Working-age (20-64)	Young (20-24)	Prime-age (25-54)	Older (55-64)	Working-age (20-64)	Young (20-24)	Prime-age (25-54)	Older (55-64)	Working-age (20-64)	Young (20-24)	Prime-age (25-54)	Older (55-64)	Working-age (20-64)	Young (20-24)	Prime-age (25-54)	Older (55-64)	Men	Women		
BE	***1.5***	***1.4***	0.2	0.1	1.1	0.4	0.1	0.0	0.3	1.0	0.1	0.1	0.8	***0.0***	-0.3	-0.2	0.6	0.2	-0.2	***0.0***	BE
BG	***2.0***	***3.1***	0.2	1.9	1.0	1.1	0.0	0.8	0.2	2.0	0.1	1.1	0.8	***-1.0***	0.9	-1.3	-0.6	0.1	-0.1	***0.0***	BG
CZ	***0.9***	***1.3***	0.2	0.0	1.1	0.5	0.1	0.1	0.3	0.8	0.1	-0.2	0.8	***-0.7***	0.4	-4.5	3.4	0.5	-0.5	***0.3***	CZ
DK	***6.0***	***5.9***	0.3	3.0	2.6	1.8	0.1	0.8	0.9	4.1	0.2	2.2	1.7	***0.0***	-1.0	0.1	0.8	0.5	-0.5	***0.1***	DK
DE	***2.5***	***2.3***	0.0	1.6	0.7	0.1	0.0	0.3	-0.2	2.2	0.0	1.4	0.8	***0.2***	0.5	1.5	-1.9	0.2	-0.2	***0.0***	DE
EE	***4.3***	***4.6***	0.5	2.6	1.5	1.6	0.3	0.5	0.8	3.1	0.2	2.1	0.7	***-0.5***	0.0	-4.2	3.6	0.6	-0.6	***0.2***	EE
IE	***4.6***	***5.0***	0.3	2.7	2.0	1.3	0.1	0.7	0.5	3.7	0.2	2.0	1.5	***-0.8***	-0.7	-4.3	4.2	0.9	-0.8	***0.4***	IE
EL	***3.1***	***3.1***	0.2	-0.4	3.3	1.0	0.1	-0.3	1.2	1.6	0.1	-0.4	1.9	***0.0***	0.0	-0.2	0.2	2.8	-2.3	***0.0***	EL
ES	***1.3***	***1.3***	0.1	-0.5	1.7	0.3	0.1	-0.4	0.6	1.0	0.0	-0.1	1.1	***-0.1***	-0.4	-0.8	1.1	0.5	-0.4	***0.1***	ES
FR	***3.5***	***3.4***	0.1	1.3	2.0	1.1	0.1	0.2	0.8	2.3	0.0	1.1	1.2	***0.0***	-0.4	0.2	0.3	0.9	-0.8	***0.0***	FR
HR	***3.7***	***3.9***	0.1	0.9	2.8	1.7	0.1	0.5	1.1	1.9	0.0	0.3	1.6	***-0.3***	-0.3	-1.0	0.9	4.8	-4.4	***0.2***	HR
IT	***7.0***	***6.8***	0.1	1.8	4.9	2.3	0.0	0.4	1.9	4.1	0.0	1.2	2.9	***0.4***	-0.2	1.4	-0.8	1.9	-1.4	***-0.2***	IT
CY	***3.8***	***4.2***	0.5	1.3	2.4	1.2	0.4	0.3	0.5	2.8	0.2	0.8	1.9	***-1.2***	-0.2	-6.4	5.5	2.8	-2.5	***0.8***	CY
LV	***1.8***	***2.2***	0.2	1.5	0.4	0.9	0.1	0.6	0.2	1.2	0.1	0.9	0.2	***-0.3***	0.3	-2.8	2.2	2.9	-2.8	***0.0***	LV
LT	***3.2***	***3.7***	0.3	2.3	1.1	1.3	0.1	0.7	0.5	2.5	0.2	1.6	0.6	***-0.5***	-0.4	-3.6	3.6	3.6	-3.6	***0.0***	LT
LU	***0.8***	***2.1***	0.5	0.3	1.4	0.2	0.2	-0.1	0.1	1.9	0.2	0.4	1.3	***-1.6***	-0.2	-3.8	2.4	-0.2	0.2	***0.3***	LU
HU	***2.2***	***3.0***	0.2	1.7	1.1	0.3	0.1	0.2	0.0	2.6	0.1	1.5	1.0	***-0.9***	0.2	-4.2	3.2	1.0	-0.9	***0.1***	HU
MT	***3.3***	***5.1***	0.4	2.7	2.1	0.0	0.1	-0.1	0.0	5.1	0.2	2.9	2.1	***-2.9***	-1.3	-8.6	6.9	1.1	-1.0	***1.1***	MT
NL	***4.6***	***4.4***	0.2	2.8	1.5	0.8	0.1	0.6	0.1	3.7	0.1	2.1	1.4	***0.1***	-1.4	1.7	-0.3	0.1	-0.1	***0.0***	NL
AT	***3.3***	***3.4***	0.2	1.0	2.2	0.7	0.1	0.3	0.4	2.6	0.1	0.7	1.8	***-0.1***	0.2	-0.3	0.0	0.5	-0.5	***0.0***	AT
PL	***0.8***	***2.9***	0.2	2.0	0.7	0.9	0.1	0.5	0.3	1.7	0.1	1.4	0.2	***-2.1***	0.1	-6.7	4.5	1.6	-1.4	***0.1***	PL
PT	***3.7***	***3.8***	0.1	1.2	2.5	1.3	0.1	0.4	0.9	2.5	0.0	0.8	1.6	***-0.2***	0.1	-0.9	0.6	0.1	-0.1	***0.1***	PT
RO	***1.0***	***1.3***	0.2	-0.5	1.6	0.7	0.1	0.1	0.4	0.2	0.1	-0.9	1.0	***-0.5***	-0.2	-2.1	1.8	1.9	-1.4	***0.2***	RO
SI	***4.7***	***5.1***	0.1	0.3	4.7	2.0	0.0	0.0	2.0	3.0	0.1	0.3	2.6	***-0.5***	0.5	-1.4	0.4	1.0	-1.0	***0.1***	SI
SK	***3.6***	***4.5***	0.3	1.1	3.2	1.2	0.2	0.0	1.0	3.4	0.1	1.1	2.2	***-1.7***	0.5	-6.2	4.0	0.9	-0.8	***0.8***	SK
FI	***2.2***	***2.1***	0.2	1.1	0.9	0.7	0.1	0.2	0.5	1.4	0.1	0.9	0.5	***0.0***	-0.8	-1.1	1.9	0.6	-0.6	***0.1***	FI
SE	***1.8***	***1.9***	0.3	0.5	1.0	0.7	0.2	0.1	0.4	1.1	0.1	0.4	0.7	***-0.1***	-0.3	-1.9	2.1	0.4	-0.3	***0.1***	SE
NO	***2.9***	***3.1***	0.5	1.7	1.0	1.1	0.2	0.6	0.2	2.0	0.2	1.1	0.8	***-0.2***	-0.6	-1.4	1.9	0.0	0.0	***0.0***	NO
EA	***3.5***	***3.6***	0.2	1.3	2.1	0.9	0.1	0.2	0.6	2.6	0.1	1.1	1.4	***0.1***	-0.1	0.3	-0.1	0.8	-0.7	***0.0***	EA
EU	***3.3***	***3.4***	0.2	1.3	1.9	0.9	0.1	0.2	0.6	2.4	0.1	1.0	1.3	***-0.1***	-0.1	-0.6	0.6	0.9	-0.8	***0.0***	EU

Source: European Commission, EPC.

2.4.3. Projection of labour supply

The total labour supply in the EU is expected to decrease by 17% over the projection period, with a decrease of at least 25% in many Member States.

Multiplying the participation rate projections by single age and sex with the demographic projections provides the labour supply projections. The labour force in the EU is expected to decrease substantially over the projection period. By 2080, the labour supply would shrink by as much as 17% compared with the size in 2025, with an average annual decrease of 0.3% (see Table I.2.9). This entails a fall in the number of workers of 36 million: 19 million fewer men and 17 million fewer women.

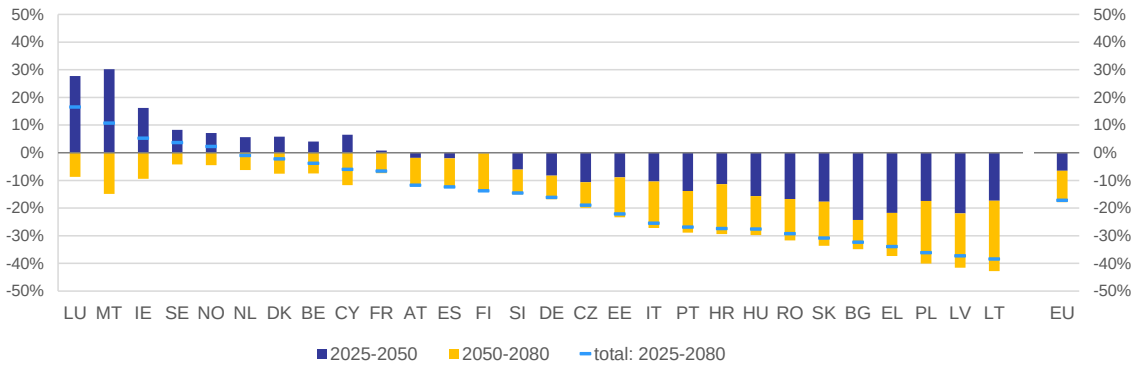
Graph I.2.7 highlights the substantial differences in labour supply projections across Member States, ranging from an increase by 17% in Luxembourg([12]) to a decrease by more than a third in Greece, Poland, Latvia and Lithuania in the period up to 2080. The labour force in 2080 would exceed that in 2025 for only five countries. These steep declines in the labour force reverberate in the potential growth estimates discussed in Chapter 3. The decline by 7% on average in 2025-2050 is followed by another decline of 11% in 2050-2080. While by 2050 the labour force would still grow in several countries, during the remainder of the projection period, it is expected to decline in all countries and those with the sharpest fall in 2025-2050 also show the steepest decline in 2050-2080.

Table I.2.9: **Labour supply projections – total**

	Total labour force (20-64y, '000 persons)		Change (2080/2025)	Avg annual growth rate (2025-2080)
	2025	2080		
BE	5,319	5,118	-4%	-0.1%
BG	2,912	1,971	-32%	-0.7%
CZ	5,418	4,393	-19%	-0.4%
DK	2,938	2,873	-2%	0.0%
DE	41,156	34,538	-16%	-0.3%
EE	693	540	-22%	-0.5%
IE	2,714	2,857	5%	0.1%
EL	4,649	3,073	-34%	-0.7%
ES	24,231	21,241	-12%	-0.2%
FR	31,055	29,003	-7%	-0.1%
HR	1,744	1,267	-27%	-0.6%
IT	24,685	18,399	-25%	-0.5%
CY	515	484	-6%	-0.1%
LV	897	563	-37%	-0.8%
LT	1,486	917	-38%	-0.9%
LU	344	401	17%	0.3%
HU	4,799	3,478	-28%	-0.6%
MT	327	362	11%	0.2%
NL	9,130	9,041	-1%	0.0%
AT	4,556	4,021	-12%	-0.2%
PL	17,869	11,412	-36%	-0.8%
PT	5,308	3,884	-27%	-0.6%
RO	8,158	5,774	-29%	-0.6%
SI	1,015	868	-15%	-0.3%
SK	2,755	1,907	-31%	-0.7%
FI	2,658	2,294	-14%	-0.3%
SE	5,297	5,495	4%	0.1%
NO	2,714	2,776	2%	0.0%
EA	168,149	142,750	-15%	-0.3%
EU	212,627	176,175	-17%	-0.3%

Source: European Commission, EPC.

Graph I.2.7: **Change in the labour force, 20-64y (%)**



Source: European Commission, EPC.

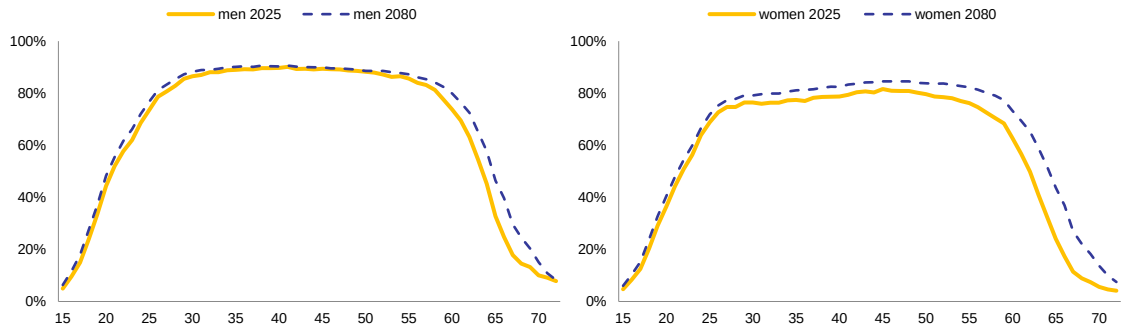
([12]) Reflecting the strong population growth (see Chapter 1), which also results in a larger labour force for Malta and, to a lesser extent, Ireland, Sweden and Norway.

2.5. EMPLOYMENT PROJECTIONS

Employment in the EU is projected to increase from around 76% of the working-age population in 2025 to around 80% in 2080. This change mostly reflects higher employment rates among older people and women in general, given higher participation among these groups and the assumption of declining unemployment over time.

Employment is calculated as a residual variable, being determined by the EUROPOP demographic projections (see Chapter 1), the participation rates projected through the CSM (see Section 2.4) and the unemployment rate assumptions (see Box I.2.3).

Graph I.2.8: **Age profile of employment rate by sex, EU, 2025 & 2080**



Source: European Commission, EPC.

The employment rate among people aged between 20 and 64 in the EU is projected to rise from around 76% in 2025 to 80% in 2080 (see Table I.2.10). This overall increase in the employment rate by 4 pps results from a 5 pps increase in the female employment rate and a smaller increase of about 2 pps in the male one (see Tables I.2.11 and I.2.12). The age profile in Graph I.2.8 tracks that of participation, with a rightward shift for both men and women and higher employment for women at most ages by 2080. The unemployment assumptions, with a general decline in the unemployment rate from current levels in the next decades (see Box I.2.3), contribute to the general increase in employment rates. Despite the strong increase in women's employment, a higher share of the male population aged 20-64 would nevertheless be employed in 2080: 83% compared to 77% for women.

Employment among older workers is expected to rise considerably over the projection period for both sexes, with increases of 5 pps and 10 pps in the respective employment rates of men and women aged 55-64. This reflects how recent pension and labour market reforms in many Member States incentivise older workers to retire later. By 2080, the employment rate for people aged 55-64 would remain below 65% in Luxembourg, Poland and Romania, which currently are among the countries with the lowest participation for the age bracket, in particular among women, and, aside from Romania, have no planned increase in the legal retirement ages (see Table II.A3.2 in Annex 3).

Table I.2.10: **Employment rate projections by age group – total (%)**

	total 20-64		*young* 20-24		*prime-age* 25-54		*older* 55-64		*change 2025-2080 (pps)* total 20-64	young 20-24	prime-age 25-54	older 55-64	
	2025	2080	2025	2080	2025	2080	2025	2080					
BE	72.9	74.9	43.0	46.0	81.2	82.0	61.5	66.3	2.0	3.0	0.8	4.8	BE
BG	77.0	77.6	33.2	33.7	84.3	85.6	71.3	74.2	0.6	0.4	1.4	2.9	BG
CZ	83.1	83.6	48.3	50.4	88.6	88.3	78.4	83.5	0.5	2.1	-0.4	5.1	CZ
DK	79.9	88.2	71.5	78.8	82.9	89.7	75.1	87.8	8.3	7.3	6.9	12.7	DK
DE	81.1	83.8	71.1	71.8	84.9	87.6	75.3	77.9	2.6	0.7	2.7	2.6	DE
EE	81.6	87.0	61.6	69.3	85.6	90.3	76.9	84.5	5.3	7.7	4.7	7.6	EE
IE	80.2	84.5	69.5	71.9	84.7	88.3	69.5	79.3	4.3	2.5	3.6	9.9	IE
EL	70.5	75.2	41.0	45.8	78.7	80.1	59.4	73.1	4.7	4.8	1.3	13.7	EL
ES	72.4	76.1	44.5	49.1	79.7	81.4	62.4	71.2	3.7	4.7	1.6	8.9	ES
FR	75.5	80.1	56.7	60.3	83.1	86.2	61.9	71.1	4.6	3.6	3.1	9.1	FR
HR	74.3	77.2	43.0	42.6	85.5	86.1	54.7	65.4	2.8	-0.4	0.6	10.7	HR
IT	67.4	73.7	32.9	33.2	74.8	77.0	60.9	78.2	6.3	0.2	2.2	17.3	IT
CY	80.7	83.5	56.7	60.0	86.2	87.0	71.0	82.5	2.8	3.2	0.8	11.6	CY
LV	78.4	80.8	61.0	64.2	82.2	85.0	73.8	76.1	2.4	3.2	2.8	2.3	LV
LT	79.9	83.7	58.9	63.6	85.9	90.0	70.0	74.9	3.8	4.7	4.1	4.9	LT
LU	73.8	76.6	39.4	46.8	85.0	87.6	49.5	57.1	2.8	7.4	2.6	7.6	LU
HU	81.0	83.1	47.7	49.4	88.0	90.2	72.2	77.0	2.0	1.7	2.2	4.8	HU
MT	83.2	87.5	70.9	76.8	89.1	93.6	60.9	74.7	4.3	6.0	4.5	13.8	MT
NL	83.5	89.0	80.6	84.3	86.7	91.8	75.8	82.9	5.6	3.7	5.1	7.0	NL
AT	77.4	82.1	67.0	71.3	85.3	88.3	60.3	69.7	4.6	4.3	3.0	9.4	AT
PL	78.9	79.6	52.9	54.9	87.0	89.6	60.2	63.6	0.7	2.0	2.6	3.4	PL
PT	79.6	82.6	48.7	48.4	87.5	88.8	69.4	79.0	3.0	-0.3	1.3	9.6	PT
RO	69.1	70.3	33.9	36.4	77.6	77.2	57.2	64.2	1.3	2.4	-0.4	7.0	RO
SI	79.0	82.4	52.4	51.7	89.6	89.0	58.0	76.0	3.4	-0.7	-0.6	18.0	SI
SK	78.0	80.9	41.5	43.7	85.6	86.3	66.1	80.6	2.8	2.2	0.6	14.5	SK
FI	76.3	81.3	57.9	64.2	80.3	84.5	72.2	78.6	5.0	6.3	4.2	6.4	FI
SE	81.8	85.6	62.2	69.0	85.7	88.3	78.7	84.9	3.8	6.8	2.6	6.2	SE
NO	79.4	82.8	68.4	73.4	83.2	86.0	72.5	77.2	3.3	5.1	2.8	4.7	NO
EA	75.9	80.1	58.1	61.5	82.2	84.9	66.9	75.2	4.2	3.4	2.8	8.2	EA
EU	76.4	80.2	56.9	60.4	82.9	85.3	67.1	74.9	3.8	3.6	2.5	7.8	EU

Source: European Commission, EPC.

Table I.2.11: **Employment rate projections by age group – men (%)**

	total 20-64		*young* 20-24		*prime-age* 25-54		*older* 55-64		*change 2025-2080 (pps)* total 20-64	young 20-24	prime-age 25-54	older 55-64	
	2025	2080	2025	2080	2025	2080	2025	2080					
BE	76.4	78.0	46.3	49.3	84.7	85.4	65.9	68.6	1.6	2.9	0.7	2.7	BE
BG	80.7	80.2	39.0	37.9	87.3	88.1	75.7	76.5	-0.5	-1.1	0.8	0.9	BG
CZ	88.5	88.5	54.4	57.2	94.4	94.4	82.1	84.5	0.0	2.8	0.0	2.4	CZ
DK	82.9	89.1	72.3	78.9	86.0	90.9	79.0	88.4	6.2	6.7	4.8	9.4	DK
DE	84.4	85.1	72.8	73.7	88.3	89.4	78.9	77.9	0.7	0.9	1.1	-1.0	DE
EE	81.8	85.7	62.6	70.7	86.6	89.1	73.3	82.1	3.9	8.1	2.6	8.7	EE
IE	84.7	86.8	70.4	72.3	89.2	91.0	76.3	81.1	2.1	1.8	1.8	4.8	IE
EL	79.1	82.6	43.6	48.4	87.1	87.6	71.4	81.8	3.5	4.8	0.6	10.5	EL
ES	77.2	79.9	46.8	51.9	84.3	85.2	68.6	75.3	2.7	5.1	0.9	6.7	ES
FR	78.3	81.8	59.5	63.7	86.4	88.1	63.7	71.5	3.5	4.1	1.7	7.9	FR
HR	76.9	79.1	49.2	49.6	87.0	87.6	57.5	66.2	2.2	0.4	0.6	8.8	HR
IT	76.9	81.3	38.9	39.1	84.5	85.1	71.5	85.0	4.4	0.3	0.7	13.4	IT
CY	85.6	87.0	57.0	62.1	90.3	90.3	81.6	86.7	1.4	5.1	0.0	5.1	CY
LV	79.4	81.5	62.2	65.6	83.6	86.1	72.7	75.2	2.1	3.4	2.5	2.5	LV
LT	79.6	82.3	58.8	62.9	86.5	89.3	65.3	71.2	2.6	4.1	2.8	5.9	LT
LU	77.2	78.5	41.1	48.5	87.7	89.7	56.6	58.3	1.3	7.4	2.0	1.7	LU
HU	85.0	84.8	51.5	53.7	90.5	90.8	80.8	80.7	-0.2	2.2	0.3	-0.1	HU
MT	89.1	88.0	73.2	77.6	93.8	94.5	72.4	73.8	-1.1	4.4	0.7	1.4	MT
NL	87.2	90.0	80.4	83.7	90.4	93.2	81.9	83.4	2.8	3.3	2.8	1.5	NL
AT	80.9	83.9	68.6	72.9	87.9	90.3	66.6	70.7	2.9	4.3	2.4	4.2	AT
PL	84.5	84.8	58.0	60.5	91.0	92.3	71.3	74.4	0.3	2.5	1.3	3.1	PL
PT	82.3	84.4	52.3	52.4	89.6	90.4	73.3	80.6	2.1	0.1	0.8	7.3	PT
RO	78.2	79.6	40.4	43.3	86.5	87.2	67.7	71.8	1.3	2.9	0.7	4.1	RO
SI	81.7	84.1	58.6	57.7	91.3	90.3	61.2	76.7	2.4	-0.9	-1.0	15.5	SI
SK	82.5	83.1	49.7	52.9	89.3	88.5	71.1	80.5	0.7	3.2	-0.8	9.3	SK
FI	76.9	81.5	60.1	67.0	81.5	84.9	70.3	77.2	4.5	6.9	3.4	6.9	FI
SE	83.7	87.1	63.9	71.8	87.8	90.1	80.0	85.1	3.4	7.9	2.2	5.1	SE
NO	81.9	84.3	69.6	75.0	85.3	87.5	76.6	78.8	2.4	5.4	2.2	2.2	NO
EA	80.3	82.9	60.1	63.7	86.6	87.9	72.2	77.5	2.6	3.6	1.3	5.3	EA
EU	81.0	83.3	59.2	63.0	87.3	88.5	72.7	77.7	2.3	3.8	1.2	5.0	EU

Source: European Commission, EPC.

Table I.2.12: **Employment rate projections by age group – women (%)**

	total 20-64		*young* 20-24		*prime-age* 25-54		*older* 55-64		*change 2025-2080 (pps)* total 20-64	young 20-24	prime-age 25-54	older 55-64	
	2025	2080	2025	2080	2025	2080	2025	2080					
BE	69.3	71.7	39.5	42.5	77.8	78.5	57.1	64.0	2.4	3.0	0.8	6.9	BE
BG	73.3	74.9	27.1	29.2	81.0	83.1	67.2	71.9	1.6	2.1	2.0	4.7	BG
CZ	77.5	78.4	42.0	43.2	82.6	81.7	74.8	82.4	0.8	1.1	-0.9	7.6	CZ
DK	76.8	87.3	70.7	78.6	79.7	88.6	71.3	87.2	10.5	7.9	8.9	16.0	DK
DE	77.7	82.3	69.2	69.8	81.4	85.8	71.7	77.8	4.6	0.5	4.4	6.1	DE
EE	81.4	88.2	60.6	67.9	84.5	91.6	80.0	86.8	6.8	7.3	7.0	6.9	EE
IE	75.8	82.2	68.4	71.6	80.4	85.5	62.8	77.6	6.4	3.1	5.2	14.8	IE
EL	61.7	66.6	38.0	42.7	70.2	71.3	48.3	63.3	4.9	4.6	1.1	14.9	EL
ES	67.7	72.1	41.9	46.2	75.1	77.3	56.3	67.2	4.5	4.2	2.2	10.9	ES
FR	72.8	78.4	53.8	56.8	80.0	84.3	60.3	70.6	5.6	3.0	4.3	10.3	FR
HR	71.7	74.6	35.9	34.8	83.8	84.0	52.1	64.2	2.9	-1.1	0.2	12.1	HR
IT	57.8	65.3	26.3	26.6	65.0	67.9	50.8	70.8	7.4	0.3	3.0	20.0	IT
CY	75.9	79.8	56.4	57.6	82.2	83.3	61.1	78.2	3.8	1.1	1.0	17.0	CY
LV	77.5	80.1	59.8	62.7	80.8	83.8	74.7	77.0	2.6	2.9	3.0	2.3	LV
LT	80.2	85.5	58.9	64.3	85.1	90.8	73.9	79.4	5.4	5.4	5.7	5.5	LT
LU	70.3	74.7	37.5	45.0	82.2	85.5	41.9	55.8	4.4	7.5	3.3	13.9	LU
HU	77.0	81.2	43.7	44.9	85.3	89.5	64.2	73.2	4.2	1.2	4.2	9.0	HU
MT	76.0	86.9	68.0	76.0	82.9	92.3	48.5	75.9	10.9	8.0	9.4	27.4	MT
NL	79.6	88.0	80.8	84.8	83.0	90.4	69.8	82.4	8.4	4.0	7.4	12.6	NL
AT	73.9	80.3	65.3	69.5	82.6	86.2	54.2	68.7	6.3	4.2	3.6	14.5	AT
PL	73.3	74.1	47.6	49.1	82.9	86.7	50.1	52.2	0.8	1.5	3.7	2.1	PL
PT	77.0	81.0	45.0	44.3	85.4	87.3	65.9	77.4	4.0	-0.6	1.9	11.6	PT
RO	59.5	59.8	27.0	29.0	68.1	65.8	47.3	55.4	0.3	2.0	-2.4	8.1	RO
SI	76.0	80.5	45.5	45.1	87.7	87.5	54.7	75.3	4.5	-0.5	-0.3	20.5	SI
SK	73.6	78.5	33.0	34.1	81.8	83.9	61.4	80.8	5.0	1.1	2.1	19.4	SK
FI	75.6	81.1	55.6	61.2	79.1	84.1	74.1	80.1	5.5	5.7	5.0	5.9	FI
SE	79.8	84.1	60.5	66.0	83.4	86.4	77.3	84.7	4.3	5.5	3.0	7.4	SE
NO	76.9	81.2	67.0	71.8	81.1	84.5	68.4	75.6	4.3	4.8	3.5	7.2	NO
EA	71.6	77.4	56.1	59.3	77.8	81.9	62.3	73.1	5.8	3.2	4.1	10.8	EA
EU	71.9	77.2	54.6	58.0	78.4	82.2	62.0	72.4	5.2	3.4	3.7	10.3	EU

Source: European Commission, EPC.

2.6. ECONOMIC DEPENDENCY RATIOS

The old-age economic dependency ratio (inactive elderly versus employed people) is projected to increase significantly in all Member States, especially over the next several decades. Similarly, the total economic dependency ratio (inactive versus employed people) is expected to rise but less so. Variability across countries is large, though.

The *old-age economic dependency ratio* provides a summary indicator of the expected macroeconomic repercussions of demographic ageing. The indicator expresses the inactive elderly population (65+) as a share of total employment (aged 20-64 or 15-74). This ratio would rise sharply: from 47% in 2025 to 64% in 2050 and 74% in 2080 (from 44% to 60% and 69% in terms of employment in the 15-74 age group) (see Table I.2.13). This means that, in 2080, for every 3 inactive persons above the age of 65, there would be 4 employed persons, down from more than 6 in 2025.

Across EU Member States, the projected old-age economic dependency ratio for 2080 ranges from a minimum of 56% in Denmark to a maximum of 90% in Italy. For most countries, the increase at the start of the projection period, i.e. 2025-2050, is larger than the increase in the period 2050-2080. The largest total increase is projected for Lithuania, Luxembourg, Cyprus, Ireland, Spain and Poland.

The *total economic dependency ratio*, calculated as the ratio between the total inactive population, regardless of age, and those in employment (aged 20-64 or 15-74), measures the average number of individuals each employed person 'supports' economically. Under this broad definition, the dependency ratio is expected to increase continuously over the projection period, from an average of 114% in 2025 to 133% in 2080 for the EU average (see Table I.2.14). Compared with the old-age economic dependency ratio, the increase is smaller since it also accounts for the decline in the youngest age groups in the demographic projections.

The projected development of this indicator reflects the profound societal impact of changes in life expectancy and fertility rates over the next decades. There are, however, large differences between countries. The increase ranges from more than 35 pps in Spain and Luxembourg, to just 2 pps in Denmark, where it would even decline initially, as is the case for Malta, Finland and Sweden.

Table I.2.13: **Old-age economic dependency ratio (%)**

	(inactive population 65+) / (employment 20-64y)					(inactive population 65+) / (employment 15-74y)					
	2025	2050	2080	*change 2025-50*	*change 2050-80*	2025	2050	2080	*change 2025-50*	*change 2050-80*	
BE	46.6	57.5	74.4	*11*	*17*	44.8	54.7	70.3	*10*	*16*	BE
BG	51.1	75.1	70.4	*24*	*-5*	49.0	72.4	68.2	*23*	*-4*	BG
CZ	39.7	58.3	64.5	*19*	*6*	38.3	55.3	60.9	*17*	*6*	CZ
DK	40.2	45.1	55.6	*5*	*10*	36.1	39.9	46.7	*4*	*7*	DK
DE	44.1	56.4	64.3	*12*	*8*	41.2	52.4	59.6	*11*	*7*	DE
EE	37.5	54.5	63.8	*17*	*9*	34.6	50.8	56.7	*16*	*6*	EE
IE	29.6	50.3	72.8	*21*	*23*	27.5	46.4	66.6	*19*	*20*	IE
EL	55.3	85.5	79.1	*30*	*-6*	53.3	78.2	70.1	*25*	*-8*	EL
ES	45.5	74.0	86.5	*29*	*12*	44.2	70.3	81.7	*26*	*11*	ES
FR	50.7	62.3	75.1	*12*	*13*	48.7	59.0	70.7	*10*	*12*	FR
HR	52.8	64.3	78.7	*12*	*14*	51.5	62.2	76.1	*11*	*14*	HR
IT	59.8	85.4	90.0	*26*	*5*	57.5	79.0	79.3	*22*	*0*	IT
CY	33.6	55.9	78.0	*22*	*22*	32.2	52.3	70.9	*20*	*19*	CY
LV	42.4	64.8	75.9	*22*	*11*	39.4	60.9	71.2	*21*	*10*	LV
LT	39.1	59.4	84.3	*20*	*25*	37.0	55.6	78.3	*19*	*23*	LT
LU	31.2	46.1	75.7	*15*	*30*	30.4	44.7	72.8	*14*	*28*	LU
HU	40.5	57.6	65.4	*17*	*8*	39.1	55.7	63.2	*17*	*7*	HU
MT	32.0	35.3	71.3	*3*	*36*	30.9	33.9	67.6	*3*	*34*	MT
NL	38.1	46.0	57.0	*8*	*11*	33.8	41.2	49.3	*7*	*8*	NL
AT	41.6	57.9	71.5	*16*	*14*	39.4	54.4	66.8	*15*	*12*	AT
PL	42.2	65.1	83.2	*23*	*18*	40.9	62.7	80.0	*22*	*17*	PL
PT	48.6	79.3	83.1	*31*	*4*	46.4	73.7	75.4	*27*	*2*	PT
RO	49.3	69.4	80.2	*20*	*11*	48.6	67.0	76.1	*18*	*9*	RO
SI	46.6	64.3	69.2	*18*	*5*	45.2	60.7	65.2	*15*	*5*	SI
SK	37.5	64.7	67.4	*27*	*3*	36.5	61.6	62.0	*25*	*0*	SK
FI	51.1	56.3	76.7	*5*	*20*	47.5	52.8	69.8	*5*	*17*	FI
SE	40.3	47.0	60.1	*7*	*13*	37.3	43.3	53.5	*6*	*10*	SE
NO	35.7	49.5	64.4	*14*	*15*	32.2	44.8	56.5	*13*	*12*	NO
EA	47.8	65.1	74.8	*17*	*10*	45.3	60.9	68.9	*16*	*8*	EA
EU	46.7	64.1	74.3	*17*	*10*	44.4	60.1	68.7	*16*	*9*	EU

Source: European Commission, EPC.

Table I.2.14: **Total economic dependency ratio (%)**

	(total inactive population) / (employment 20-64y)					(total inactive population) / (employment 15-74y)					
	2025	2050	2080	*change 2025-50*	*change 2050-80*	2025	2050	2080	*change 2025-50*	*change 2050-80*	
BE	126.9	129.7	147.2	3	18	122.1	123.4	139.1	1	16	BE
BG	120.4	149.2	142.8	29	-6	115.4	143.9	138.4	28	-6	BG
CZ	100.1	115.6	122.2	16	7	96.4	109.6	115.5	13	6	CZ
DK	98.0	91.7	99.9	-6	8	87.9	81.1	83.9	-7	3	DK
DE	99.5	108.6	116.9	9	8	92.9	101.0	108.3	8	7	DE
EE	95.2	99.9	108.0	5	8	87.8	93.1	96.0	5	3	EE
IE	98.2	100.4	122.5	2	22	91.3	92.6	112.1	1	19	IE
EL	130.7	153.6	145.0	23	-9	126.1	140.5	128.5	14	-12	EL
ES	112.1	134.2	147.6	22	13	109.1	127.5	139.5	18	12	ES
FR	126.5	127.8	139.2	1	11	121.5	121.0	131.1	-1	10	FR
HR	125.0	125.2	139.7	0	15	122.0	121.1	135.0	-1	14	HR
IT	143.5	154.0	157.8	10	4	138.0	142.5	139.2	5	-3	IT
CY	91.7	105.2	124.9	13	20	87.7	98.5	113.6	11	15	CY
LV	106.5	119.9	130.8	13	11	99.1	112.7	122.8	14	10	LV
LT	95.6	101.1	127.7	5	27	90.6	94.7	118.7	4	24	LT
LU	102.4	108.2	141.1	6	33	99.6	104.9	135.7	5	31	LU
HU	98.8	111.6	121.0	13	9	95.5	107.9	116.8	12	9	HU
MT	76.1	67.0	106.7	-9	40	73.7	64.3	101.3	-9	37	MT
NL	87.5	88.5	98.6	1	10	77.5	79.4	85.2	2	6	NL
AT	101.7	109.4	124.6	8	15	96.3	102.7	116.4	6	14	AT
PL	109.5	122.3	142.4	13	20	106.0	117.7	136.9	12	19	PL
PT	104.9	134.3	137.2	29	3	99.9	124.9	124.6	25	0	PT
RO	139.1	155.6	163.3	16	8	137.1	150.1	155.0	13	5	RO
SI	110.7	118.9	124.2	8	5	107.5	112.1	117.1	5	5	SI
SK	104.0	126.5	125.7	22	-1	101.3	120.4	115.6	19	-5	SK
FI	114.0	109.9	128.5	-4	19	105.9	103.0	116.9	-3	14	FI
SE	97.7	95.5	107.5	-2	12	90.2	87.9	95.7	-2	8	SE
NO	97.6	103.7	116.7	6	13	87.8	93.8	102.3	6	9	NO
EA	114.8	124.2	133.5	9	9	109.0	116.2	123.1	7	7	EA
EU	113.9	123.3	133.2	9	10	108.4	115.7	123.1	7	7	EU

Source: European Commission, EPC.

2.7. COMPARISON WITH THE LABOUR MARKET PROJECTIONS IN THE 2024 AGEING REPORT

Labour market indicators for base year 2025 were generally better than assumed in the 2024 Ageing Report. The improved starting point reverberates in the updated labour market assumptions, though overall revisions in employment are mostly driven by the revisions in the population projections compared with the previous update.

This section provides a comparison of the main labour market assumptions presented in the previous sections with those underlying the 2024 Ageing Report. In most countries, the labour force and employment were larger in 2025 than anticipated in the previous update (see Table I.2.15). In the EU, 3.1 million more people (1.6%) were employed in 2025 than projected, with the labour force counting 3.4 million additional people, meaning there were also 0.3 million more unemployed people than anticipated.

The employment rate – which also accounts for the difference in population size – was 1.3 pps higher on average in 2025 than projected in the 2024 Ageing Report (see Table I.2.16), with a higher outcome in most countries, aside from Belgium, Denmark, Luxembourg, Hungary, Romania, Finland, Sweden and Norway. The biggest upward revisions for the base year were for Czechia, Greece and Cyprus, at around 3 pps. Actual employment rates among people aged 55-64 were higher in 2025 for all countries aside from Slovenia. As shown in Table I.2.16, participation rates were on average 1.4 pps higher in 2025 than previously projected. Unemployment was, on average, in line with the 2024 Ageing Report assumptions.

Table I.2.17 provides a breakdown of the revision in the employment projection for 2070, the end-year of the 2024 Ageing Report. For the EU, total employment in 2070 is very close to the previous projections (see Table I.2.15) since lower population projections are offset by a higher participation rate and a similar unemployment rate. Looking at individual countries, revisions in the population projections, in both directions, are the principal driver behind changes in the employment figures.

Table I.2.15: **Labour force revision: 2027 Ageing Report vs 2024 Ageing Report ('000)**

	labour force (20-64)		employment (20-64)	
	2025	2070	2025	2070
BE	48	-87	15	-65
BG	-192	-146	-173	-146
CZ	187	-73	177	-108
DK	56	162	9	182
DE	79	-2,096	-227	-1,925
EE	11	-49	-1	-45
IE	155	270	145	283
EL	141	170	222	144
ES	785	2,413	950	1,923
FR	876	327	757	461
HR	73	77	88	82
IT	298	-1,084	717	-1,057
CY	32	49	41	50
LV	29	69	20	64
LT	70	147	52	141
LU	-3	16	-8	21
HU	-20	-451	-59	-478
MT	26	18	24	25
NL	97	521	80	595
AT	115	-78	74	-55
PL	-127	-301	-195	-330
PT	353	228	323	200
RO	228	394	140	395
SI	6	0	13	5
SK	45	-55	34	-56
FI	40	128	-44	133
SE	11	-451	-56	-417
NO	31	-74	25	-69
EA	3,085	837	3,102	777
EU	3,420	127	3,118	30

For Czechia and Slovenia the tables in this section compare with the assumptions underlying the updated pension projections conducted in 2025 and 2026, respectively.

Source: European Commission, EPC.

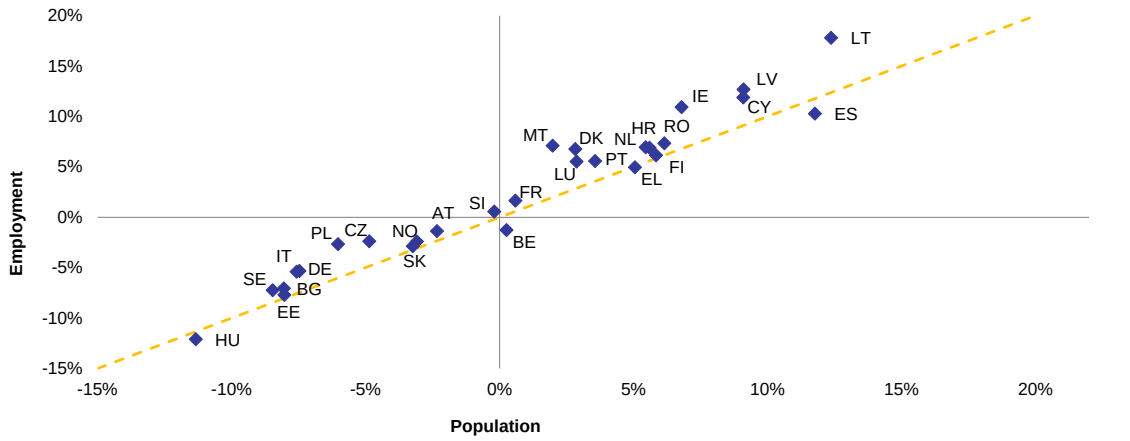
For twelve countries the 2070 employment figure is lower than under the 2024 Ageing Report projections, with the largest revisions for Hungary, Estonia, Sweden, Bulgaria and Italy, which are also the countries with the biggest downward revisions in working-age population for 2070. The sixteen countries with higher projected employment by 2070 all saw the working-age population revised up (aside from Slovenia), with higher participation further pushing up the employment projections (aside from Finland). The largest upward revisions in the employment projections are seen for Lithuania, Latvia, Cyprus, Ireland and Spain. Graph I.2.9 visualises the high correlation between revisions in the employment and population projections.

Table I.2.16: **Labour force revision: 2027 Ageing Report vs 2024 Ageing Report (pps)**

	employment rate				participation rate				unemployment rate		
	(20-64)		(55-64)		(20-64)		(55-64)		(20-64)		
	2025	2070	2025	2070	2025	2070	2025	2070	2025	2070	
BE	-0.3	-1.2	1.9	-1.1	0.1	-1.5	2.2	-1.4	0.6	-0.3	BE
BG	2.0	0.8	8.4	3.8	1.8	1.2	8.4	4.2	-0.4	0.4	BG
CZ	3.2	2.1	9.8	3.5	3.4	2.9	10.1	4.2	0.1	0.8	CZ
DK	-0.6	3.2	2.1	2.8	0.7	2.5	2.6	2.0	1.5	-0.9	DK
DE	0.8	1.9	4.0	3.0	1.5	1.7	4.0	2.3	0.7	-0.3	DE
EE	0.3	0.3	7.4	-1.4	1.7	0.1	8.2	-2.3	1.5	-0.2	EE
IE	1.0	3.1	3.0	8.2	1.2	2.5	3.1	7.8	0.2	-0.9	IE
EL	3.0	-0.1	4.1	-1.7	1.5	0.3	3.7	-1.3	-2.1	0.4	EL
ES	1.7	-1.0	2.3	-1.9	1.0	0.2	2.3	-0.5	-1.0	1.5	ES
FR	1.1	0.8	3.9	-0.3	1.3	0.4	3.7	-1.2	0.2	-0.5	FR
HR	1.8	0.9	3.2	3.0	1.0	0.4	2.9	3.0	-1.1	-0.7	HR
IT	2.0	1.7	3.0	3.3	0.8	2.0	2.3	3.3	-1.8	0.2	IT
CY	2.6	2.1	9.5	7.4	0.9	1.4	8.3	6.6	-2.1	-0.9	CY
LV	1.2	2.5	6.3	5.8	2.1	2.9	7.4	6.4	0.8	0.1	LV
LT	1.0	3.9	2.4	5.1	1.9	3.8	4.0	5.8	0.9	-0.3	LT
LU	-1.2	1.9	3.3	7.3	0.0	0.9	3.2	6.0	1.5	-1.4	LU
HU	-0.4	-0.7	4.1	1.8	0.3	0.3	4.2	2.1	0.8	1.1	HU
MT	0.2	4.2	3.9	5.2	0.6	2.5	4.9	4.9	0.4	-2.1	MT
NL	0.5	1.2	4.5	1.3	0.7	0.4	4.1	-0.1	0.2	-1.0	NL
AT	0.1	0.8	3.9	3.3	0.8	0.4	4.3	3.1	0.8	-0.5	AT
PL	1.0	2.7	2.8	4.6	1.3	3.1	3.1	5.0	0.4	0.3	PL
PT	1.5	1.6	3.3	1.6	1.7	2.0	3.6	2.1	0.2	0.3	PT
RO	-0.5	0.8	2.7	4.1	0.2	0.5	3.1	4.1	0.9	-0.4	RO
SI	0.3	0.6	-0.2	0.6	-0.3	0.2	-1.1	-0.6	-0.7	-0.5	SI
SK	0.3	0.3	4.2	-1.1	0.6	0.5	4.6	-0.8	0.3	0.2	SK
FI	-1.8	0.2	4.9	-0.6	0.8	-0.3	6.8	-2.0	3.1	-0.6	FI
SE	-0.2	1.1	2.9	1.9	0.9	1.0	4.0	1.9	1.3	-0.1	SE
NO	-0.8	0.6	1.5	4.8	-0.7	0.5	1.7	4.9	0.2	-0.1	NO
EA	1.4	1.1	4.0	1.4	1.4	1.2	4.0	1.2	-0.1	0.0	EA
EU	1.3	1.3	4.2	2.1	1.4	1.4	4.2	2.0	0.0	0.0	EU

Source: European Commission, EPC.

Graph I.2.9: **Population and employment projections: 2027 Ageing Report vs 2024 Ageing Report, 2070 (% change)**



Source: European Commission, EPC.

Table I.2.17: **Breakdown of revision in the employment projection for 2070: 2027 Ageing Report vs 2024 Ageing Report, 20-64y (%)**

	E	P	PR	UR	(1)-(2)-(3)+(4)
	(1)≈(2)+(3)-(4)	(2)	(3)	(4)	
BE	-1.3	0.3	-1.9	-0.3	0.0
BG	-7.3	-8.4	1.5	0.4	-0.0
CZ	-2.4	-5.0	3.4	0.8	-0.0
DK	6.5	2.8	2.8	-0.9	0.0
DE	-5.5	-7.8	2.0	-0.3	0.0
EE	-8.0	-8.4	0.1	-0.2	0.0
IE	10.4	6.6	2.8	-0.9	0.0
EL	4.8	4.9	0.4	0.4	-0.0
ES	9.8	11.1	0.3	1.5	-0.1
FR	1.6	0.6	0.5	-0.5	0.0
HR	6.7	5.4	0.5	-0.7	0.0
IT	-5.6	-7.9	2.5	0.2	-0.0
CY	11.2	8.7	1.6	-0.9	0.1
LV	11.9	8.7	3.4	0.1	-0.0
LT	16.4	11.7	4.3	-0.3	0.0
LU	5.4	2.8	1.1	-1.4	0.1
HU	-12.9	-12.0	0.3	1.1	-0.0
MT	6.9	2.0	2.8	-2.1	0.1
NL	6.7	5.3	0.4	-1.0	0.0
AT	-1.4	-2.4	0.5	-0.5	0.0
PL	-2.7	-6.2	3.8	0.3	-0.0
PT	5.4	3.5	2.3	0.3	-0.0
RO	7.1	6.0	0.7	-0.4	0.0
SI	0.6	-0.2	0.2	-0.5	-0.0
SK	-2.9	-3.3	0.6	0.2	-0.0
FI	6.0	5.7	-0.3	-0.6	0.0
SE	-7.5	-8.8	1.2	-0.1	0.0
NO	-2.4	-3.1	0.6	-0.1	0.0
EA	0.6	-0.6	1.4	0.0	-0.2
EU	0.0	-1.3	1.6	0.0	-0.2

The labour force identity L = E + U can be written as E = P x PR x (1-UR) where L is the labour force, E is employment, U is unemployment, P is the population, PR is the participation rate, and UR is the unemployment rate. Taking the logarithm of the above expression, revisions in employment level can be approximated as follows:

$$\ln\left({}^{E_1}/_{E_0}\right) \approx \ln\left({}^{P_1}/_{P_0}\right) + \ln\left({}^{PR_1}/_{PR_0}\right) - (UR_1 - UR_0)$$

where indices 0 and 1 refer to two distinct projection exercises.

Source: European Commission, EPC.

Box I.2.1: **Cohort Simulation Model (CSM)**

The cohort simulation model (CSM) as developed by the European Commission (DG ECFIN) ([1]) has been used since the 2006 Ageing Report to project participation rates by sex and single age. The rationale for using the CSM is to reflect the substantial changes in labour market behaviour in recent decades across different cohorts and sexes. This methodology accounts, for instance, for the significant rise in female labour force participation in recent decades, as younger women, with a much stronger attachment to the labour force, gradually replace older women with relatively low participation rates. Simultaneously, the cohort methodology also caters for a – generally small – decline in the participation rate of men in recent generations in several countries, opposite to the trend observed for women.

The central feature of the CSM is the estimation of labour market exit and entry rates for a 'synthetic' cohort ([2]). Because no individual longitudinal data on labour market transitions is available, participation data by single age is used to estimate labour market transitions, namely whether people either entered or exited the labour market between two consecutive ages. These probabilities are calculated on the basis of changes in the participation rate for the past ten years – 2016-2025 for the 2027 Ageing Report. This reference period provides thus a 'synthetic' cohort for base year 2025. A 10-year average is used to avoid that the choice of a particular year unduly influences the calculation of entry and exit rates through cyclical fluctuations or statistical errors.

Graph 1: **The Cohort Simulation Model**



The entry and exit rates are then used to project future participation rates as older generations are progressively replaced by younger ones. The projections rely on a no-policy-change assumption meaning that for Member States which legislated pension reforms, average exit rates for the age group 51-74 are adjusted to account for the reform impact. Otherwise, rates are kept constant throughout the projection period. By keeping rates constant, the cohort effect is captured: in the long term, we arrive at a population with the same individual characteristics as the cohorts who entered the labour force most recently, as measured through the 10-year average.

The 2027 Ageing Report projections build on the latest Eurostat demographic projections (see Chapter 1), prepared independently by Eurostat with consultation of National Statistical Institutes. Together with the participation rate projections, the population projections determine the labour force assumptions.

The following assumptions are made:

- Base year for the labour market projections is 2025, the projection period covers 2026-2080.
- Average entry/exit rates are calculated as a ten-year average (2016-2025), using participation rates by sex and single age (15-74) from the harmonised EU Labour Force Survey of Member States as compiled by Eurostat.
- A corrective mechanism for young cohorts is applied to avoid that any increase in education enrolment rates (and the corresponding decline in participation rates) feeds into future declines of participation rates for prime-age workers. This assumption means that participation rates at each single year of age

([1]) The methodology was initially developed at the OECD, see Burniaux et al. (2003).
([2]) A more detailed description of the methodology can be found in Annex 1.

(Continued on the next page)

Box (continued)

between 15 and 19 remain constant at the 10-year average. Participation rates between ages 20 and 29 are allowed to increase if this is the outcome of the model. Otherwise, rates are kept constant.

- Pension reforms are modelled through their estimated impact on the labour market exit rates of older workers (aged 51-74). This is based on a best-reasoned judgment, using the probabilistic nature of the CSM. Specifically, the historical average exit rates of older workers, calculated separately for both sexes, are adjusted to account for the expected effects of enacted pension reforms. The estimation of the adjustment considers country-specific information about the relationship between retirement behaviour and the parameters of the pension system, as well as cross-country evidence. This framework for analysis is able to incorporate a broad typology of measures, inter alia, increases in the statutory or early retirement age, the convergence of lower female statutory retirement ages to that of men, changes in financial incentives for early or delayed retirement and the linking of the statutory retirement age to changes in life expectancy. For the latter mechanism, the assumed increase in the *effective* retirement age, as approximated through the average labour market exit age, equals about three quarters of the projected increase in the statutory retirement age.

Box I.2.2: **Pension measures incorporated in the labour force projections**

This box lists the most recent pension reforms legislated by the Member States that are considered to have a direct impact on the labour market exit behaviour of the oldest workers and that are thus relevant for the participation rates as projected through the CSM model. This box describes the situation on 30 September 2026.

The countries with the most significant new measures since the 2024 Ageing Report are Belgium, Czechia, Romania, Slovenia and Norway, all of which have legislated higher retirement ages or tighter conditions for early exit.

Belgium

The statutory retirement age in the three main public old-age pension schemes (wage earners, self-employed and civil servants) rose from 65 years to 66 years in 2025 and will reach 67 years in 2030. A career of 45 years remains required for drawing a full pension.

Early retirement is possible at the age of 63 with a career of 42 years, at 61 with a 43-year career and at 60 with a 44-year career. As of 2027, a career year is counted only if 156 days were effectively worked or assimilated (104 days before), and most periods of unemployment and of career interruption at the end of the career are excluded. As of 2027, it also becomes possible to retire at the age of 60 with 42 contribution years, provided that each of these years comprises at least 234 effectively worked or assimilated days.

A new bonus/malus system was adopted in 2026 and applies as of 2027. It is based on an effective employment condition: people with fewer than 35 years of at least 156 effectively worked or assimilated days (and 7020 worked days in total) lose 5% of their benefit for each year of anticipation with respect to the statutory retirement age. The malus is phased in by cohort: 2% per year for people born up to 1965, 4% per year for those born in 1966-1974 and 5% per year for those born as of 1975. In addition, assimilated periods can account for at most 40% of the total career as of 2027, falling to 20% in 2031.

The same career condition applies to the pension bonus: people who have accumulated 35 years with at least 156 effectively worked or assimilated days receive 2% for each extra year of work if born before 1963, 4% for the 1963-1972 cohorts and 5% if born as of 1973.

The preferential career break for certain civil servants, which resulted in a faster build-up of career years, is being phased out and harmonised at a lower level for teachers and police officers, among others. The statutory retirement age for railway drivers and the military is being aligned with the general regime: from 55 years with a 30-year career to 67 years in 2038 for railway drivers, and from 56 years to 67 years in 2048 for the military. As of 2027, calculation of civil servants' pensions is based on an extended working period instead of the last ten career years, such that the full career is taken into account by 2062.

Bulgaria

Following the 2015 reform, the statutory retirement age is rising to 65 years: by 2029 for men and by 2037 for women (63 years in 2029). After 2037, the statutory retirement age is supposed to increase in line with gains in life expectancy, though no clear rule has been legislated. Therefore, such mechanism is not included in the projections. The retirement age for workers in the defence and security sector is gradually increasing by two months annually, to 55 years in 2029.

The required career length for workers in normal work conditions to qualify for retirement is rising by two months annually, until it reaches 40 years for men and 37 years for women in 2027.

People within 12 months of the statutory retirement age can retire early, in which case the benefit is reduced by 0.4% for each month of anticipation. Early retirement is also possible for people working under hazardous and unhealthy working conditions or special groups such as teachers, military and police officers (55-60y).

Czechia

Statutory retirement ages are determined in function of a person's birth year and, in the case of women, the number of children raised. For men and women born in 1960, the statutory retirement age is 64 years and 2 months (63y8m, 62y2m, 60y8m and 59y2m for women with 1, 2, 3-4 and more than 4 children respectively). It rises to 65 years for people born in 1965, i.e. in 2030 (64y8m, 63y2m and 61y8m for women with 2, 3-4 and more than 4 children), and to 65 years and 8 months for all people born in 1973, i.e. in 2038, regardless of the number of children. Thereafter, the statutory

(Continued on the next page)

Box (continued)

retirement age rises by one month per cohort until it reaches 67 years in 2056.

The minimum insurance period is 35 years or 30 contributory years. Without this minimum insurance period, retirement is possible only two years after the statutory retirement age (five years previously).

Early retirement is possible three years prior to the statutory retirement age, with a minimum insurance period of 40 years (35 years before the 2023 reform). The insurance period includes non-contributory periods. With at least 45 insurance years under a strict definition, the penalty for early retirement is 0.75% per 90 days or 3% per year (6% before); with fewer than 45 years, the penalty is 1.5% per 90 days or 6% per year.

Denmark

The standard retirement age reached 67 years in 2022. The statutory retirement age and the VERP age (voluntary early retirement pension with minimum 30 contributory years) increase based on life expectancy for a 60-year-old – the unweighted average for men and women is used – with the period on old-age pension targeted at 14.5 years (17.5 years including VERP).

Adjustments to life expectancy must be confirmed by Parliament 15 years before they take effect (12 years for changes in the VERP age), with further updates every five years. Increases to 68 years in 2030, to 69 years in 2035 and to 70 years in 2040 were confirmed in 2015, 2020 and 2025 respectively; the 22 May 2025 Law sets the retirement age at 70 years for all people born after 1970. The maximum increase in the retirement age is limited to one year for every update. In the projections, it is assumed that Parliament confirms the increases in the retirement age beyond 2040 given the established track record.

In 2020, a new early retirement scheme was created for people with long careers: people with 44 years of labour market seniority (at the age of 61 years) obtain the right to retire 3 years before the standard pension age. People with respectively 42 years and 43 years of labour market seniority can retire 1 and 2 years early.

In 2019, a new right to disability pension was created for people 6 years or less removed from the statutory retirement age, on the conditions of at least 20-25 years of labour activity and a reduction in the ability to work to a maximum of 15 hours per week. The scheme took effect in 2020 and replaced a similar senior disability pension.

Germany

As a result of the 2007 reform, the statutory retirement age is gradually increasing, reaching 67 years in 2031. Early retirement is possible (i) at the age of 63 for people with an insurance record of at least 35 years, with a permanent reduction of 0.3% for each month below the statutory retirement age; (ii) without a deduction for people with a contribution history of 45 years, at the age of 64 years and 6 months in 2025, rising to 65 years by 2029.

Since 2023, it is possible to combine an early pension with additional earnings without any loss of pension entitlements. Since 2026, the *Aktivrente* scheme allows people who have reached the statutory retirement age to earn up to EUR 2 000 per month tax-free through work.

Estonia

The retirement age for men and women was equalised in 2016 at 63 years and reached 65 years in 2026. The 2018 reform introduced a link to changes in life expectancy at the age of 65, applied as of 2027 and taking into account the change over five years. The maximum annual increase is three months; any increase in excess of three months is carried over to the next adjustment. The change in the retirement age is known two years in advance.

The old bonus/malus system was replaced by an actuarially neutral system in 2021. The early retirement age (previously three years before the statutory retirement age) is 1/2/3/4/5 year(s) lower, for contribution periods of 20/25/30/35/40 years. Drawing a pension benefit can be combined with work.

Ireland

Ireland does not have a statutory retirement age. Retirement ages are generally determined by the terms of an individual's employment contract. The State Pension Age in Ireland is 66. There is no requirement for an individual to retire from employment in order to receive a State Pension (Contributory). Eligible employees may notify their employer that they do not consent to retire at the contractual retirement age.

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Box (continued)

State Pension Deferral was introduced in 2024. Individuals who turn 66 may defer claiming their State Pension (Contributory) until age 70 in return for an actuarially adjusted higher weekly pension payment. Individuals aged 66 to 70 who defer claiming their State Pension (Contributory) continue to pay social insurance contributions. These contributions may be used to establish entitlement to, or increase the rate of, a future State Pension (Contributory).

Greece

The 2012 and 2014 reforms increased the statutory retirement age from 65 to 67 years (with at least 15 contribution years) and the early retirement age from 60 to 62 years (with 40 years of service, a penalty applying otherwise) for the whole social security system. There are minor exceptions for private sector employees who had already 25 years of service by 2010, who can retire before the age of 62. Since 2021, the minimum and statutory retirement ages are adjusted in line with changes in life expectancy at the age of 65. Upon its first implementation in 2021, the integer year(s) of the change over the period 2010-2020 was(were) to be taken into account. Thereafter, the integer year of the change in life expectancy is to be re-examined every three years.

The 2021 adjustment was cancelled because the COVID-19 pandemic had caused a drop in life expectancy at 65. In 2024, the change in life expectancy at 65 relative to 2010 was less than one year, so the mechanism was not activated, keeping the retirement ages at 67 and 62 years.

Spain

The statutory retirement age is rising to 67 years in 2027 and the contributory career for a full pension to 37 years. Workers with a contributory period of at least 38.5 years can retire at the age of 65 with a full pension.

Early retirement for voluntary retirees requires a minimum age of 65 (as of 2027), a minimum contributory period of 35 years and the resulting benefit should be at least the minimum pension.

Early retirement for involuntary retirees (collective dismissals) requires a minimum retirement age of 63 years (as of 2027) and a minimum contributory period of 33 years.

Early partial retirement, for 25% to 75% of working time, is available for workers of different ages depending on the number of years of contributions: 63 years in 2027 with a contributory period of at least 36.5 years, 65 years in case of 33-36.5 contribution years. Below 33 contribution years early partial retirement is not possible.

Early retirement is penalised in function of the distance to the statutory retirement age and the contribution period. People working beyond their statutory retirement age increase their benefits by 4% per extra year of work, regardless of the contribution history. People can opt for a lump sum payment or a mixed pay-out.

France

People can retire from the moment they reach the earliest retirement age, with a penalty if they do not meet the required contribution period. They can also delay their retirement to obtain a full-rate pension which is granted to people with the required contribution period or have reached the age for a full-rate pension of 67 years.

Following the 2023 reform, the earliest retirement age for most schemes rises gradually from 62 to 64 years. In addition, the required insurance period rises faster to 43 years than under the previous reform timetable. In the public sector, for some special branches with 'active service' (e.g. policemen and nurses), the earliest retirement age is 57 years, rising to 59 years following the 2023 reform.

For pensions taking effect as of 1 September 2026, this calendar has been suspended until January 2028. As a result, the 1964-1968 cohorts are allowed to retire one quarter earlier than foreseen. People born in 1969 or later remain subject to the earliest retirement age of 64 years. The required contribution period for a full-rate pension is also reduced by one quarter, but only for the 1964 and 1965 cohorts.

Certain groups can receive a full-rate pension before the automatic full-rate pension age of 67. People recognised as disabled can retire at full rate from age 62.

Early retirement for long careers is available to people who started working before the ages of 16, 18, 20 or 21 and meet the required contributory period, with eligibility conditions depending on the birth cohort.

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Box (continued)

Croatia

The statutory retirement age is 65 years for men (64 years for women in 2026, rising to 65 years in 2030), with 41 insurance years needed for a full pension. Early retirement is possible at the age of 60 (59 years for women in 2026, rising to 60 years in 2030) with a minimum contributory period of 35 years (34 years for women in 2026, rising to 35 years in 2030). Penalisation of 0.2% per month of anticipation, i.e. maximum 12%, which since 2026 is no longer applied once the age of 70 is reached. Bonus of 0.45% per month beyond the statutory retirement age since 2023 (0.34% before).

Bonus in case of long career (41 years): 0.15% per month until the statutory retirement age is reached and 0.45% per month thereafter. Persons working in arduous or hazardous occupations and those covered by special schemes, such as military and police personnel, may qualify for earlier retirement and more favourable pension conditions. For these categories, insurance periods are calculated in extended duration (each 12 months of work counting as 14, 15, 16 or 18 months), and the statutory retirement age may be reduced depending on the degree of increment of the insurance periods and the length of such periods

Italy

Since the latest positive update to life expectancy, which took effect in 2019, the statutory retirement age is 67 years for men and women in all sectors until 2026, with a minimum of 20 contributory years.

Irrespective of age, women can retire with 41 years and 10 months of contributions and men with 42 years and 10 months until 2026 (early retirement).

For 'precocious workers' (workers with at least 12 months of contributions from actual work before the age of 19) who are in special conditions (unemployed, caregivers, workers with a certified reduction in work capacity of at least 74%, and those engaged in heavy labour) retirement is permitted with only 41 years of contribution until 2026.

Under the standard early retirement regime, for workers enrolled after 1995, whose benefits are therefore calculated entirely under the Notional Defined Contribution (NDC) system, early retirement is also permitted at 64 years, i.e. three years before the statutory retirement age, if they have at least 20 years of effective contributions, with both requirements applying until 2026 and subject to life-expectancy adjustments thereafter, provided that their expected pension is not below a minimum threshold: three times the old-age social allowance for men and for women without children, rising to 3.2 times as of 2030, and 2.8 and 2.6 times the social allowance for women with one child and with two or more children respectively.

For all three early retirement pathways described above, pension payments start 3 months after the eligibility requirements are met. For ordinary early retirement and precocious workers, progressively longer waiting periods apply to certain categories of public employees, reaching 9 months from 2028.

Eligibility requirements for old-age pensions, early retirement pensions and the social allowance are updated every two years to reflect changes in life expectancy at 65. The updates for 2021, 2023 and 2025 did not result in an increase.

The 2026 Budget Law re-determined, for 2027, an increase in the access requirements of one month and confirmed the three-month increase as of 1 January 2028. Employees engaged in strenuous or burdensome activities are exempted from the increases in access requirements for 2027 and 2028. For military personnel retiring under lower-than-general requirements, eligibility requirements will increase by an additional month in 2028, a further month in 2029 and another month in 2030, on top of the general adjustment to changes in life expectancy.

Workers may receive an allowance ('*APE Sociale*', classified as social assistance expenditure and not included in pension expenditure) to bridge the period before meeting the old-age pension requirements. It is available to workers in special circumstances – the unemployed, caregivers, workers with a certified reduction in work capacity of at least 74% and those engaged in heavy labour – who are aged 63 years and 5 months and have accrued at least (i) 30 years of contributions or (ii) 36 years of contributions in an arduous job (32 years in the construction sector). The scheme has been extended for 2025 and 2026.

The temporary '*Quota 103*' scheme (a minimum age of 62 years and 41 years of contributions, with full application of NDC rules) was extended for people eligible in 2025 but has not been renewed for 2026. It followed the temporary schemes '*Quota 100*' (2019-2021: 62 years and 38 years of contributions) and '*Quota 102*' (2022: 64 years and 38 years).

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Box (continued)

'*Opzione donna*' allows women aged 61 years (60 and 59 years with one child and with two or more children respectively, or 59 years regardless of the number of children for women affected by company crises) with 35 years of contributions under special conditions (caregivers, women with a reduction in work capacity of at least 74% and women affected by company crises) to retire early, subject to benefits being entirely computed according to the Notional Defined Contribution (NDC) rules instead of the mix of Defined Benefit and NDC rules that would normally apply to these workers. The scheme was extended in 2025 for women who met the requirements in 2024 but has not been extended in 2026 for women who met the requirements in 2025.

Cyprus

The 2012 pension reform introduced a link between the statutory retirement age and changes in life expectancy at the statutory retirement age, with an automatic adjustment every five years. The first revision, calculated in 2024 and applied in 2025, covered the change in life expectancy over 2018-2023 compared with the 2013-2017 base period. It had no impact and the statutory retirement age remained at 65 years. The next revision is scheduled for 2030.

Early retirement is available at the age of 63 provided that certain contribution requirements are met, including a minimum of 780 weeks of insurance and at least 70% of the required insurance points. A permanent penalty of 12% for early retirement is under discussion, as part of a reform expected by 2027. Miners and specific professions may retire earlier under special provisions.

Latvia

As a result of the 2012 pension reform, the retirement age increased by three months every year, reaching 65 years in 2025, with a minimum contributory period of 20 years (15 years until then). The early retirement age – with an insurance record of at least 30 years – is two years lower than the statutory one and thus reached 63 years in 2025. The early retirement benefit is 50% of the normal benefit. The full pension is restored upon reaching the statutory retirement age.

Lithuania

The statutory retirement age reached 65 years for both sexes in 2026, with a minimum contribution period of 15 years. 35 years are needed for a full pension as of 2027. People with a contribution history exceeding the minimum qualifying period (15y) but less than the mandatory contribution period (35y) are still entitled to the full general (basic) component of the pension.

Early retirement is possible as of five years prior to the statutory retirement age, on the conditions of a minimum of 30 years of service and not receiving any other social insurance, state or social assistance pension. Early old-age pensions are calculated in the same way as regular old-age pensions but are subject to a permanent reduction of 0.32% (maximum of 19.2%) for each full month remaining until the statutory retirement age.

After reaching the statutory retirement age, a person may continue working while receiving an old-age pension. If retirement is deferred, the pension is permanently increased by 8% for each additional year of deferral.

Luxembourg

To be eligible for an old-age pension, an insured person needs to be at least 65 years old and have accumulated a total of 10 years of contributory periods. An insured person that is at least 60 years old and has accumulated a combined total of 40 years of contributory periods (work) and credited non-contributory periods (e.g. years of study or years spent raising children) qualifies for early retirement, provided that contributions have been paid for at least 10 years. Since July 2026, 40 years and 1 month are required, rising further over 2027-2030 to 40 years and 8 months. Individuals that are at least 57 years old gain access to early old-age benefits if they accumulated a total of 40 years of compulsory insurance periods (work).

Since 2026, an employee who is eligible for an early old-age pension at the age of 57 or 60 and has agreed with their employer to reduce working hours by at least 25% has the right to a progressive pension, i.e. the part of the pension corresponding to the reduction in working time. A similar option already existed under the special pension schemes for the public sector.

Since 2026, taxpayers who are eligible for an early old-age pension but do not exercise that right benefit from an annual income tax allowance of up to EUR 9 000.

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Box (continued)

Hungary

The statutory retirement age has been 65 years since 2022 for both men and women. There is no early retirement scheme, though women can retire with 40 years of eligibility period, i.e. contribution years of gainful activity plus childcare years, regardless of their age.

Malta

The 2006 reform entails a gradual increase in the statutory retirement age, from 61 and 60 years for men and women respectively to 65 years by 2027 (for people born as of 1962). It stands at 64 years in 2025 and at 64 years and 6 months in 2026. The minimum contributory period is 12 years, while the period required for a full pension increases to 40 years in 2027, to 41 years in 2034 and to 42 years in 2041.

Early retirement is possible as of the age of 61 provided that the retiree will not remain in any gainful employment and has the required contribution history: 35 years for those born up to 1961, 40 years for the 1962-1968 cohorts, 41 years for the 1969-1975 cohorts and 42 years for the 1976 cohort and younger. People who delay claiming their retirement pension and continue working see their entitlements increase by about 6.5% to 8% per year of deferral, reaching up to around 29% for longer deferrals.

The Netherlands

The statutory retirement age reached 67 years in 2024. Since 2025 it is linked to two thirds of the rise in the remaining life expectancy at 65, instead of the full link envisaged before. The statutory retirement age is set five years in advance: an increase to 67 years and 3 months in 2028 has been confirmed, and in November 2025 the age was fixed at that same level up to and including 2031. The duration of social security arrangements for people below the retirement age (disability pensions, survivors' pensions, unemployment schemes and social assistance) is extended in line with the increase in the statutory retirement age. There is no early retirement scheme in the Netherlands.

Austria

The statutory retirement age is 65 years for men and all civil servants, with a minimum contribution period of 15 years. The female statutory retirement age is rising gradually from 60 to 65 years over 2024-2033, by six months each year; it stands at 61 years and 6 months in 2026. Several early retirement schemes exist:

- The early retirement scheme '*Korridorpension*' could be accessed at the age of 62 years until 2025; the age is rising by two months each quarter to reach 63 years in 2028. The required insurance period, 40 years until 2025, is rising to 42 years. Penalty: 5.1% per year. For women the scheme becomes relevant as of 2030, when the statutory retirement age rises above 63 years.

- The early old-age pension scheme for long-term contributors '*Hacklerregelung*' requires 45 years of contributions and a minimum age of 62 years (relevant for women as of 2028). Penalty: 4.2% per year.

- For the heavy worker '*Schwerarbeitspension*', the early retirement age is 60 years, with a minimum of 45 years of insurance (at least 10 years of arduous labour in the last 20 years before retirement). Nursing and healthcare workers are recognised as heavy workers as of 2026. Penalty: 1.8% per year.

As of 2022, the early retirement possibilities without deductions in case of 540 contribution months that existed in 2020 and 2021, have been abolished again for all pension types.

Since 2026, partial retirement, for 25% to 75% of working time, is possible for people who are eligible for early retirement and continue to work part-time. A bonus of 5.1% per year, for a maximum of three years, applies when retirement is postponed beyond the statutory retirement age.

Poland

The retirement age is 65 years for men and 60 years for women. No minimum contribution requirements apply. There is no early retirement possibility, except for special schemes such as miners and teachers, who can retire up to 5 years early. No penalty or bonus applies.

Portugal

Under the general contributory regime, an insured person is entitled to an old-age pension when having reached the statutory retirement age and completed the required qualifying period of 15 years with earnings registration. Since 2015, the statutory retirement age changes in line with two thirds of the change in life expectancy at the age

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Box (continued)

of 65. It stands at 66 years and 9 months in 2026 and rises to 66 years and 11 months in 2027. The statutory retirement age is reduced by four months for each contributory year above 40 years, with a minimum retirement age of 65 years.

Early retirement is possible from the age of 60 with 40 contributory years. These conditions are not adjusted for gains in life expectancy. Two permanent corrections apply. First, a penalty of 0.5% per month of anticipated retirement, which is always applied unless the person has 48 contributory years or 46 contributory years and started the contributory career before the age of 17. Second, for people without 40 contributory years at the age of 60, a sustainability factor applies, i.e. an additional penalty tied to the increase in life expectancy since 2000, which amounts to 17.63% in 2026.

Romania

Old-age retirement is possible when the standard retirement age is reached (65 years for men; 62 years and 6 months for women in 2026, rising to 63 years by 2030 and to 65 years by 2035) together with a minimum contribution period of 15 years; 35 years are required for a full pension, for women by 2030. For every child born, the standard retirement age of women is reduced by six months.

For 'service pensions' (army, police, intelligence and penitentiary administration staff), which covered 4.5% of total pensioners in 2025, the eligibility criteria are an age of 60 years with at least 25 years of contribution, of which at least 15 years in service. This age is rising to 65 years over 2030-2035.

Early retirement is possible up to five years before the standard retirement age, with at least 35 contribution years. Penalties of 0.2% to 0.4% per month apply for contribution periods between 35 and 40 years, i.e. a maximum penalty of 24% when retiring five years in advance with 35 contribution years and of 12% when retiring five years in advance with 40 contribution years. The penalty applies until the standard retirement age is reached.

After 2035, retirement ages are adjusted for half of the gains in life expectancy, at intervals of no more than three years. The projections assume that the mechanism starts in 2038.

Slovenia

The right to an old-age pension depends on two parameters that both need to be met: the age of the insured person (65 years for both men and women in 2026) and the pension qualifying period (minimum 15 years). With 40 years of paid contributions – pensionable service excluding purchased periods – old-age retirement is possible at the age of 60 in 2026 without any reduction of the benefit. This is not considered early retirement but an old-age pension with a lowered retirement age, reflecting an earlier entry into the labour market. In 2026, early retirement is also possible at the age of 60, with 40 years of contributions including purchased periods and periods of voluntary pension insurance after 2013. The penalty for early retirement is 0.3% for each month of retirement before the age of 65, i.e. maximum 18%.

Under the 2025 reform, the early and statutory retirement ages rise by three months annually as of 2028, until they reach 62 and 67 years respectively in 2035. The earliest retirement age is reduced for periods of childcare, compulsory military service, employment between the ages of 15 and 18, and arduous labour with a detriment to health.

People that have accumulated 40 contributory years but continue to work full time can earn a bonus of 3% per year for a maximum of three years. If they meet the conditions for old-age retirement and continue working full time, they are entitled to 40% of their old-age pension for the first three years and to 20% thereafter. If they work part time, they receive part of the accrued pension benefit (minimum 12.5%, 50% in case of half-time work and 75% in case of working 25% of full time). People can also work part time prior to retirement.

Slovakia

The statutory retirement age for people born up to 1966, i.e. until 2030, is defined by a fixed table based on cohort, sex and number of raised children (for women, the retirement age is reduced by six months for each of the first three children). It increases by two months for each subsequent cohort, reaching 64 years in 2030, with 41 contribution years required.

The 2023 reform restored the link between the retirement age and average life expectancy from 2030 onwards (for people born as of 1967), which

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Box (continued)

had been abandoned in the 2019 reform, thereby abolishing the previously existing retirement age caps. The required contributory period is linked to life expectancy as well. The linking is done through a cohort-specific formula that computes the median of seven five-year averages in life expectancy and adds this median to the unadjusted general retirement age of the previous cohort. The new retirement age has to be calculated and published six years before coming into effect, and no maximum increase applies.

Under the standard early retirement scheme, people are allowed to retire two years before reaching the statutory retirement age if the benefit is at least the subsistence minimum. In that case, their old-age pension is reduced by 0.5% per month. The pension benefit is increased by 0.5% for every additional month of work beyond the retirement age.

In addition, early retirement is possible with a career of 40 years, which is also linked to life expectancy, provided the benefit amounts to at least 1.6 times the subsistence minimum. A penalty applies of 0.5% for every month below the statutory retirement age.

Finland

The lowest old-age retirement age in the earnings-related scheme rose by three months for each age cohort, from 63 years in 2018 to 65 years in 2026. The upper age limit will be raised to 69 years for those born in 1958-1961 and to 70 years for those born in 1962 or later. Partial old-age retirement, for 25% or 50% of the pension, is possible three years in advance, i.e. at 62 years as of 2026.

The lowest old-age retirement age will be linked to life expectancy as of 2030 (the 1965 cohort) so that the time spent working in relation to the time spent in retirement remains at the 2025 level. The annual increase of the retirement age is capped at two months.

Sweden

The retirement age is flexible and individuals can claim benefits as of a minimum age, 64 years since 2026, without any upper limit.

The 2022 reform increased the earliest age for an old-age pension from 62 years to 63 years in 2023 and to 64 years in 2026. The earliest age for a guarantee pension was raised from 65 years to 66 years in 2023 and to 67 years in 2026. The upper age for employment protection was increased to 68 years in 2023 and to 69 years in 2026.

Thereafter, all age limits are linked to an 'indicative age' which increases in line with two thirds of the change in life expectancy at the age of 65, i.e. by one year every time the expected remaining life expectancy at 65 increases by 1.5 years. When the indicative age increases by a full year, all age limits are automatically increased by one year. Applying the formula to the EUROPOP2025 projection, the age limits increase by one year in 2042, 2061 and 2079.

Norway

The statutory retirement age stands at 67 years but serves rather as a reference age since flexible retirement is possible from the age of 62. To receive a full guarantee pension, one must have been a member of the National Insurance Scheme for 40 years, otherwise the benefit is reduced accordingly. The guarantee part of the pension can be drawn only from the age of 67.

Under the 2024 reform, age limits rise in line with life expectancy from the 1964 cohort onwards, i.e. as of 2031. The unconditional retirement age for the old-age pension, currently 67 years, increases by two thirds of the increase in life expectancy; all age limits in the pension system are adjusted in line with it.

Box I.2.3: **Long-term unemployment assumptions**

In line with the assumption that the output gap closes in T+5 (see Box I.3.1), actual unemployment rates are assumed to converge to their structural levels by 2030.

Structural unemployment refers to the 'natural' rate of unemployment at which the economy is estimated to settle in the medium run, in the absence of shocks (i.e. by T+5 in this methodology). Since structural unemployment cannot be observed, it is typically estimated via methods that pin down its statistical and theoretical properties. Its level is usually determined by institutional and fiscal factors, such as unemployment benefits or tax rates, which influence the minimum wage needed for a worker to accept a job (the 'reservation wage').

To proxy structural unemployment, the Ageing Report uses estimates of the 'non-accelerating wage rate of unemployment' (NAWRU). The NAWRU is defined as the unemployment rate consistent with stable wage growth ([1]). As labour productivity changes over time (see Chapter 3), the NAWRU is not constant. Rather, it changes in response to demographic and productivity developments. Moreover, it captures the gradual elimination of the long-term effects of cyclical unemployment, like hysteresis phenomena ([2]). Concretely, the methodology assumes that, in the long term, the NAWRU converges either to the country-specific '*NAWRU anchors*' or to their EU average, whichever is lower ([3]).

Anchor values are country-specific estimates derived from a panel regression model in which the NAWRU depends on a set of cyclical variables (total factor productivity, the long-term real interest rate, a measure of construction activity, and a measure of industrial confidence), together with a set of structural variables (unemployment benefit net replacement rates, expenditure on active labour market policies, the degree of union density, the labour tax wedge, and a demographic index) ([4]). To derive medium- and long-term country-specific anchors, non-structural variables are set at their average values, thereby averaging out the impact of cyclical fluctuations. Structural variables are assumed to remain unchanged at their last observed values, in line with the 'no policy change' principle. At the same time, the demographic index follows EUROPOP projections, while total factor productivity is set in line with the long-term projections (see Box I.3.1).

Capping country-specific NAWRU values to the EU average avoids extrapolating excessively high unemployment rates into the far future. This assumption reflects the idea that some convergence within EU Member States will materialise over time. Implicitly, the methodology assumes the implementation of labour market policy measures. For those countries that currently register high unemployment, this is a crucial assumption, as it implies higher employment and higher GDP growth rates over the projection period.

To ensure consistency between total/average structural unemployment rates and the structure of the labour force, age-gender specific unemployment rates are calculated as follows for each projection year:

$$u_{a,g}^{t} = \frac{u_{total}^{t}}{\sum_{a,g}\left\{u_{a,g}^{2025} * l_{a,g}^{t}\right\}} * u_{a,g}^{2025}$$

(1) For further details on the NAWRU methodology, developed by the Potential Output Working Group attached to the Economic Policy Committee (EPC-POWG), see Arévalo et al. (2026), Planas and Rossi (2020), Hristov and Roeger (2020), Orlandi et al. (2018), Hristov et al. (2017) and Havik et al. (2014).

(2) Hysteresis is the idea that shocks on the unemployment rate that are initially temporary can have more persistent effects, for instance through skills erosion as workers stay out of work for longer.

(3) As a general rule, convergence to the country-specific anchors is achieved by T+10 (2035). However, for countries whose unemployment rate is far from the anchor, convergence may take longer (see Arévalo et al. 2026). Moreover, in countries where the NAWRU anchor is above the EU average, structural unemployment starts to converge to the EU average once the country-specific anchors have been reached. In other countries, the NAWRU follows its structural anchor but, if it is increasing, it is capped to the EU average.

(4) See Hristov and Roeger (2020) for detailed definitions of the explanatory variables included in the analysis.

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Box (continued)

where

$$l_{a,g}^{t} = \frac{LF_{a,g}^{t}}{LF_{total}^{t}}$$

where $u_{a,g}^{t}$ is the unemployment rate in age group a with gender g in period t; u_{total}^{t} is the total unemployment rate in period t; and $l_{a,g}^{t}$ is the share in the total labour force. This means that the unemployment rate structure by age and gender observed in base year 2025 is kept unchanged throughout the projection period, with age/gender values adjusted proportionally to satisfy a given total unemployment rate target.

Table 1 summarises assumptions for the unemployment rates. In the EU, the unemployment rate is projected to remain broadly stable at 6% until 2040 before declining to 5% by 2080. The decline is expected to be particularly marked in Finland (-3.9 pps) and Spain (-3.2 pps). By contrast, unemployment is projected to rise in a small number of countries, most notably in Bulgaria (+1.7 pps) and Slovenia (+1.5 pps).

Table 1: **Unemployment rate projections, 15-74y (%)**

	2025	2030 (NAWRU)	2040	2050	2060	2070	2080
BE	6.2	5.8	5.9	5.5	5.6	5.5	5.3
BG	3.5	3.9	4.9	4.9	5.3	5.4	5.3
CZ	2.8	2.9	3.6	2.7	3.6	3.6	3.2
DK	6.4	4.3	3.4	3.3	3.0	2.9	3.0
DE	3.9	3.5	3.8	3.4	3.5	3.7	3.5
EE	7.6	6.9	6.7	5.5	6.1	6.1	5.8
IE	4.7	5.2	5.3	4.6	4.7	4.7	4.6
EL	8.9	8.8	8.3	7.4	7.3	6.9	6.5
ES	10.5	11.3	11.1	9.5	8.8	8.0	7.3
FR	7.7	7.1	6.4	6.0	6.2	6.0	5.9
HR	5.0	5.6	6.6	6.2	6.2	6.1	6.0
IT	6.2	7.5	7.0	6.5	6.6	6.4	6.1
CY	4.7	5.9	6.3	5.7	5.5	5.7	5.7
LV	7.0	6.6	7.9	6.5	6.7	6.6	6.2
LT	7.0	6.5	6.9	5.8	6.0	6.0	5.9
LU	6.6	5.7	4.6	4.0	4.0	4.0	3.9
HU	4.5	5.2	4.7	4.1	4.7	4.8	4.6
MT	3.6	3.1	2.8	2.2	2.1	2.2	2.2
NL	3.9	3.2	2.8	2.6	2.6	2.4	2.4
AT	5.7	5.0	4.3	3.8	3.8	4.0	3.9
PL	3.2	3.0	3.7	2.9	3.3	3.4	3.2
PT	6.0	5.6	7.1	6.9	6.7	6.5	6.3
RO	6.2	6.1	6.0	5.3	5.9	5.8	5.7
SI	3.9	5.7	5.6	5.2	5.7	5.7	5.4
SK	5.5	5.5	6.9	6.1	6.4	6.3	6.0
FI	9.7	8.3	6.5	5.9	6.0	5.9	5.8
SE	8.9	6.8	6.9	6.1	6.2	6.1	5.9
NO	4.6	3.7	3.7	3.7	3.7	3.7	3.7
EA	6.4	6.4	6.3	5.7	5.7	5.5	5.2
EU	6.0	6.0	6.0	5.3	5.4	5.3	5.0

Source: European Commission, EPC.

3. GDP PROJECTIONS

3.1. INTRODUCTION

To project potential GDP growth over the long term, a production function framework is employed. It is based on the standard specification of the Cobb-Douglas production function with constant returns to scale. Within this framework, potential GDP growth is driven by long-term developments in labour input and labour productivity.

Projections of labour productivity are based on assumptions regarding the long-run development of its underlying determinants, namely labour-augmenting total factor productivity (TFP) and the capital stock per worker (also referred to as capital deepening). While allowing for cross-country differences in the short to medium term, these projections assume partial convergence across EU Member States by the end of the projection period. Labour input projections are based on Eurostat's latest population projections (see Chapter 1) and the labour market participation rates projected by the Commission's Cohort Simulation Model (see Chapter 2).

Differently from the practice used since the 2015 Ageing Report, the long-term projections of potential GDP were not directly elaborated by the AWG. Instead, they were produced by the EPC's Potential Output Working Group (POWG), based on an extension of the T+10 EUCAM methodology to cover the period up until T+55 (2080) ([13]). A description of the production function framework and the key assumptions underpinning the long-term GDP projections presented in this section are summarised in Box I.3.1. A more comprehensive account is available in Annex 2. The long-term projections in this report are based on the Commission 2026 spring forecast. For Norway, 'mainland GDP' is used, which excludes ocean transport and petroleum extraction.

The following sections present the long-term potential GDP projections (Section 3.2) and the main differences with those of the 2024 Ageing Report (Section 3.3).

([13]) Arévalo et al. (2026) The EU's Commonly Agreed Production Function Methodology for Estimating Potential Output (EUCAM). European Economy. Discussion Paper 256.

3.2. LONG-TERM GDP PROJECTIONS

Potential annual GDP growth in the EU is projected at 1% on average over the long term. Given the projected decline in the working-age population, potential GDP growth in the EU would be driven entirely by labour productivity.

Annual potential GDP growth in the EU is projected to decline gradually over the long term, falling from an average of 1.2% over the period 2026-2030 to 0.9% in the 2070s (see Table I.3.1).

Table I.3.1: **Potential GDP growth rate – period average (%)**

	2026-30	2031-40	2041-50	2051-60	2061-70	2071-80	**2026-80**
BE	1.3	1.1	1.2	1.1	1.1	1.0	**1.1**
BG	2.7	1.7	1.1	1.0	1.3	1.1	**1.4**
CZ	1.4	1.2	1.0	0.9	1.2	1.0	**1.1**
DK	1.7	1.7	1.7	1.4	1.1	1.1	**1.4**
DE	0.5	0.8	1.1	0.9	1.0	1.0	**0.9**
EE	0.3	1.0	0.9	0.7	1.1	1.0	**0.9**
IE	4.1	2.9	1.5	1.2	1.1	0.9	**1.7**
EL	1.5	0.8	0.3	0.6	1.1	0.9	**0.8**
ES	2.2	1.4	1.1	1.3	1.2	1.0	**1.3**
FR	0.9	0.9	1.0	1.1	1.1	0.9	**1.0**
HR	2.7	1.3	0.9	0.8	0.7	0.7	**1.1**
IT	0.6	0.3	0.7	0.9	0.9	0.8	**0.7**
CY	3.0	2.2	1.8	1.3	1.2	1.2	**1.6**
LV	1.4	1.7	1.1	0.7	1.0	0.8	**1.1**
LT	1.9	1.6	1.0	0.5	0.5	0.6	**0.9**
LU	1.4	2.0	1.7	1.1	1.0	0.9	**1.3**
HU	1.2	1.4	1.1	0.9	1.0	0.9	**1.1**
MT	4.8	4.0	2.6	1.6	1.1	1.0	**2.3**
NL	1.2	1.1	1.5	1.4	1.2	1.1	**1.2**
AT	0.7	1.0	1.0	0.9	1.0	0.9	**0.9**
PL	2.7	2.5	1.6	1.0	1.0	0.7	**1.5**
PT	1.4	0.5	0.7	0.9	0.9	1.0	**0.8**
RO	1.4	1.6	1.1	1.0	1.0	0.9	**1.1**
SI	2.2	2.3	1.6	1.2	1.2	1.0	**1.5**
SK	1.3	1.5	1.1	0.8	1.1	1.0	**1.1**
FI	0.8	1.2	1.1	0.9	0.9	0.8	**1.0**
SE	1.6	1.6	1.6	1.2	1.4	1.2	**1.4**
NO	1.6	1.2	1.3	1.3	1.1	1.0	**1.2**
EA	1.1	1.0	1.0	1.0	1.1	0.9	**1.0**
EU	1.2	1.1	1.0	1.0	1.1	0.9	**1.0**

Source: European Commission, EPC.

The growth rate of the labour component – the number of total hours worked – in the EU is projected to be negative as of the early 2030s. The demographic assumptions result in a decline in the working-age population and, by extension, a negative contribution of labour input to potential growth for most EU countries. The projected increase in participation and employment rates would not be sufficient to counterbalance the decline in the working-age population (see Chapter 2). Overall, over the period 2026-2080, total hours worked would fall in the EU by 0.3% on average (see Table I.3.2). As a result, potential GDP growth in the EU would be entirely driven by labour productivity.

Annual growth in labour productivity per hour worked is projected to increase in the first half of the projections, going from 0.9% on average over the period 2026-2030 to 1.4% over the period 2041-2060. Thereafter, the annual growth in labour productivity is projected to slow down slightly, reaching an average of 1.3% over the period 2061-2080. As a result, the average annual growth rate over the entire projection period (2026-2080) would be 1.3% (see Table I.3.3).

Total factor productivity (TFP) growth would explain around two-thirds of labour productivity growth during the projection period. For the EU as a whole, the average annual growth of TFP would steadily increase, from 0.6% in the late 2020s, until around 2050, when it would stabilise at 0.9%. Over the whole projection period (2026-2080), the growth rate of TFP would average 0.8% (see Table I.3.4).

The contribution of capital deepening to labour productivity would remain about constant at around 0.4%-0.5% throughout the projection period for the EU (see Table I.3.5). For many countries whose GDP per capita is below the EU average, the capital deepening contribution is projected to be higher than the EU average, reflecting to some extent the catching-up process on the accumulation of capital.

Table I.3.2: **Total hours worked growth rate – period average (%)**

	2026-30	2031-40	2041-50	2051-60	2061-70	2071-80	**2026-80**
BE	0.7	0.3	0.0	-0.2	-0.2	-0.3	**0.0**
BG	0.2	-1.1	-1.1	-0.7	-0.2	-0.3	**-0.6**
CZ	0.1	-0.3	-0.6	-0.5	-0.1	-0.3	**-0.3**
DK	0.5	0.4	0.3	0.1	-0.2	-0.2	**0.1**
DE	-0.1	-0.2	-0.2	-0.4	-0.3	-0.3	**-0.2**
EE	-0.2	-0.1	-0.5	-0.7	-0.2	-0.3	**-0.3**
IE	1.4	0.7	0.0	-0.2	-0.2	-0.4	**0.1**
EL	-0.1	-0.7	-1.0	-0.7	-0.2	-0.4	**-0.6**
ES	1.3	0.1	-0.3	-0.2	-0.2	-0.4	**-0.1**
FR	0.5	0.3	-0.1	-0.2	-0.2	-0.3	**0.0**
HR	0.6	-0.5	-0.7	-0.7	-0.7	-0.6	**-0.5**
IT	0.4	-0.2	-0.4	-0.4	-0.4	-0.5	**-0.3**
CY	1.2	0.3	0.1	-0.4	-0.3	-0.2	**0.0**
LV	-1.0	-0.8	-1.0	-1.1	-0.4	-0.6	**-0.8**
LT	-0.4	-0.7	-0.9	-1.2	-0.9	-0.7	**-0.8**
LU	1.6	1.4	0.5	-0.1	-0.3	-0.4	**0.3**
HU	-0.1	-0.5	-0.7	-0.7	-0.4	-0.4	**-0.5**
MT	3.3	1.4	0.3	-0.5	-0.5	-0.5	**0.3**
NL	0.5	0.2	0.3	0.1	-0.1	-0.2	**0.1**
AT	0.5	0.2	-0.1	-0.4	-0.3	-0.4	**-0.1**
PL	-0.8	-0.7	-1.1	-1.1	-0.6	-0.8	**-0.9**
PT	0.5	-0.9	-0.7	-0.5	-0.5	-0.3	**-0.5**
RO	-0.4	-0.7	-0.8	-0.7	-0.4	-0.5	**-0.6**
SI	0.1	0.2	-0.4	-0.5	-0.2	-0.3	**-0.2**
SK	-0.6	-0.7	-0.8	-0.9	-0.3	-0.3	**-0.6**
FI	0.2	0.3	-0.1	-0.4	-0.3	-0.4	**-0.2**
SE	0.6	0.4	0.4	-0.1	0.1	-0.1	**0.2**
NO	0.5	0.2	0.2	0.1	-0.1	-0.2	**0.1**
EA	0.4	-0.1	-0.3	-0.3	-0.3	-0.4	**-0.2**
EU	0.3	-0.1	-0.4	-0.4	-0.3	-0.4	**-0.3**

Source: European Commission, EPC.

Table I.3.3: **Hourly labour productivity growth rate – period average (%)**

	2026-30	2031-40	2041-50	2051-60	2061-70	2071-80	**2026-80**
BE	0.6	0.8	1.2	1.3	1.3	1.3	**1.1**
BG	2.5	2.8	2.3	1.8	1.4	1.4	**2.0**
CZ	1.3	1.6	1.6	1.5	1.3	1.4	**1.4**
DK	1.2	1.3	1.4	1.3	1.3	1.3	**1.3**
DE	0.5	1.0	1.2	1.3	1.3	1.3	**1.2**
EE	0.5	1.1	1.4	1.4	1.2	1.3	**1.2**
IE	2.7	2.1	1.5	1.4	1.3	1.3	**1.6**
EL	1.6	1.5	1.4	1.3	1.3	1.3	**1.4**
ES	0.9	1.3	1.4	1.4	1.4	1.4	**1.4**
FR	0.4	0.7	1.1	1.3	1.3	1.3	**1.1**
HR	2.1	1.9	1.6	1.5	1.4	1.3	**1.6**
IT	0.2	0.5	1.1	1.3	1.3	1.3	**1.0**
CY	1.8	1.9	1.7	1.7	1.5	1.4	**1.6**
LV	2.4	2.5	2.2	1.8	1.4	1.4	**1.9**
LT	2.3	2.2	1.9	1.7	1.4	1.3	**1.8**
LU	-0.2	0.6	1.1	1.3	1.3	1.3	**1.0**
HU	1.3	2.0	1.8	1.6	1.4	1.3	**1.6**
MT	1.5	2.5	2.3	2.0	1.7	1.5	**2.0**
NL	0.7	0.9	1.2	1.3	1.3	1.3	**1.1**
AT	0.2	0.8	1.2	1.3	1.3	1.3	**1.1**
PL	3.6	3.2	2.7	2.1	1.6	1.5	**2.4**
PT	1.0	1.4	1.4	1.4	1.4	1.4	**1.3**
RO	1.8	2.3	2.0	1.6	1.4	1.4	**1.7**
SI	2.1	2.1	2.0	1.7	1.4	1.4	**1.7**
SK	1.9	2.3	2.0	1.6	1.3	1.3	**1.7**
FI	0.6	0.9	1.2	1.3	1.3	1.3	**1.1**
SE	1.0	1.1	1.3	1.3	1.3	1.3	**1.2**
NO	1.0	1.0	1.1	1.2	1.2	1.2	**1.1**
EA	0.7	1.0	1.3	1.3	1.3	1.3	**1.2**
EU	0.9	1.2	1.4	1.4	1.3	1.3	**1.3**

Source: European Commission, EPC.

Table I.3.4: **Total factor productivity (TFP) growth rate – period average (%)**

	2026-30	2031-40	2041-50	2051-60	2061-70	2071-80	**2026-80**
BE	0.3	0.5	0.8	0.8	0.8	0.8	**0.7**
BG	1.4	1.4	1.1	1.0	0.9	0.8	**1.1**
CZ	0.7	1.0	1.0	0.9	0.9	0.9	**0.9**
DK	0.8	0.9	0.9	0.9	0.8	0.8	**0.9**
DE	0.4	0.7	0.8	0.8	0.8	0.8	**0.8**
EE	-0.4	0.6	0.8	0.8	0.8	0.8	**0.7**
IE	2.6	1.4	1.0	0.9	0.9	0.8	**1.1**
EL	1.1	0.9	0.9	0.9	0.8	0.8	**0.9**
ES	0.7	0.8	1.0	1.0	1.0	1.0	**0.9**
FR	0.2	0.4	0.7	0.8	0.8	0.8	**0.7**
HR	0.9	0.9	0.9	0.9	0.8	0.8	**0.9**
IT	0.0	0.3	0.8	0.9	0.9	0.9	**0.7**
CY	0.9	0.9	0.9	0.8	0.8	0.8	**0.9**
LV	1.3	1.6	1.3	1.0	0.9	0.9	**1.1**
LT	0.6	1.2	1.1	1.0	0.9	0.8	**1.0**
LU	-0.1	0.4	0.7	0.8	0.8	0.8	**0.6**
HU	0.8	1.2	1.1	0.9	0.9	0.8	**1.0**
MT	1.2	1.3	1.1	1.0	0.9	0.8	**1.0**
NL	0.4	0.6	0.8	0.8	0.8	0.8	**0.7**
AT	0.1	0.5	0.8	0.8	0.8	0.8	**0.7**
PL	2.0	2.0	1.5	1.1	1.0	0.9	**1.4**
PT	0.8	0.9	0.9	0.9	0.9	0.9	**0.9**
RO	0.3	1.3	1.1	1.0	0.9	0.8	**1.0**
SI	1.4	1.4	1.1	1.0	0.9	0.8	**1.1**
SK	0.9	1.4	1.2	1.0	0.9	0.8	**1.0**
FI	0.3	0.6	0.8	0.8	0.8	0.8	**0.7**
SE	0.6	0.8	0.8	0.8	0.8	0.8	**0.8**
NO	0.7	0.5	0.8	0.9	0.9	0.9	**0.8**
EA	0.5	0.6	0.8	0.9	0.9	0.9	**0.8**
EU	0.6	0.8	0.9	0.9	0.9	0.9	**0.8**

Source: European Commission, EPC.

Table I.3.5: **Annual contribution of capital deepening – period average (%)**

	2026-30	2031-40	2041-50	2051-60	2061-70	2071-80	**2026-80**
BE	0.3	0.3	0.4	0.4	0.5	0.5	**0.4**
BG	1.1	1.4	1.1	0.8	0.6	0.6	**0.9**
CZ	0.5	0.5	0.6	0.5	0.4	0.5	**0.5**
DK	0.4	0.4	0.5	0.5	0.5	0.5	**0.4**
DE	0.1	0.3	0.4	0.4	0.5	0.5	**0.4**
EE	0.9	0.5	0.6	0.5	0.4	0.5	**0.5**
IE	0.1	0.7	0.5	0.5	0.5	0.5	**0.5**
EL	0.5	0.6	0.5	0.5	0.5	0.5	**0.5**
ES	0.2	0.4	0.4	0.4	0.5	0.5	**0.4**
FR	0.2	0.3	0.4	0.4	0.5	0.5	**0.4**
HR	1.2	0.9	0.8	0.6	0.5	0.5	**0.7**
IT	0.2	0.2	0.4	0.4	0.5	0.5	**0.4**
CY	0.9	1.0	0.8	0.8	0.7	0.6	**0.8**
LV	1.2	0.9	0.9	0.8	0.5	0.5	**0.8**
LT	1.7	1.0	0.8	0.8	0.6	0.5	**0.8**
LU	-0.1	0.2	0.4	0.4	0.5	0.5	**0.3**
HU	0.5	0.8	0.8	0.7	0.5	0.5	**0.6**
MT	0.3	1.2	1.2	1.1	0.8	0.6	**0.9**
NL	0.3	0.4	0.4	0.4	0.5	0.5	**0.4**
AT	0.2	0.3	0.4	0.4	0.5	0.5	**0.4**
PL	1.5	1.2	1.2	1.0	0.7	0.7	**1.0**
PT	0.2	0.5	0.4	0.4	0.5	0.5	**0.4**
RO	1.5	1.0	0.8	0.7	0.5	0.5	**0.8**
SI	0.7	0.8	0.9	0.7	0.5	0.5	**0.7**
SK	1.0	0.9	0.8	0.6	0.4	0.5	**0.7**
FI	0.3	0.4	0.4	0.4	0.5	0.5	**0.4**
SE	0.5	0.4	0.4	0.4	0.5	0.5	**0.4**
NO	0.5	0.4	0.3	0.3	0.3	0.3	**0.4**
EA	0.2	0.4	0.5	0.5	0.5	0.5	**0.4**
EU	0.4	0.4	0.5	0.5	0.5	0.5	**0.5**

Source: European Commission, EPC.

A summary of the relative contribution to potential GDP growth of labour productivity and labour input (and their determinants) over the entire projection period 2026-2080 is provided by the standard growth accounting framework reported in Table I.3.6.

For the EU, a broadly stable decline in total hours worked is projected over the projection period. Employment rates are projected to increase, making a small positive contribution to potential growth (0.1 pp). However, this would be more than offset by the decline in total population and the share of

the working-age population, which would put a negative drag on potential growth (-0.2 pp each). Consequently, on average, labour input would contribute negatively to annual potential output growth (by 0.3 pps in the EU).

By contrast, growth in labour productivity (production per hour worked) would contribute positively to potential output growth in the EU, i.e. 1.3 pps on average in 2026-2080. Overall, the annual potential GDP growth over projection period 2026-2080 would average 1% in the EU.

The contribution of labour input (total hours worked) to potential growth rates is projected to be negative for the majority of EU Member States. This mostly follows from the adverse impact of demographic developments. However, labour input growth would be positive, on average, for some countries (Denmark, Ireland, Luxembourg, Malta, the Netherlands, Sweden and Norway), because of a growing population or higher employment rates (see Chapters 1 and 2). The contribution of labour productivity would be positive for all Member States. Yet, the size of the contribution would differ substantially across countries, especially in the first half of the projection period, reflecting different catching-up potential both in terms of TFP and capital accumulation (see description in Box I.3.1).

Table I.3.6: **Breakdown of potential GDP growth (baseline), 2026-2080**

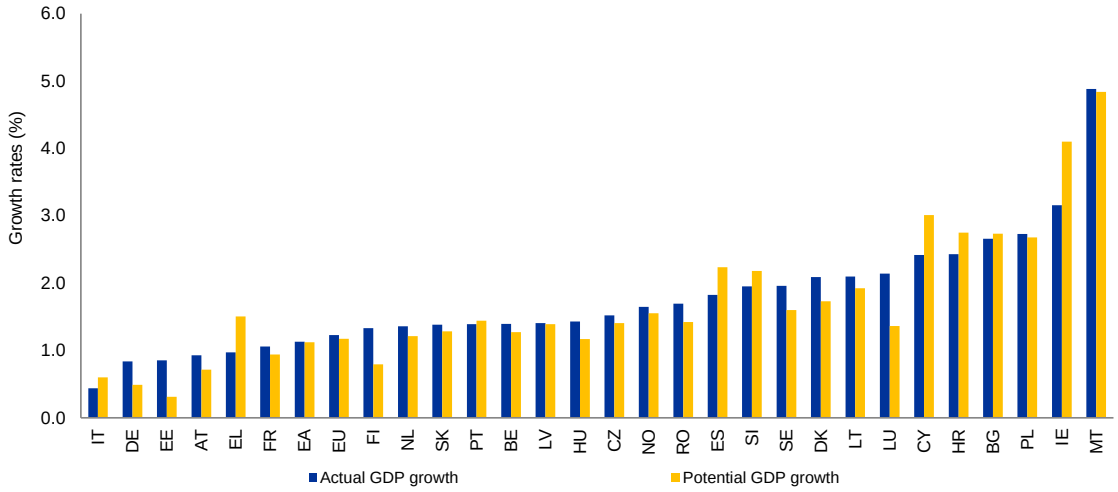
	Average real GDP growth (2026-2080)									GDP/capita growth
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)					
			contribution from			contribution from				
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee	
	(1) = (2)+(5)	(2) = (3)+(4)	(3)	(4)	(5) = (6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)
BE	1.1	1.1	0.7	0.4	0.0	0.1	-0.2	0.0	0.0	1.0
BG	1.4	2.0	1.1	0.9	-0.6	-0.6	-0.2	0.1	0.0	1.9
CZ	1.1	1.4	0.9	0.5	-0.3	-0.2	-0.2	0.0	0.0	1.3
DK	1.4	1.3	0.9	0.4	0.1	0.1	-0.2	0.2	0.0	1.4
DE	0.9	1.2	0.8	0.4	-0.2	-0.2	-0.2	0.1	0.0	1.1
EE	0.9	1.2	0.7	0.5	-0.3	-0.3	-0.2	0.1	0.0	1.2
IE	1.7	1.6	1.1	0.5	0.1	0.3	-0.2	0.0	0.0	1.4
EL	0.8	1.4	0.9	0.5	-0.6	-0.5	-0.2	0.2	0.0	1.4
ES	1.3	1.4	0.9	0.4	-0.1	0.1	-0.2	0.1	0.0	1.2
FR	1.0	1.1	0.7	0.4	0.0	0.0	-0.2	0.1	0.0	1.0
HR	1.1	1.6	0.9	0.7	-0.5	-0.5	-0.2	0.1	0.0	1.5
IT	0.7	1.0	0.7	0.4	-0.3	-0.4	-0.2	0.3	0.0	1.1
CY	1.6	1.6	0.9	0.8	0.0	0.2	-0.2	0.0	0.0	1.5
LV	1.1	1.9	1.1	0.8	-0.8	-0.7	-0.2	0.0	0.0	1.7
LT	0.9	1.8	1.0	0.8	-0.8	-0.6	-0.2	0.0	0.0	1.5
LU	1.3	1.0	0.6	0.3	0.3	0.6	-0.2	-0.1	0.0	0.7
HU	1.1	1.6	1.0	0.6	-0.5	-0.4	-0.2	0.1	0.0	1.5
MT	2.3	2.0	1.0	0.9	0.3	0.5	-0.2	0.0	0.0	1.8
NL	1.2	1.1	0.7	0.4	0.1	0.1	-0.2	0.1	0.0	1.1
AT	0.9	1.1	0.7	0.4	-0.1	0.0	-0.2	0.1	0.0	1.0
PL	1.5	2.4	1.4	1.0	-0.9	-0.5	-0.2	-0.1	0.0	2.0
PT	0.8	1.3	0.9	0.4	-0.5	-0.3	-0.3	0.1	0.0	1.1
RO	1.1	1.7	1.0	0.8	-0.6	-0.4	-0.2	0.0	0.0	1.6
SI	1.5	1.7	1.1	0.7	-0.2	-0.2	-0.2	0.1	0.0	1.7
SK	1.1	1.7	1.0	0.7	-0.6	-0.4	-0.2	0.1	0.0	1.6
FI	1.0	1.1	0.7	0.4	-0.2	-0.1	-0.2	0.1	0.0	1.1
SE	1.4	1.2	0.8	0.4	0.2	0.2	-0.1	0.1	0.0	1.2
NO	1.2	1.1	0.8	0.4	0.1	0.2	-0.2	0.0	0.0	1.0
EA	1.0	1.2	0.8	0.4	-0.2	-0.1	-0.2	0.1	0.0	1.1
EU	1.0	1.3	0.8	0.5	-0.3	-0.2	-0.2	0.1	0.0	1.2

* WAP: working-age population (15-74y).

Source: European Commission, EPC.

Actual GDP growth rates are computed by considering the position of the economies in the business cycle (see Box I.3.1). Specifically, for those countries whose potential GDP is expected to be higher than actual GDP in 2027 in the Commission 2026 spring forecast (i.e. a negative output gap), actual GDP growth is projected to be higher than potential GDP growth until the output gap is closed in 2030 (see Graph I.3.1). The reverse happens for those countries whose potential GDP is projected to be lower than actual GDP in 2027, i.e. the output gap is positive.

Graph I.3.1: **Actual and potential GDP growth rates, average 2026-2030 (%)**



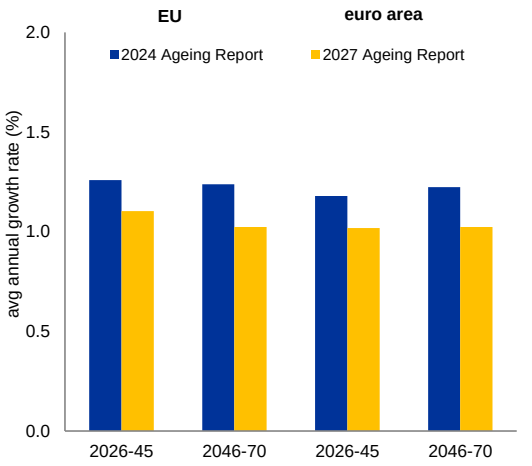
Source: European Commission, EPC.

3.3. COMPARISON WITH THE GROWTH PROJECTIONS IN THE 2024 AGEING REPORT

Compared with the 2024 Ageing Report, potential GDP growth over the period 2026-2070 is lower in the 2027 exercise. This is explained by the expected lower TFP growth rate in the long term.

In the 2027 Ageing Report, the annual average potential GDP growth rate for 2026-2070 ([14]) is projected to be 1.1% in the EU and 1.0% in the euro area. For both aggregates, it is 0.2 pps lower than in the 2024 Ageing Report (see Table I.3.7). The lower potential GDP growth is fully explained by the lower contribution of labour productivity growth, more precisely TFP growth. The difference in potential GDP growth rates between the two reports is slightly increasing with the projection horizon (see Graph I.3.2).

Graph I.3.2: **Potential GDP growth rate, average 2026-2070 (%)**



Source: European Commission, EPC.

The differences in the GDP growth projections are substantial for several Member States. The largest downward revisions in average annual potential GDP growth are for Estonia (-0.7 pps), Italy (-0.5 pps) and Hungary (-0.5 pps). This is due to a combination of lower contributions of labour productivity and, to a lesser extent, hours worked for these countries. The largest upward revisions concern Malta (+0.7 pps), Cyprus (+0.3 pps) and Poland (+0.3 pps) and are primarily because of stronger labour productivity projections.

([14]) The comparison with the 2024 Ageing Report is done for the period 2026-2070 considering that the 2024 update covered the period up to 2070, compared with 2080 in the current update.

Table I.3.7: **Growth revision: 2027 Ageing Report vs 2024 Ageing Report, 2026-2070 (pps)**

	Average real GDP growth (2026-2070)									GDP/capita growth
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)					
			contribution from			contribution from				
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee	
	(1) = (2)+(5)	(2) = (3)+(4)	(3)	(4)	(5)= (6)+(7)+(8)+(9	(6)	(7)	(8)	(9)	(10)=(1)-(6)
BE	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
BG	0.1	0.0	-0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.1
CZ	-0.4	-0.3	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	-0.3
DK	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.2
DE	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.0	-0.1
EE	-0.7	-0.6	-0.4	-0.1	-0.2	-0.2	0.0	0.0	0.0	-0.6
IE	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1
EL	-0.3	-0.3	-0.2	-0.1	0.0	0.1	0.0	-0.1	0.0	-0.3
ES	0.1	-0.1	0.0	-0.1	0.2	0.2	0.0	-0.1	0.0	0.0
FR	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
HR	-0.2	-0.3	-0.3	0.1	0.0	0.0	0.0	0.0	0.0	-0.2
IT	-0.5	-0.3	-0.2	-0.1	-0.2	-0.1	0.0	-0.1	0.0	-0.3
CY	0.3	0.2	0.0	0.2	0.0	0.2	0.0	-0.1	0.0	0.1
LV	0.2	-0.1	-0.1	0.0	0.3	0.2	0.1	0.1	0.0	0.0
LT	0.1	-0.1	-0.2	0.1	0.3	0.2	0.0	0.1	0.0	-0.1
LU	-0.3	-0.2	-0.1	-0.1	-0.1	0.0	0.1	-0.1	0.0	-0.2
HU	-0.5	-0.4	-0.3	-0.1	-0.2	-0.3	0.0	0.0	0.0	-0.3
MT	0.7	0.6	0.1	0.5	0.1	-0.2	0.1	0.2	0.1	0.9
NL	0.0	-0.1	-0.1	0.0	0.1	0.1	0.0	0.0	0.0	-0.1
AT	-0.3	-0.3	-0.2	-0.1	0.0	-0.1	0.0	0.0	0.0	-0.2
PL	0.3	0.4	0.1	0.3	-0.1	-0.1	0.1	0.1	-0.1	0.4
PT	-0.4	-0.3	-0.2	-0.1	0.0	0.1	0.0	0.0	0.0	-0.4
RO	-0.4	-0.5	-0.5	0.0	0.2	0.1	0.1	0.0	0.0	-0.4
SI	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
SK	-0.2	-0.2	-0.2	0.0	-0.1	-0.1	0.0	0.0	0.0	-0.1
FI	-0.1	-0.2	-0.1	-0.1	0.2	0.1	0.0	0.1	0.0	-0.2
SE	-0.2	0.0	0.0	0.0	-0.1	-0.2	0.0	0.1	0.0	0.0
NO	-0.2	-0.1	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	-0.1
EA	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
EU	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1

* WAP: working-age population (15-74y).

Source: European Commission, EPC.

Box I.3.1: The production function used for long-run growth projections

The long-run GDP projections are based on the Potential Output Working Group's (POWG) *EU's commonly agreed methodology* (EUCAM) for projecting output up to T+55 [1]. This box outlines the rationale and main assumptions of the methodology, while Annex 2 provides additional technical details.

General framework

EUCAM is based on a standard production function, in which output depends on total factor productivity (TFP), capital (K) and labour (L). It assumes that output is produced according to a Cobb-Douglas technology with constant returns to scale. Potential output results from the same production technology, using potential (or trend) equivalents of the input series:

$$Y_t = TFP_t \cdot K_t^{1-\alpha} \cdot L_t^{\alpha}$$

Within this production function framework, EUCAM projects TFP, capital and labour by applying distinct methods for different projection periods:

- Over the short run (up to T+5), EUCAM uses a mix of **filtering techniques** to decompose actual GDP, and its underlying input variables, into a cyclical component and a trend component.
- Over the medium term (from T+6 to T+10), EUCAM applies **stabilising rules** to ensure smooth transitions and to reflect the persistence of structural developments.
- Over the long term (from T+11 to T+55), EUCAM focuses on longer term trends through further stabilisation and **convergence rules**.

Actual and potential labour series (L) result from the combination of four factors: working-age population, participation rate, hours worked per worker and unemployment rate. For potential labour input, the trend or potential values of these components are used where relevant. Chapters 1 and 2 describe the behaviour of these factors over the projection period. Therefore, this box does not discuss them further. Instead, it focuses on the assumptions underlying the evolution of productivity (TFP) and of the capital stock (K).

Total factor productivity (TFP)

In the case of TFP, the trend-cycle decomposition is based on a Kalman filter.

Over the medium term, EUCAM assumes that the growth rate of TFP follows an autoregressive process with a drift, implying a mean reversion. In practice, this allows for a partial recovery of TFP that compensates for the declining trend observed in recent years. This is justified on the basis that EU economies needed time to adjust following recent large economic shocks.

This recovery is, however, assumed to be short-lived. Indeed, theoretical and empirical evidence point to a persistent slowdown in TFP growth. Relevant evidence includes the secular decline in TFP growth (e.g. Gordon, 2015), the likely negative TFP effects of the EU's rapidly ageing labour force (e.g. Aiyar, Ebeke and Shao, 2016) and climate change (e.g. Cárdenas Rodríguez et al., 2023; Parker, 2023), as well as evidence that ideas are becoming harder to find (see Bloom et al., 2020). Taken together, these arguments do not support the view that TFP growth will return to its historical long-run average, despite the potential impact of AI.

Therefore, over the long term, the projection of trend TFP turns to a more structural model anchored on a knowledge production function, following Jones (1995, 2005). More specifically, EUCAM assumes that past discoveries facilitate the generation of new ideas, such that R&D investment has a proportional impact on

(1) The methodology extends the T+10 projections up to T+55, thus covering the entire Ageing Report projection period. For a detailed description of the methodology, see Arévalo et al. (2026).

(Continued on the next page)

Box (continued)

the stock of knowledge and productivity. Consequently, constant TFP growth is assumed in the long run. Operationally, from T+11 onwards, TFP is assumed to grow at the same rate as between T+9 and T+10.

In addition, consistently with the evidence of convergence clubs within the EU, the growth rate of TFP of all Member States is assumed to converge asymptotically to the EU average but at differentiated speeds. Specifically, convergence is assumed to be completed by T+30 for countries whose TFP growth is below the EU average in T+10, and by T+55 for countries whose TFP growth is above it.

Capital stock (K)

Because the capital stock measures the economy's productive capacity, EUCAM does not distinguish between actual and potential capital. There is thus no need to perform a trend-cycle decomposition ([2]).

Over the medium and long term, EUCAM assumes that the capital stock evolves according to the standard law of motion of capital:

$$K_t = (1 - \delta) \cdot K_{t-1} + I_t$$

where δ is the rate of depreciation of capital ([3]), and I_t is the gross fixed capital formation.

EUCAM distinguishes two groups of countries to project investment.

For 13 Member States (Bulgaria, Czechia, Estonia, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia), EUCAM projects investment using an autoregressive process throughout the projection period (the '*investment rule*'). This approach extends the trends observed in the historical data and in the Commission forecast.

For the remaining 14 Member States (Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, and Sweden), EUCAM applies this methodology only up to T+5. Beyond that, investment projections are modified so that the capital-to-potential GDP ratio gradually converges to a constant level by T+15 (this is referred to as the '*transition rule*'). From that point, investment is calibrated to ensure that the growth rate of capital equals the growth rate of potential GDP (this is known as the '*capital rule*').

Safeguard clause and closure rule

Once all input series are generated, final GDP values are calculated using the Cobb-Douglas production function mentioned above. However, this does not fully determine the projection path for those countries that meet the following two conditions: (i) their ratio of GDP per person of working age is below the EU average in T+10, and (ii) the average growth rate of this ratio, computed over the period from T+10 to T+55, is lower than the corresponding EU average. For these countries, the GDP growth projections are increased so that their average growth rate of GDP per person of working age matches that of the EU, thereby ensuring that further divergence does not occur in the long run (i.e. the *safeguard clause*). To preserve the growth accounting breakdown between GDP and the production inputs, the additional growth of potential GDP is integrally assigned to the TFP component.

Finally, the *closure rule* generates the actual GDP growth series by linking the short-term forecast to the medium-term path of potential GDP through a gradual elimination of the output gap. Up to T+2, actual GDP follows observed data and the Commission forecast, which differ from potential because of cyclical conditions. From T+3 onwards, the remaining gap between actual and potential GDP is reduced linearly, so that by T+5 the gap is fully closed, and actual GDP coincides with potential GDP. This approach ensures that temporary deviations are phased out smoothly, producing an actual GDP growth profile that converges in a consistent and economically coherent way towards medium-term potential growth.

([2]) Variations in capital utilisation are captured through the cyclical component of total factor productivity.
([3]) In the projections, the rate of depreciation is fixed to its last forecast value, i.e. 2027.

4. INFLATION AND INTEREST RATE ASSUMPTIONS

This chapter describes the interest rates and inflation assumptions for the 2027 Ageing Report. Interest rate assumptions, described in Section 4.1, are particularly relevant for the purpose of projecting pension fund assets. Section 4.2 presents the baseline inflation assumptions, which matter for the indexation of pension benefits.

Table I.4.1: **Selected macroeconomic assumptions for the 2027 Ageing Report**

Long-term interest rate	Inflation
Linear convergence to: - country-specific forward market rates in T+10 (2035) - 2% in real terms by T+30 (2055); 4% in nominal terms in all Member States except PL, RO (4.5%) and HU (5%)	*Linear convergence to:* 2% between 2027 and 2030 in all Member States except PL & RO (2.5%) and HU (3%)
Maintained for the remainder of the projection period	

Source: European Commission, EPC.

4.1. INTEREST RATE ASSUMPTIONS AND PENSION FUND PROJECTIONS

4.1.1. Interest rate assumptions

Since the 2021 Ageing Report, interest rate assumptions are set in line with financial markets' country-specific expectations for the medium term, while using common convergence values for the long term. Long-term interest rates are assumed to converge linearly from the country-specific rates in the Commission 2026 spring forecast for 2026 and 2027 to country-specific market-based forward nominal rates by T+10 ([15]). Beyond T+10, they are assumed to converge to a common value of 2% in real terms by T+30, corresponding to 4% in nominal terms for most EU Member States ([16]). This value is set to stay constant thereafter (see Table I.4.2).

Such interest rate assumptions have a double rationale. On the one hand, the linear convergence principle allows accounting for country-specific situations up to the medium term, while still maintaining the assumption of a common real interest rate in the long run. On the other hand, a market-based method represents an evidence-based, tried-and-tested approach to project nominal interest rates.

Table I.4.2: **Long-term interest rate projections (%)**

	T 2025	T+1 2026	T+2 2027	T+10 2035	T+30 2055
BE	3.2	3.6	3.8	5.1	4.0
BG	3.9	4.1	4.2	4.6	4.0
CZ	4.3	4.7	4.9	5.9	4.0
DK	2.3	2.9	3.1	3.5	4.0
DE	2.6	3.0	3.2	4.1	4.0
EE	3.3	3.5	3.6	4.7	4.0
IE	2.9	3.2	3.4	4.1	4.0
EL	3.4	3.7	4.0	4.9	4.0
ES	3.2	3.5	3.7	4.7	4.0
FR	3.4	3.7	4.0	5.1	4.0
HR	3.0	3.4	3.7	4.7	4.0
IT	3.6	3.8	4.1	5.3	4.0
CY	2.9	3.5	3.8	4.6	4.0
LV	3.3	3.8	4.0	4.5	4.0
LT	2.9	3.1	3.2	4.9	4.0
LU	2.9	3.2	3.4	3.9	4.0
HU	6.9	6.2	6.0	6.4	5.0
MT	3.4	3.9	4.1	5.0	4.0
NL	2.8	3.1	3.3	4.0	4.0
AT	3.0	3.3	3.5	4.3	4.0
PL	5.5	5.6	5.9	7.0	4.5
PT	3.1	3.4	3.6	4.7	4.0
RO	7.0	6.9	7.1	7.2	4.5
SI	3.1	3.4	3.7	4.6	4.0
SK	3.4	3.7	4.0	5.3	4.0
FI	3.0	3.4	3.6	4.4	4.0
SE	2.5	2.8	3.0	3.3	4.0
EA	3.2	3.5	3.7	4.7	4.0
EU	3.5	3.8	4.0	4.8	4.1

Source: European Commission, EPC.

([15]) This approach corresponds to that of the Commission's debt sustainability framework. For more details, see Chapter 3 and Box 3.1 in the Debt Sustainability Monitor 2025 (European Commission, 2026).

([16]) 4.5% nominal for Poland and Romania, and 5% nominal for Hungary, given that these countries' central banks have higher inflation targets.

4.1.2. Pension fund projections

Long-term interest rates influence the projection of publicly funded pension funds and reserve positions, in particular the expected rate of return on the stock of assets. Since the 2024 Ageing Report, the reporting on pension fund assets and returns has been mandatory, whenever public pension funds and reserve funds exist and are sizeable ([17]).

Considering the rising importance of pre-funded or partially funded public pension schemes in some Member States, it is important to ensure consistent and comparable projections (i.e. based on common assumptions) across all Member States of the asset position of these schemes and the related flows. These projections contribute to the assessment of the sustainability of public pension schemes, especially for Member States where these funds and reserves play a significant role. This is the case for Finland, Luxembourg and Sweden.

The assumed rate of return for pension funds is unchanged from previous reports. It is determined by the long-term interest rate assumptions as described in Section 4.1.1. Returns generated by the (public) pension assets are generally reinvested in the funds and need to be considered in the projections. Pension funds might in reality achieve a return on equity that is higher than the return on government bonds, though.

Table I.4.3: **Inflation projections (%)**

	T 2025	T+1 2026	T+2 2027	T+5 2030
BE	3.0	3.4	2.6	2.0
BG	3.5	4.2	2.6	2.0
CZ	2.3	2.7	2.8	2.0
DK	1.8	1.8	1.9	2.0
DE	2.3	2.9	2.7	2.0
EE	4.8	4.4	2.9	2.0
IE	2.1	3.5	2.6	2.0
EL	2.9	3.7	2.4	2.0
ES	2.7	3.0	2.5	2.0
FR	0.9	2.4	1.8	2.0
HR	4.4	4.6	2.7	2.0
IT	1.7	3.2	1.8	2.0
CY	0.8	3.6	2.2	2.0
LV	3.8	3.6	2.2	2.0
LT	3.4	4.4	2.7	2.0
LU	2.5	2.7	1.8	2.0
HU	4.4	3.2	3.1	3.0
MT	2.4	2.7	2.3	2.0
NL	3.0	3.2	2.5	2.0
AT	3.6	3.0	2.5	2.0
PL	3.3	3.6	2.9	2.5
PT	2.2	3.0	2.3	2.0
RO	6.8	7.0	3.7	2.5
SI	2.5	3.5	2.5	2.0
SK	4.2	4.3	3.2	2.0
FI	1.8	2.4	1.9	2.0
SE	2.6	1.5	1.8	2.0
NO	2.8	3.2	2.5	2.0
EA	2.1	3.0	2.3	2.0
EU	2.5	3.1	2.4	2.0

Source: European Commission, EPC.

4.2. INFLATION ASSUMPTIONS

The inflation methodology for the 2027 Ageing Report is unchanged from previous reports. Beyond the Commission 2026 spring forecast horizon in T+2 (2027), inflation is assumed to converge linearly to the inflation targets of the central banks by T+5 (2030). This target is 2% for euro area countries, Czechia, Denmark and Sweden, 2.5% for Poland and Romania, and 3% for Hungary.

([17]) The reporting by Member States on private pension assets is voluntary.

5. SENSITIVITY TESTS AND ALTERNATIVE SCENARIOS

5.1. INTRODUCTION

The baseline projections measure how population ageing influences economic and budgetary developments in the long term. However, given the inherent uncertainty surrounding long-run projections, it is essential to conduct sensitivity tests to evaluate the responsiveness of the projections to changes in the macroeconomic and demographic assumptions.

The sensitivity tests introduce a change to a specific variable. For each test, a uniform shock is applied to all Member States. The sensitivity tests enrich the assessment of the impact of population ageing on public spending. Combined with the baseline they allow identifying the key factors driving the projection results and potential risks to the baseline. The sensitivity tests presented in section 5.2 include both unfavourable and favourable changes in the underlying assumptions.

In addition, specific policy scenarios are considered for each expenditure item to reflect the impact of potential future policy changes. These scenarios reflect the impact of deviating from the constant policy assumption under the baseline. Rather than attaching probabilities that the assumed policy is effectively implemented, the policy scenarios provide a 'what-if' view to enrich the analysis. Section 5.3 provides the policy scenarios for the pension projections. The specific scenarios conducted for health care, long-term care and education are presented in the respective chapters in Part II.

The projections for the sensitivity tests are constructed the same way as for the baseline: from population to labour input to GDP growth. The Cohort Simulation Model and the production function are adjusted in function of changes for each scenario (population, participation rate, TFP). However, in these sensitivity exercises, changes in TFP and labour input do not lead to corresponding adjustments in the capital stock, as is the case under the EUCAM methodology used for the baseline (see Chapter 3). The results should therefore be interpreted as partial sensitivity analyses rather than fully consistent alternative macroeconomic projections.

Table I.5.1: **Overview of the common sensitivity tests and policy scenarios for pensions**

Demography				Labour force	Productivity	Policy scenarios (pensions)		
Higher life expectancy	Lower fertility	Lower/higher migration	Migration: delayed convergence	Higher employment rate older workers	Lower/higher TFP growth	Link retirement age to life expectancy	Constant retirement age	Constant benefit ratio
Additional gain in life expectancy at birth of two years by 2080	*20% lower fertility rate (phased in)*	*33% less/more non-EU immigration over the entire projection period*	*Later convergence of migration flows and higher working-age feedback mechanism*	*10 pps higher employment rate of older workers (55-74y) compared with baseline*	*TFP growth at 85%/115% of the baseline assumption*	*Effective retirement age (labour market exit age) shifts in line with 3/4 th of the expected change in life expectancy*	*Effective retirement ages (labour market exit ages) are frozen at their 2026 levels*	*If the benefit ratio declines by 10% relative to the base year, measures are taken to prevent a further decline*

Source: European Commission, EPC.

5.2. SENSITIVITY TESTS

The selection of sensitivity tests draws on the previous cycles. In general, the standard tests applied in the 2024 Ageing Report were deemed appropriate for conducting a broad sensitivity analysis of the baseline expenditure dynamics. Changes are therefore limited to the introduction of an additional migration scenario. The assumptions are described in the following section and summarised in Table I.5.1. Tables I.5.2 to I.5.9 summarise the macroeconomic projections for each sensitivity test. The following sensitivity tests are conducted for all Member States([18]):

([18]) The five demographic sensitivity tests are based on demographic projections prepared by Eurostat around the baseline demographic projections (EUROPOP2025) discussed in Chapter 1.

- ***Higher life expectancy***: the age-specific mortality rates are reduced to achieve an additional increase in life expectancy at birth of two years by 2080 compared to the baseline assumptions.
- ***Lower fertility***: fertility rates are assumed to be 20% lower from 2034 onwards. For 2025 and 2026, the rates coincide with the baseline assumptions. Between 2027–2034, intermediate values are calculated by linear interpolation.
- ***Lower/higher migration***: non-EU immigration flows are reduced/increased by 33% annually compared with the baseline projection as of 2026.
- ***Migration – delayed convergence***: net migration is assumed to converge more slowly because of two elements: (i) the mid-term interpolation year is delayed from 2031 to 2040, extending country-specific migration trends before converging towards common EU rates and levels; (ii) the working-age feedback mechanism is raised from 10% to 25%, thus increasing the immigration flows in response to a decline in the working-age population (see Chapter 1). The AWG decided to add this scenario for the 2027 round given the high uncertainty on future migration flows.
- ***Higher employment rate of older workers***: through a reduction in the inactive population, the employment rate of older workers (aged 55-74) is increased by 10 pps over the period 2031-2035 compared with the baseline and this difference is maintained until 2080.
- ***Lower/higher productivity growth***: total factor productivity growth (TFP) is set at, respectively, 0.85 and 1.15 times the baseline projection once the output gap is closed, i.e. as of 2031.

5.3. ALTERNATIVE PENSION SCENARIOS

In addition to the above sensitivity tests, three pension policy scenarios are conducted:

- ***Linking retirement ages to life expectancy***: This scenario considers the adoption of a mechanism to automatically update the statutory and early retirement ages in line with gains in life expectancy at the age of 65 according to the EUROPOP2025 projections. As a result, effective retirement ages rise gradually. To this end, the labour market exit ages as estimated through the Cohort Simulation Model are adjusted. To account for the fact that people might have a higher risk of becoming (partially) disabled at higher ages or would use alternative pathways to withdraw from the labour force, the assumed increase in *effective* retirement ages equals about three quarters of the estimated change in the statutory retirement age. For those countries where a full link between the retirement age and the increase in life expectancy is currently legislated — and thus included in the baseline — this scenario is not relevant. This is the case for Denmark, Estonia, Greece, Italy, Cyprus and Slovakia. For the Netherlands, Portugal, Romania, Finland, Sweden and Norway, the partial link is replaced by a full link.
- ***Constant retirement age***: this scenario assumes that the main eligibility requirements (early and statutory retirement age, career requirements) are unchanged over the projection period from current conditions. To this end, the exit probabilities for people aged 51 and over in the CSM are kept constant at their 2026 values. The scenario allows to isolate the expected impact of legislated, though not yet implemented, reforms, e.g. links to life expectancy. In this sense, the scenario also measures the budgetary impact of reversing reforms once their implementation date approaches.
- ***Constant benefit ratio***: this scenario assumes measures are taken if, according to the baseline projections, the earnings-related public pension benefit ratio decreases by more than 10% relative to the base year at some point. In such case the benefit ratio is to be kept constant at this 10% lower point for the rest of the projection period. In practice, ad hoc interventions may already occur before the benefit ratio falls back to 90%. For countries that report private schemes, the change in the total benefit ratio provides the benchmark, though the adjustment to keep the latter at 90% of the base year level is done through the public benefit ratio. Since this scenario is conducted in function of the baseline results, no separate macroeconomic assumptions are prepared.

Table I.5.2: **Sensitivity test: higher life expectancy**

	Average real GDP growth (2026-2080)									GDP/capita growth	
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)						
			contribution from			contribution from					
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee		
	(1)=(2)+(5)	(2)=(3)+(4)	(3)	(4)	(5)=(6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)	
BE	1.1	1.1	0.7	0.4	0.0	0.1	-0.2	0.0	0.0	1.0	BE
BG	1.4	2.0	1.1	0.9	-0.6	-0.5	-0.2	0.1	0.0	1.9	BG
CZ	1.1	1.4	0.9	0.5	-0.3	-0.1	-0.2	0.0	0.0	1.2	CZ
DK	1.5	1.3	0.9	0.4	0.2	0.1	-0.2	0.3	0.0	1.4	DK
DE	0.9	1.2	0.8	0.4	-0.2	-0.1	-0.2	0.1	0.0	1.1	DE
EE	0.9	1.2	0.7	0.5	-0.3	-0.2	-0.2	0.2	0.0	1.1	EE
IE	1.7	1.6	1.1	0.5	0.1	0.3	-0.2	0.0	0.0	1.4	IE
EL	0.8	1.4	0.9	0.5	-0.5	-0.5	-0.2	0.3	0.0	1.3	EL
ES	1.3	1.4	0.9	0.4	-0.1	0.1	-0.3	0.1	0.0	1.2	ES
FR	1.0	1.1	0.7	0.4	0.0	0.0	-0.2	0.1	0.0	1.0	FR
HR	1.1	1.6	0.9	0.7	-0.5	-0.4	-0.2	0.1	0.0	1.5	HR
IT	0.7	1.0	0.7	0.4	-0.3	-0.3	-0.3	0.3	0.0	1.1	IT
CY	1.7	1.6	0.9	0.8	0.1	0.2	-0.3	0.1	0.0	1.4	CY
LV	1.1	1.9	1.1	0.8	-0.8	-0.6	-0.2	0.0	0.0	1.7	LV
LT	0.9	1.8	1.0	0.8	-0.8	-0.5	-0.3	0.0	0.0	1.5	LT
LU	1.3	1.0	0.6	0.3	0.4	0.7	-0.2	-0.1	0.0	0.7	LU
HU	1.1	1.6	1.0	0.6	-0.5	-0.3	-0.2	0.1	0.0	1.4	HU
MT	2.3	2.0	1.0	0.9	0.3	0.6	-0.3	0.0	0.0	1.8	MT
NL	1.2	1.1	0.7	0.4	0.1	0.1	-0.2	0.2	0.0	1.1	NL
AT	0.9	1.1	0.7	0.4	-0.1	0.0	-0.2	0.1	0.0	0.9	AT
PL	1.5	2.4	1.4	1.0	-0.9	-0.5	-0.3	-0.1	0.0	2.0	PL
PT	0.9	1.3	0.9	0.4	-0.5	-0.2	-0.3	0.1	0.0	1.1	PT
RO	1.2	1.7	1.0	0.8	-0.5	-0.4	-0.2	0.0	0.0	1.5	RO
SI	1.5	1.7	1.1	0.7	-0.2	-0.1	-0.2	0.1	0.0	1.7	SI
SK	1.2	1.7	1.0	0.7	-0.5	-0.4	-0.3	0.1	0.0	1.6	SK
FI	1.0	1.1	0.7	0.4	-0.1	-0.1	-0.2	0.2	0.0	1.1	FI
SE	1.4	1.2	0.8	0.4	0.2	0.2	-0.1	0.1	0.0	1.2	SE
NO	1.2	1.1	0.8	0.3	0.1	0.3	-0.2	0.0	0.0	1.0	NO
EA	1.0	1.2	0.8	0.4	-0.2	-0.1	-0.2	0.1	0.0	1.1	EA
EU	1.0	1.3	0.8	0.5	-0.2	-0.1	-0.2	0.1	0.0	1.2	EU

*WAP: working-age population (15-74y).

Source: European Commission, EPC.

Table I.5.3: **Sensitivity test: lower fertility**

	Average real GDP growth (2026-2080)									GDP/capita growth	
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)						
			contribution from			contribution from					
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee		
	(1)=(2)+(5)	(2)=(3)+(4)	(3)	(4)	(5)=(6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)	
BE	1.0	1.2	0.7	0.5	-0.2	-0.1	-0.1	0.0	0.0	1.1	BE
BG	1.3	2.1	1.1	1.0	-0.8	-0.7	-0.1	0.1	0.0	2.0	BG
CZ	1.0	1.5	0.9	0.6	-0.5	-0.4	-0.1	0.0	0.0	1.4	CZ
DK	1.3	1.4	0.9	0.5	0.0	-0.1	-0.1	0.2	0.0	1.4	DK
DE	0.8	1.2	0.8	0.5	-0.4	-0.3	-0.1	0.1	0.0	1.2	DE
EE	0.8	1.2	0.7	0.6	-0.5	-0.4	-0.2	0.1	0.0	1.2	EE
IE	1.6	1.7	1.1	0.5	-0.1	0.1	-0.2	0.0	0.0	1.5	IE
EL	0.7	1.4	0.9	0.5	-0.7	-0.7	-0.2	0.2	0.0	1.4	EL
ES	1.2	1.4	0.9	0.5	-0.2	0.0	-0.2	0.1	0.0	1.2	ES
FR	0.9	1.1	0.7	0.4	-0.2	-0.2	-0.1	0.1	0.0	1.1	FR
HR	1.0	1.6	0.9	0.8	-0.7	-0.6	-0.1	0.1	0.0	1.6	HR
IT	0.6	1.1	0.7	0.4	-0.5	-0.5	-0.2	0.3	0.0	1.1	IT
CY	1.6	1.7	0.9	0.8	-0.1	0.1	-0.2	0.0	0.0	1.5	CY
LV	1.0	2.0	1.1	0.8	-1.0	-0.8	-0.1	0.0	0.0	1.8	LV
LT	0.9	1.8	1.0	0.9	-0.9	-0.7	-0.2	0.0	0.0	1.6	LT
LU	1.2	1.1	0.6	0.4	0.2	0.4	-0.2	-0.1	0.0	0.8	LU
HU	1.0	1.7	1.0	0.7	-0.7	-0.6	-0.2	0.1	0.0	1.5	HU
MT	2.3	2.0	1.0	0.9	0.3	0.4	-0.2	0.0	0.0	1.8	MT
NL	1.1	1.2	0.7	0.5	-0.1	-0.1	-0.1	0.1	0.0	1.2	NL
AT	0.8	1.1	0.7	0.4	-0.3	-0.2	-0.2	0.1	0.0	1.0	AT
PL	1.4	2.4	1.4	1.1	-1.0	-0.7	-0.2	-0.1	0.0	2.1	PL
PT	0.7	1.4	0.9	0.5	-0.6	-0.4	-0.3	0.1	0.0	1.2	PT
RO	1.0	1.8	1.0	0.8	-0.7	-0.6	-0.2	0.0	0.0	1.6	RO
SI	1.4	1.8	1.1	0.7	-0.3	-0.3	-0.2	0.1	0.0	1.8	SI
SK	1.0	1.8	1.0	0.8	-0.8	-0.6	-0.2	0.1	0.0	1.6	SK
FI	0.9	1.2	0.7	0.5	-0.3	-0.3	-0.1	0.1	0.0	1.1	FI
SE	1.3	1.3	0.8	0.5	0.0	0.0	-0.1	0.1	0.0	1.3	SE
NO	1.1	1.2	0.8	0.4	-0.1	0.1	-0.1	0.0	0.0	1.1	NO
EA	0.9	1.3	0.8	0.5	-0.3	-0.3	-0.2	0.1	0.0	1.2	EA
EU	0.9	1.4	0.8	0.5	-0.4	-0.3	-0.2	0.1	0.0	1.3	EU

*WAP: working-age population (15-74y).

Source: European Commission, EPC.

Table I.5.4: **Sensitivity test: lower migration**

	Average real GDP growth (2026-2080)										
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)					GDP/capita growth	
			contribution from			contribution from					
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee		
	(1)=(2)+(5)	(2)=(3)+(4)	(3)	(4)	(5)=(6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)	
BE	1.0	1.2	0.7	0.5	-0.2	-0.1	-0.2	0.0	0.0	1.0	BE
BG	1.2	2.1	1.1	1.0	-0.8	-0.7	-0.2	0.1	0.0	2.0	BG
CZ	1.0	1.5	0.9	0.6	-0.5	-0.3	-0.2	0.0	0.0	1.3	CZ
DK	1.3	1.4	0.9	0.5	-0.1	-0.2	-0.2	0.2	0.0	1.4	DK
DE	0.8	1.3	0.8	0.5	-0.5	-0.4	-0.2	0.1	0.0	1.2	DE
EE	0.7	1.3	0.7	0.6	-0.5	-0.5	-0.2	0.1	0.0	1.2	EE
IE	1.5	1.7	1.1	0.6	-0.2	0.0	-0.2	0.0	0.0	1.5	IE
EL	0.6	1.5	0.9	0.6	-0.8	-0.8	-0.2	0.2	0.0	1.4	EL
ES	1.1	1.5	0.9	0.5	-0.4	-0.2	-0.2	0.1	0.0	1.3	ES
FR	0.9	1.1	0.7	0.4	-0.2	-0.2	-0.2	0.1	0.0	1.1	FR
HR	0.9	1.7	0.9	0.8	-0.8	-0.7	-0.2	0.1	0.0	1.6	HR
IT	0.6	1.1	0.7	0.4	-0.5	-0.5	-0.2	0.3	0.0	1.1	IT
CY	1.4	1.8	0.9	0.9	-0.3	-0.1	-0.3	0.1	0.0	1.6	CY
LV	0.9	2.0	1.1	0.9	-1.1	-0.9	-0.2	0.0	0.0	1.8	LV
LT	0.7	1.9	1.0	0.9	-1.1	-0.9	-0.3	0.0	0.0	1.6	LT
LU	1.2	1.1	0.6	0.4	0.2	0.5	-0.2	-0.1	0.0	0.8	LU
HU	0.9	1.7	1.0	0.7	-0.7	-0.6	-0.2	0.1	0.0	1.5	HU
MT	2.0	2.1	1.0	1.1	-0.1	0.1	-0.3	0.0	0.0	1.9	MT
NL	1.1	1.2	0.7	0.5	-0.1	-0.1	-0.2	0.1	0.0	1.2	NL
AT	0.8	1.1	0.7	0.5	-0.3	-0.2	-0.2	0.1	0.0	1.0	AT
PL	1.3	2.4	1.4	1.1	-1.1	-0.7	-0.2	-0.1	0.0	2.1	PL
PT	0.7	1.4	0.9	0.5	-0.7	-0.5	-0.3	0.1	0.0	1.2	PT
RO	1.0	1.8	1.0	0.8	-0.8	-0.6	-0.2	0.0	0.0	1.6	RO
SI	1.3	1.8	1.1	0.8	-0.5	-0.4	-0.2	0.1	0.0	1.8	SI
SK	1.1	1.7	1.0	0.7	-0.6	-0.5	-0.2	0.1	0.0	1.6	SK
FI	0.9	1.2	0.7	0.5	-0.4	-0.3	-0.2	0.1	0.0	1.1	FI
SE	1.2	1.3	0.8	0.5	-0.1	0.0	-0.1	0.1	0.0	1.3	SE
NO	1.0	1.2	0.8	0.5	-0.2	-0.1	-0.2	0.0	0.0	1.1	NO
EA	0.9	1.3	0.8	0.5	-0.4	-0.3	-0.2	0.1	0.0	1.2	EA
EU	0.9	1.4	0.8	0.6	-0.5	-0.4	-0.2	0.1	0.0	1.2	EU

*WAP: working-age population (15-74y).

Source: European Commission, EPC.

Table I.5.5: **Sensitivity test: higher migration**

	Average real GDP growth (2026-2080)										
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)					GDP/capita growth	
			contribution from			contribution from					
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee		
	(1)=(2)+(5)	(2)=(3)+(4)	(3)	(4)	(5)=(6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)	
BE	1.2	1.0	0.7	0.3	0.2	0.3	-0.1	0.0	0.0	1.0	BE
BG	1.5	1.9	1.1	0.8	-0.4	-0.4	-0.2	0.1	0.0	1.9	BG
CZ	1.2	1.4	0.9	0.5	-0.2	0.0	-0.1	0.0	0.0	1.2	CZ
DK	1.6	1.2	0.9	0.4	0.3	0.3	-0.1	0.2	0.0	1.3	DK
DE	1.1	1.1	0.8	0.3	0.0	0.0	-0.1	0.1	0.0	1.0	DE
EE	1.0	1.1	0.7	0.4	-0.1	-0.1	-0.2	0.1	0.0	1.1	EE
IE	1.9	1.6	1.1	0.4	0.3	0.5	-0.2	0.0	0.0	1.4	IE
EL	1.0	1.3	0.9	0.4	-0.3	-0.4	-0.2	0.2	0.0	1.3	EL
ES	1.5	1.3	0.9	0.3	0.2	0.3	-0.2	0.1	0.0	1.1	ES
FR	1.1	1.0	0.7	0.3	0.1	0.1	-0.1	0.1	0.0	1.0	FR
HR	1.2	1.5	0.9	0.6	-0.3	-0.3	-0.2	0.1	0.0	1.5	HR
IT	0.8	1.0	0.7	0.3	-0.2	-0.2	-0.2	0.3	0.0	1.1	IT
CY	1.8	1.5	0.9	0.7	0.3	0.5	-0.2	0.0	0.0	1.4	CY
LV	1.3	1.8	1.1	0.7	-0.6	-0.4	-0.1	0.0	0.0	1.7	LV
LT	1.1	1.7	1.0	0.7	-0.6	-0.4	-0.2	0.0	0.0	1.5	LT
LU	1.4	0.9	0.6	0.3	0.5	0.8	-0.2	-0.1	0.0	0.7	LU
HU	1.2	1.5	1.0	0.6	-0.4	-0.2	-0.2	0.1	0.0	1.4	HU
MT	2.5	1.8	1.0	0.8	0.7	0.8	-0.2	0.0	0.0	1.7	MT
NL	1.4	1.1	0.7	0.3	0.3	0.3	-0.1	0.1	0.0	1.1	NL
AT	1.1	1.0	0.7	0.3	0.1	0.2	-0.2	0.1	0.0	0.9	AT
PL	1.6	2.3	1.4	0.9	-0.7	-0.4	-0.2	-0.1	0.0	2.0	PL
PT	1.0	1.3	0.9	0.4	-0.3	-0.1	-0.3	0.1	0.0	1.1	PT
RO	1.3	1.7	1.0	0.7	-0.4	-0.3	-0.2	0.0	0.0	1.5	RO
SI	1.7	1.7	1.1	0.6	0.0	0.1	-0.2	0.1	0.0	1.6	SI
SK	1.2	1.7	1.0	0.7	-0.5	-0.4	-0.2	0.1	0.0	1.6	SK
FI	1.1	1.1	0.7	0.4	0.0	0.0	-0.1	0.1	0.0	1.1	FI
SE	1.6	1.1	0.8	0.4	0.4	0.4	-0.1	0.1	0.0	1.2	SE
NO	1.4	1.0	0.8	0.3	0.4	0.5	-0.1	0.0	0.0	0.9	NO
EA	1.1	1.1	0.8	0.4	0.0	0.1	-0.2	0.1	0.0	1.1	EA
EU	1.2	1.2	0.8	0.4	-0.1	0.0	-0.2	0.1	0.0	1.1	EU

*WAP: working-age population (15-74y).

Source: European Commission, EPC.

Table I.5.6: **Sensitivity test: migration – delayed convergence**

	Average real GDP growth (2026-2080)									GDP/capita growth	
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)						
			contribution from			contribution from					
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee		
	(1)=(2)+(5)	(2)=(3)+(4)	(3)	(4)	(5)=(6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)	
BE	1.1	1.1	0.7	0.4	0.1	0.1	-0.1	0.0	0.0	1.0	BE
BG	1.4	2.0	1.1	0.9	-0.6	-0.5	-0.2	0.1	0.0	1.9	BG
CZ	1.2	1.4	0.9	0.5	-0.2	-0.1	-0.1	0.0	0.0	1.3	CZ
DK	1.5	1.3	0.9	0.4	0.2	0.1	-0.2	0.2	0.0	1.4	DK
DE	1.0	1.1	0.8	0.4	-0.2	-0.1	-0.2	0.1	0.0	1.1	DE
EE	0.9	1.2	0.7	0.5	-0.2	-0.2	-0.2	0.1	0.0	1.1	EE
IE	1.8	1.6	1.1	0.5	0.2	0.4	-0.2	0.0	0.0	1.4	IE
EL	0.9	1.3	0.9	0.4	-0.4	-0.4	-0.2	0.2	0.0	1.3	EL
ES	1.4	1.3	0.9	0.4	0.0	0.2	-0.2	0.1	0.0	1.2	ES
FR	1.0	1.1	0.7	0.4	0.0	0.0	-0.2	0.1	0.0	1.0	FR
HR	1.1	1.6	0.9	0.7	-0.4	-0.4	-0.2	0.1	0.0	1.5	HR
IT	0.8	1.0	0.7	0.3	-0.2	-0.3	-0.2	0.3	0.0	1.1	IT
CY	1.7	1.6	0.9	0.7	0.1	0.3	-0.3	0.0	0.0	1.4	CY
LV	1.1	1.9	1.1	0.8	-0.7	-0.6	-0.2	0.0	0.0	1.7	LV
LT	1.0	1.8	1.0	0.8	-0.7	-0.5	-0.2	0.0	0.0	1.5	LT
LU	1.4	0.9	0.6	0.3	0.5	0.8	-0.2	-0.1	0.0	0.7	LU
HU	1.1	1.6	1.0	0.6	-0.4	-0.3	-0.2	0.1	0.0	1.4	HU
MT	2.4	1.9	1.0	0.9	0.4	0.6	-0.2	0.0	0.0	1.7	MT
NL	1.3	1.1	0.7	0.4	0.1	0.2	-0.2	0.1	0.0	1.1	NL
AT	1.0	1.0	0.7	0.4	-0.1	0.0	-0.2	0.1	0.0	0.9	AT
PL	1.5	2.3	1.4	1.0	-0.8	-0.5	-0.2	-0.1	0.0	2.0	PL
PT	0.9	1.3	0.9	0.4	-0.4	-0.2	-0.3	0.1	0.0	1.1	PT
RO	1.2	1.7	1.0	0.7	-0.5	-0.3	-0.2	0.0	0.0	1.5	RO
SI	1.6	1.7	1.1	0.6	-0.1	-0.1	-0.2	0.1	0.0	1.7	SI
SK	1.2	1.7	1.0	0.7	-0.5	-0.4	-0.2	0.1	0.0	1.5	SK
FI	1.0	1.1	0.7	0.4	-0.1	0.0	-0.2	0.1	0.0	1.1	FI
SE	1.4	1.2	0.8	0.4	0.2	0.2	-0.1	0.1	0.0	1.2	SE
NO	1.2	1.1	0.8	0.3	0.1	0.2	-0.2	0.0	0.0	1.0	NO
EA	1.1	1.2	0.8	0.4	-0.1	-0.1	-0.2	0.1	0.0	1.1	EA
EU	1.1	1.3	0.8	0.4	-0.2	-0.1	-0.2	0.1	0.0	1.2	EU

*WAP: working-age population (15-74y).

Source: European Commission, EPC.

Table I.5.7: **Sensitivity test: higher employment rate of older workers**

	Average real GDP growth (2026-2080)									GDP/capita growth	
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)						
			contribution from			contribution from					
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee		
	(1)=(2)+(5)	(2)=(3)+(4)	(3)	(4)	(5)=(6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)	
BE	1.2	1.1	0.7	0.4	0.1	0.1	-0.2	0.1	0.0	1.1	BE
BG	1.4	2.0	1.1	0.9	-0.5	-0.6	-0.2	0.2	0.0	2.0	BG
CZ	1.2	1.4	0.9	0.5	-0.3	-0.2	-0.2	0.1	0.0	1.3	CZ
DK	1.5	1.3	0.9	0.4	0.2	0.1	-0.2	0.3	0.0	1.4	DK
DE	1.0	1.1	0.8	0.4	-0.2	-0.2	-0.2	0.2	0.0	1.1	DE
EE	0.9	1.2	0.7	0.5	-0.3	-0.3	-0.2	0.2	0.0	1.2	EE
IE	1.8	1.6	1.1	0.5	0.2	0.3	-0.2	0.1	0.0	1.5	IE
EL	0.9	1.4	0.9	0.5	-0.5	-0.5	-0.2	0.3	0.0	1.4	EL
ES	1.3	1.3	0.9	0.4	0.0	0.1	-0.2	0.1	0.0	1.3	ES
FR	1.1	1.0	0.7	0.4	0.0	0.0	-0.2	0.2	0.0	1.1	FR
HR	1.1	1.6	0.9	0.7	-0.4	-0.5	-0.2	0.2	0.0	1.6	HR
IT	0.8	1.0	0.7	0.3	-0.3	-0.4	-0.2	0.3	0.0	1.1	IT
CY	1.7	1.6	0.9	0.7	0.1	0.2	-0.2	0.1	0.0	1.5	CY
LV	1.1	1.9	1.1	0.8	-0.7	-0.7	-0.2	0.1	0.0	1.8	LV
LT	1.0	1.8	1.0	0.8	-0.8	-0.6	-0.2	0.1	0.0	1.6	LT
LU	1.4	1.0	0.6	0.3	0.4	0.6	-0.2	0.0	0.0	0.8	LU
HU	1.1	1.6	1.0	0.6	-0.4	-0.4	-0.2	0.2	0.0	1.5	HU
MT	2.4	1.9	1.0	0.9	0.4	0.5	-0.2	0.1	0.0	1.8	MT
NL	1.3	1.1	0.7	0.4	0.1	0.1	-0.2	0.2	0.0	1.2	NL
AT	1.0	1.0	0.7	0.4	-0.1	0.0	-0.2	0.2	0.0	1.0	AT
PL	1.5	2.3	1.4	1.0	-0.8	-0.5	-0.2	0.0	0.0	2.1	PL
PT	0.9	1.3	0.9	0.4	-0.4	-0.3	-0.3	0.1	0.0	1.2	PT
RO	1.2	1.7	1.0	0.7	-0.5	-0.4	-0.2	0.1	0.0	1.6	RO
SI	1.6	1.7	1.1	0.6	-0.1	-0.2	-0.2	0.2	0.0	1.7	SI
SK	1.2	1.7	1.0	0.7	-0.5	-0.4	-0.2	0.2	0.0	1.6	SK
FI	1.0	1.1	0.7	0.4	-0.1	-0.1	-0.2	0.2	0.0	1.1	FI
SE	1.5	1.2	0.8	0.4	0.2	0.2	-0.1	0.2	0.0	1.3	SE
NO	1.3	1.1	0.8	0.3	0.2	0.2	-0.2	0.1	0.0	1.0	NO
EA	1.1	1.2	0.8	0.4	-0.1	-0.1	-0.2	0.2	0.0	1.2	EA
EU	1.1	1.3	0.8	0.4	-0.2	-0.2	-0.2	0.2	0.0	1.2	EU

*WAP: working-age population (15-74y).

Source: European Commission, EPC.

Table I.5.8: **Sensitivity test: lower productivity growth**

	Average real GDP growth (2026-2080)										
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)					GDP/capita growth	
			contribution from			contribution from					
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee		
	(1)=(2)+(5)	(2)=(3)+(4)	(3)	(4)	(5)=(6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)	
BE	1.0	1.0	0.6	0.4	0.0	0.1	-0.2	0.0	0.0	0.9	BE
BG	1.2	1.8	0.9	0.9	-0.6	-0.6	-0.2	0.1	0.0	1.7	BG
CZ	0.9	1.3	0.8	0.5	-0.3	-0.2	-0.2	0.0	0.0	1.1	CZ
DK	1.3	1.1	0.7	0.4	0.1	0.1	-0.2	0.2	0.0	1.2	DK
DE	0.8	1.0	0.7	0.4	-0.2	-0.2	-0.2	0.1	0.0	1.0	DE
EE	0.7	1.1	0.6	0.5	-0.3	-0.3	-0.2	0.1	0.0	1.0	EE
IE	1.5	1.5	1.0	0.4	0.1	0.3	-0.2	0.0	0.0	1.2	IE
EL	0.7	1.2	0.8	0.5	-0.6	-0.5	-0.2	0.2	0.0	1.2	EL
ES	1.1	1.2	0.8	0.4	-0.1	0.1	-0.2	0.1	0.0	1.0	ES
FR	0.9	0.9	0.6	0.4	0.0	0.0	-0.2	0.1	0.0	0.9	FR
HR	0.9	1.4	0.8	0.7	-0.5	-0.5	-0.2	0.1	0.0	1.4	HR
IT	0.6	0.9	0.6	0.3	-0.3	-0.4	-0.2	0.3	0.0	1.0	IT
CY	1.5	1.5	0.7	0.7	0.0	0.2	-0.2	0.0	0.0	1.3	CY
LV	0.9	1.7	1.0	0.7	-0.8	-0.7	-0.2	0.0	0.0	1.5	LV
LT	0.8	1.6	0.8	0.8	-0.8	-0.6	-0.2	0.0	0.0	1.3	LT
LU	1.2	0.9	0.5	0.3	0.3	0.6	-0.2	-0.1	0.0	0.6	LU
HU	0.9	1.4	0.8	0.6	-0.5	-0.4	-0.2	0.1	0.0	1.3	HU
MT	2.1	1.8	0.9	0.9	0.3	0.5	-0.2	0.0	0.0	1.6	MT
NL	1.1	1.0	0.6	0.4	0.1	0.1	-0.2	0.1	0.0	1.0	NL
AT	0.8	0.9	0.6	0.4	-0.1	0.0	-0.2	0.1	0.0	0.8	AT
PL	1.2	2.1	1.2	0.9	-0.9	-0.5	-0.2	-0.1	0.0	1.8	PL
PT	0.7	1.2	0.8	0.4	-0.5	-0.3	-0.3	0.1	0.0	1.0	PT
RO	1.0	1.5	0.8	0.7	-0.6	-0.4	-0.2	0.0	0.0	1.4	RO
SI	1.3	1.5	0.9	0.6	-0.2	-0.2	-0.2	0.1	0.0	1.5	SI
SK	0.9	1.5	0.9	0.6	-0.6	-0.4	-0.2	0.1	0.0	1.4	SK
FI	0.8	1.0	0.6	0.4	-0.2	-0.1	-0.2	0.1	0.0	1.0	FI
SE	1.3	1.1	0.7	0.4	0.2	0.2	-0.1	0.1	0.0	1.1	SE
NO	1.1	1.0	0.7	0.4	0.1	0.2	-0.2	0.0	0.0	0.9	NO
EA	0.9	1.1	0.7	0.4	-0.2	-0.1	-0.2	0.1	0.0	1.0	EA
EU	0.9	1.1	0.7	0.4	-0.3	-0.2	-0.2	0.1	0.0	1.0	EU

*WAP: working-age population (15-74y).

Source: European Commission, EPC.

Table I.5.9: **Sensitivity test: higher productivity growth**

	Average real GDP growth (2026-2080)										
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)					GDP/capita growth	
			contribution from			contribution from					
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee		
	(1)=(2)+(5)	(2)=(3)+(4)	(3)	(4)	(5)=(6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)	
BE	1.2	1.2	0.8	0.4	0.0	0.1	-0.2	0.0	0.0	1.1	BE
BG	1.6	2.2	1.2	1.0	-0.6	-0.6	-0.2	0.1	0.0	2.1	BG
CZ	1.3	1.6	1.1	0.6	-0.3	-0.2	-0.2	0.0	0.0	1.5	CZ
DK	1.6	1.5	1.0	0.5	0.1	0.1	-0.2	0.2	0.0	1.5	DK
DE	1.1	1.3	0.9	0.4	-0.2	-0.2	-0.2	0.1	0.0	1.2	DE
EE	1.0	1.3	0.8	0.6	-0.3	-0.3	-0.2	0.1	0.0	1.3	EE
IE	1.9	1.8	1.3	0.6	0.1	0.3	-0.2	0.0	0.0	1.6	IE
EL	1.0	1.5	1.0	0.5	-0.6	-0.5	-0.2	0.2	0.0	1.5	EL
ES	1.5	1.5	1.1	0.5	-0.1	0.1	-0.2	0.1	0.0	1.4	ES
FR	1.1	1.2	0.8	0.4	0.0	0.0	-0.2	0.1	0.0	1.1	FR
HR	1.2	1.8	1.0	0.8	-0.5	-0.5	-0.2	0.1	0.0	1.7	HR
IT	0.8	1.2	0.8	0.4	-0.3	-0.4	-0.2	0.3	0.0	1.2	IT
CY	1.8	1.8	1.0	0.8	0.0	0.2	-0.2	0.0	0.0	1.6	CY
LV	1.3	2.1	1.3	0.8	-0.8	-0.7	-0.2	0.0	0.0	2.0	LV
LT	1.1	2.0	1.1	0.9	-0.8	-0.6	-0.2	0.0	0.0	1.7	LT
LU	1.5	1.1	0.7	0.4	0.3	0.6	-0.2	-0.1	0.0	0.8	LU
HU	1.3	1.8	1.1	0.7	-0.5	-0.4	-0.2	0.1	0.0	1.6	HU
MT	2.5	2.2	1.2	1.0	0.3	0.5	-0.2	0.0	0.0	2.0	MT
NL	1.4	1.3	0.8	0.4	0.1	0.1	-0.2	0.1	0.0	1.3	NL
AT	1.1	1.2	0.8	0.4	-0.1	0.0	-0.2	0.1	0.0	1.1	AT
PL	1.7	2.6	1.5	1.1	-0.9	-0.5	-0.2	-0.1	0.0	2.3	PL
PT	1.0	1.5	1.0	0.5	-0.5	-0.3	-0.3	0.1	0.0	1.3	PT
RO	1.3	1.9	1.1	0.8	-0.6	-0.4	-0.2	0.0	0.0	1.8	RO
SI	1.7	1.9	1.2	0.7	-0.2	-0.2	-0.2	0.1	0.0	1.9	SI
SK	1.3	1.9	1.2	0.7	-0.6	-0.4	-0.2	0.1	0.0	1.8	SK
FI	1.1	1.3	0.8	0.4	-0.2	-0.1	-0.2	0.1	0.0	1.2	FI
SE	1.6	1.4	0.9	0.5	0.2	0.2	-0.1	0.1	0.0	1.4	SE
NO	1.3	1.2	0.9	0.4	0.1	0.2	-0.2	0.0	0.0	1.1	NO
EA	1.2	1.4	0.9	0.5	-0.2	-0.1	-0.2	0.1	0.0	1.3	EA
EU	1.2	1.5	0.9	0.5	-0.3	-0.2	-0.2	0.1	0.0	1.3	EU

*WAP: working-age population (15-74y).

Source: European Commission, EPC.

Table I.5.10: **Policy scenario: link to life expectancy**

	Average real GDP growth (2026-2080)										
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)					GDP/capita growth	
			contribution from			contribution from					
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee		
	(1)=(2)+(5)	(2)=(3)+(4)	(3)	(4)	(5)=(6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)	
BE	1.2	1.1	0.7	0.4	0.1	0.1	-0.2	0.2	0.0	1.1	BE
BG	1.5	1.9	1.1	0.9	-0.4	-0.6	-0.2	0.3	0.0	2.0	BG
CZ	1.2	1.4	0.9	0.5	-0.2	-0.2	-0.2	0.1	0.0	1.4	CZ
DK	1.4	1.3	0.9	0.4	0.1	0.1	-0.2	0.2	0.0	1.4	DK
DE	1.0	1.1	0.8	0.4	-0.1	-0.2	-0.2	0.2	0.0	1.2	DE
EE	0.9	1.2	0.7	0.5	-0.3	-0.3	-0.2	0.1	0.0	1.2	EE
IE	1.8	1.6	1.1	0.4	0.2	0.3	-0.2	0.2	0.0	1.5	IE
EL	0.8	1.4	0.9	0.5	-0.6	-0.5	-0.2	0.2	0.0	1.4	EL
ES	1.4	1.3	0.9	0.4	0.0	0.1	-0.2	0.2	0.0	1.3	ES
FR	1.1	1.0	0.7	0.3	0.1	0.0	-0.2	0.2	0.0	1.1	FR
HR	1.2	1.5	0.9	0.7	-0.4	-0.5	-0.2	0.3	0.0	1.6	HR
IT	0.7	1.0	0.7	0.4	-0.3	-0.4	-0.2	0.3	0.0	1.1	IT
CY	1.6	1.6	0.9	0.8	0.0	0.2	-0.2	0.0	0.0	1.5	CY
LV	1.2	1.9	1.1	0.7	-0.7	-0.7	-0.2	0.2	0.0	1.8	LV
LT	1.0	1.7	1.0	0.8	-0.7	-0.6	-0.2	0.2	0.0	1.6	LT
LU	1.4	1.0	0.6	0.3	0.4	0.6	-0.2	0.0	0.0	0.8	LU
HU	1.2	1.5	1.0	0.6	-0.4	-0.4	-0.2	0.2	0.0	1.6	HU
MT	2.4	1.9	1.0	0.9	0.5	0.5	-0.2	0.1	0.0	1.9	MT
NL	1.3	1.1	0.7	0.4	0.1	0.1	-0.2	0.2	0.0	1.1	NL
AT	1.0	1.0	0.7	0.3	0.0	0.0	-0.2	0.2	0.0	1.0	AT
PL	1.6	2.3	1.4	0.9	-0.7	-0.5	-0.2	0.2	0.0	2.2	PL
PT	0.9	1.3	0.9	0.4	-0.5	-0.3	-0.3	0.1	0.0	1.2	PT
RO	1.2	1.7	1.0	0.7	-0.5	-0.4	-0.2	0.1	0.0	1.6	RO
SI	1.6	1.7	1.1	0.6	-0.1	-0.2	-0.2	0.2	0.0	1.8	SI
SK	1.1	1.7	1.0	0.7	-0.6	-0.4	-0.2	0.1	0.0	1.6	SK
FI	1.0	1.1	0.7	0.4	-0.1	-0.1	-0.2	0.1	0.0	1.1	FI
SE	1.4	1.2	0.8	0.4	0.2	0.2	-0.1	0.1	0.0	1.2	SE
NO	1.3	1.1	0.8	0.3	0.1	0.2	-0.2	0.1	0.0	1.0	NO
EA	1.1	1.2	0.8	0.4	-0.1	-0.1	-0.2	0.2	0.0	1.2	EA
EU	1.1	1.3	0.8	0.4	-0.2	-0.2	-0.2	0.2	0.0	1.3	EU

*WAP: working-age population (15-74y).

Source: European Commission, EPC.

Table I.5.11: **Policy scenario: constant retirement age**

	Average real GDP growth (2026-2080)										
		Labour productivity (GDP/hour worked)			Labour input (Total hours worked)					GDP/capita growth	
			contribution from			contribution from					
			TFP	capital deepening		total population	share of WAP*	employment rate	hours worked/ employee		
	(1)=(2)+(5)	(2)=(3)+(4)	(3)	(4)	(5)=(6)+(7)+(8)+(9)	(6)	(7)	(8)	(9)	(10)=(1)-(6)	
BE	1.1	1.1	0.7	0.4	0.0	0.1	-0.2	0.0	0.0	1.0	BE
BG	1.4	2.0	1.1	0.9	-0.6	-0.6	-0.2	0.1	0.0	1.9	BG
CZ	1.1	1.5	0.9	0.5	-0.4	-0.2	-0.2	-0.1	0.0	1.2	CZ
DK	1.3	1.4	0.9	0.5	0.0	0.1	-0.2	0.1	0.0	1.3	DK
DE	0.9	1.2	0.8	0.4	-0.3	-0.2	-0.2	0.1	0.0	1.1	DE
EE	0.8	1.3	0.7	0.6	-0.5	-0.3	-0.2	0.0	0.0	1.0	EE
IE	1.7	1.6	1.1	0.5	0.1	0.3	-0.2	0.0	0.0	1.4	IE
EL	0.7	1.4	0.9	0.5	-0.7	-0.5	-0.2	0.1	0.0	1.3	EL
ES	1.3	1.4	0.9	0.4	-0.1	0.1	-0.2	0.0	0.0	1.2	ES
FR	1.0	1.1	0.7	0.4	-0.1	0.0	-0.2	0.1	0.0	1.0	FR
HR	1.0	1.6	0.9	0.7	-0.5	-0.5	-0.2	0.1	0.0	1.5	HR
IT	0.6	1.1	0.7	0.4	-0.5	-0.4	-0.2	0.1	0.0	1.0	IT
CY	1.5	1.7	0.9	0.8	-0.1	0.2	-0.2	-0.1	0.0	1.4	CY
LV	1.1	1.9	1.1	0.8	-0.8	-0.7	-0.2	0.0	0.0	1.7	LV
LT	0.9	1.8	1.0	0.8	-0.8	-0.6	-0.2	0.0	0.0	1.5	LT
LU	1.3	1.0	0.6	0.4	0.3	0.6	-0.2	-0.1	0.0	0.7	LU
HU	1.1	1.6	1.0	0.6	-0.5	-0.4	-0.2	0.1	0.0	1.4	HU
MT	2.3	2.0	1.0	0.9	0.3	0.5	-0.2	0.0	0.0	1.8	MT
NL	1.2	1.2	0.7	0.4	0.0	0.1	-0.2	0.1	0.0	1.1	NL
AT	0.9	1.1	0.7	0.4	-0.2	0.0	-0.2	0.1	0.0	0.9	AT
PL	1.5	2.4	1.4	1.0	-0.9	-0.5	-0.2	-0.1	0.0	2.0	PL
PT	0.8	1.4	0.9	0.5	-0.6	-0.3	-0.3	0.0	0.0	1.1	PT
RO	1.1	1.8	1.0	0.8	-0.7	-0.4	-0.2	-0.1	0.0	1.5	RO
SI	1.5	1.8	1.1	0.7	-0.3	-0.2	-0.2	0.0	0.0	1.6	SI
SK	1.0	1.8	1.0	0.8	-0.8	-0.4	-0.2	-0.1	0.0	1.4	SK
FI	0.9	1.2	0.7	0.5	-0.3	-0.1	-0.2	0.0	0.0	1.0	FI
SE	1.4	1.3	0.8	0.5	0.1	0.2	-0.1	0.0	0.0	1.2	SE
NO	1.2	1.2	0.8	0.4	0.0	0.2	-0.2	-0.1	0.0	0.9	NO
EA	1.0	1.2	0.8	0.4	-0.3	-0.1	-0.2	0.1	0.0	1.1	EA
EU	1.0	1.3	0.8	0.5	-0.3	-0.2	-0.2	0.0	0.0	1.2	EU

*WAP: working-age population (15-74y).

Source: European Commission, EPC.

Part II

Projection methodologies for age-related spending items

1. PENSIONS

1.1. MAIN FEATURES OF THE PENSION PROJECTIONS

Despite the varying set-up of national health care, long-term care and education systems across Member States, the European Commission and the AWG have developed common models to project spending on these items. However, for pensions a different approach is taken since the diversity in public pension systems is difficult to capture within a single framework. As a result, Member States use their national models to prepare pension expenditure projections, incorporating the demographic and macroeconomic assumptions described in Part I of this report.

On the one hand, this decentralised approach enables the integration of the specific institutional features and legal settings of each country's pension system as much as possible. On the other hand, using separate models may reduce the comparability of the results, despite relying on common methodologies and assumptions.

To ensure both a high quality and cross-country comparability, an extensive peer review is conducted by the AWG members and the Commission. This process intends to: (i) verify whether the Member States apply the agreed methodologies and the underlying demographic and macroeconomic assumptions; and (ii) examine how Member States interpret the existing pension legislation. If deemed necessary, the AWG asks the Member State to revise the projections.

1.2. COVERAGE OF THE PENSION PROJECTIONS

The focus of the pension projection exercise is government expenditure on public pension schemes, with variables for private schemes (occupational, individual mandatory or individual non-mandatory) reported on a voluntary basis. Annex 3 provides an overview of which schemes exist in each country and the extent to which they are covered in the projections.

Reporting is structured around the following items: gross pension expenditure by scheme and age; taxes paid on pension benefits; benefit ratios and average replacement rates; the number of pensions and pensioners by scheme, age and sex; contributions paid and the number of contributors; indexation coefficients; the breakdown of new pension expenditure; and assets and reserves of pension funds.

Member States report administrative data for recent years on the number of new pensioners by sex and public scheme as well as projections for new retirees by single age. Additionally, Member States can provide, on a voluntary basis, details on special pension schemes. These are preferential schemes that deviate from the standard regime in terms of eligibility criteria, benefit amount or contributions. Such schemes should be included in the overall projections, which are exhaustive for public pension expenditure. The scope and nature of special schemes are discussed in the country fiche accompanying the updated projections for each country.

1.3. DEFINITION OF THE VARIABLES

1.3.1. Reporting norms and input data

Member States provide annual projections up to 2080, with base year 2025, and report historical data for the period 2000-2025. All expenditure figures are measured in current prices.

The GDP projections for each country over the period 2026-2080 are produced by the Commission by means of a production function and the agreed assumptions (see Part I, Chapter 3).

Average wages are calculated as the ratio of total gross wages from national account data and employed people (employees and self-employed) aged 15-74. The gross wage total without social

security contributions is projected by multiplying GDP with the labour share and the ratio of gross wages and salaries over compensation of employees ([19]). Dividing this series by the projections for actual employment provides the average gross wage.

Projections on the economy-wide average wage at retirement are provided by the Member States. The gross wage is net of employers' contributions, while the net wage also excludes employees' contributions and personal income taxation. These variables are required to calculate replacement rates.

Member States provide historical data back to 2000 and discuss recent expenditure changes in the country fiche. This should clarify the reasons behind: (i) notable changes in pension spending; (ii) overall trends in pension spending in the recent past; and (iii) the possible implications of these changes and trends for the projections.

The pension projections include the impact of pension reforms that will have entered legislation by the cut-off date of the projections, i.e. 1 December 2026. To this end, in their country fiches Member States provide a detailed discussion of the projections, including: (i) recently introduced reforms; (ii) their implementation schedule; and (iii) how these reforms affect the projection results.

1.3.2. Variables: definitions and clarifications

Pension expenditure

Pension expenditure includes pensions and equivalent cash benefits granted for a long period (1 year or more) for old age, early retirement, disability, survivors (widow(er)s and orphans), and other specific purposes that should be considered as equivalents or substitutes for the mentioned types of pensions, i.e. pensions or pension-like benefits granted because of a reduced work capacity or because of labour market conditions.

Pension expenditure is projected according to the current legislation in force. Pensions are defined in a broad sense: (i) earnings-related pensions; (ii) flat-rate pensions or basic pensions; (iii) means-tested benefits that aim at providing a social minimum pension; and (iv) supplements that are part of the pension benefit and that are granted for an indefinite period on the basis of fulfilling certain criteria but which are not directly linked to the remuneration of costs (e.g. supplements to support the purchase of home or health care services are not included). Pensions and benefits can be paid out from specific schemes or directly from government budgets. Social assistance is included if it is functionally equivalent to a minimum pension, thus representing a non-earnings-related minimum pension. Housing subsidies are excluded and considered as other means-tested social transfers. Pension expenditure should include pensions paid overseas, even if these people are not included in the demographic projections.

Short-term disability benefits should be considered as sickness benefits, while prolonged unemployment benefits to older workers should be considered as unemployment benefits.

Pensions do not include social security contributions paid by pension schemes on behalf of their pensioners to other social protection schemes, notably for health coverage.

Pension expenditure by age

Many countries have introduced pension reforms to lift the retirement age. To better understand the impact of these reforms, Member States report public pension spending disaggregated by age group: -54, 55-59, 60-64, 65-69, 70-74 and 75+. This breakdown increases transparency and consistency between the projections for population, labour force and number of pensioners.

([19]) The labour share (ALCD0 in AMECO) and the ratio of gross wages and salaries (UWSH in AMECO) over compensation of employees (UWCD in AMECO) are constant as of 2027 at the values from the Commission 2026 spring forecast.

New pension expenditure

To monitor reforms, Member States provide annual projections for spending on new benefits for each of the pension schemes: (i) old-age and early pensions (earnings-related, flat-rate or basic pensions, and minimum pensions), (ii) disability pensions, (iii) survivor pensions and (iv) other pensions (see descriptions below).

Net pension expenditure

Net pension expenditure corresponds to gross pension expenditure minus taxes on pensions and compulsory social security contributions paid by beneficiaries. Several EU countries treat pensions as non-taxable income. In general, taxes are projected in a way that tax revenues as a share of pension expenditure, the implicit average tax rate, stay constant over time.

Table II.1.1: **Typology of pension schemes in the Ageing Report**

PUBLIC PENSIONS	*PRIVATE PENSIONS*
Old-age and early pensions	***Occupational schemes***
- Basic and flat-rate pensions	***Individual mandatory schemes***
- Earnings-related pensions	***Individual voluntary schemes***
- Minimum pensions (non-contributory)	
Disability pensions	
Survivor pensions	
Other pension benefits	

Source: European Commission, EPC.

Public pensions

Public schemes and other public pensions are statutory schemes that are provided by the general government sector to insure against old age and other age-related risks. Typically it concerns universal or quasi-universal social security schemes that are imposed, controlled and financed by government units. Government employee schemes sometimes exist outside of the social security system ([20]).

The projections aim at covering in an exhaustive way those pension schemes that affect public finances, in other words schemes that are considered to belong to the general government sector in the national accounts system. Usually, there is a specific or general social security contribution to the scheme, which is defined as part of total taxes in the national accounting system. However, the scheme can also be financed, either partially or fully, through general taxation. Thus, ultimately, the government bears the financial cost and risk attached to the scheme. The pensions provided by the social security schemes can be either earnings-related, flat-rate or means-tested. In addition, public pensions include pension benefits that are paid directly by the government budget or by another public sector entity. Cash benefits equivalent to pensions, notably social assistance benefitting mainly older, retired people, also fall within the Ageing Report pension definition.

Public pensions are split into four different categories: (i) old-age and early pensions, (ii) disability pensions, (iii) survivor pensions and (iv) other types of pensions.

Old-age and early pensions

Old-age and early pensions include both earnings-related and non-earnings-related pensions. Earnings-related pensions reflect all those pensions for which entitlements depend on earnings or contributions to the scheme throughout one's working career. Non-earnings-related pensions are often social-assistance benefits financed by taxes that nevertheless match the definition of pension expenditure.

([20]) See Eurostat (2020), Technical compilation guide for pension data in national accounts – 2020 edition.

Three subcategories of old-age and early pensions are considered: basic pensions, earnings-related pensions and non-contributory minimum pensions.

- **Basic pensions (flat component)** are projected separately from other earnings-related public pensions for the countries with a flat pension component. This concerns pension benefits in flat amounts allocated to beneficiaries meeting certain requirements, for instance residence or a minimum number of contributory years.
- **Earnings-related benefits other than basic pensions** concern all pensions for which entitlements depend on personal earnings or contributions to the old-age pension scheme. Old-age and early pensions are considered as a single category given that in many countries no proper distinction between the two can be made, for instance because the early retirement is built-in in the old-age pension system or because the standard retirement age varies in function of career length. Early pensions include – in addition to genuine (actuarial) early retirement schemes – other early retirement schemes that are not disability pensions and are granted, primarily based on reduced work capacity or labour market reasons, to a specific group at an age below the statutory retirement age. This category also includes minimum pensions that are contributory based.
- **Non-contributory minimum pensions and minimum income guarantees** are projected separately. This category includes all pension expenditure for which entitlement does not depend on contribution requirements, e.g. means-tested minimum pensions. In line with the general definition of pension expenditure, through this variable the projections include social assistance equivalent to a minimum pension and targeted to older or retired people. If a non-contributory benefit is granted because of disability or other reasons, this benefit is projected under 'Disability pensions' or 'Other pensions'.

Disability pensions

Expenditure related to disability does not distinguish between earnings- and non-earnings-related disability pensions. In some countries disability benefits are part of the sickness insurance scheme while in others they belong to the pension scheme ([21]). Disability pensions are generally transformed into old-age pension benefits when beneficiaries reach the statutory retirement age.

Care allowances (benefits paid to disabled people who need frequent or constant assistance to cover the extra costs of attendance) and integration support for people with disabilities (allowances paid when having work adapted to a disability, e.g. a sheltered workshop) are not considered disability pensions.

The country fiches provide a detailed description of the assumptions underlying the projection of disability pension expenditure, including the assumed development of disability rates over the projection period.

Survivor pensions

Survivor pensions, without any age limit, are covered by the projections. Such benefits include both earnings-related pensions and flat-rate or similar means-tested minimum pensions. The country fiches provide a detailed description of the assumptions behind the projection of survivor pension expenditure.

Other pensions

All public earnings or non-earnings-related pensions not fitting in the three above categories should be covered under 'Other pensions'. Examples could be bonus pensions or pension-like benefits included in the Ageing Report pension definition.

([21]) In general, disability pensions as defined above should be covered by the pension projections, even when they are officially part of the sickness insurance scheme.

Private pensions

Private pension schemes are covered on a voluntary basis in the projections. Distinction is made between three types: (i) occupational private pensions, (ii) mandatory individual pensions and (iii) voluntary individual pensions. Annex 3 provides an overview of the extent to which these schemes exist in the Member States and whether the projections include them.

Occupational private pensions

Pensions provided by private occupational schemes are those that, rather than being statutory by law, are linked to an employment relationship with the scheme provider. They are based on contractual agreements between employers and employees, either at the company or sector/industry level. Private pension funds, insurance companies or the sponsoring companies themselves run the schemes.

These schemes can be mandatory in the sense that, based on a nation- or industry-wide bargaining agreement, employers are obliged to provide their employees with an occupational pension scheme. In case there is auto-enrolment with the possibility for participants to opt-out afterwards, the schemes are considered 'quasi' mandatory. Participation of an individual can also remain voluntary. Private occupational schemes can be equivalent to statutory earnings-related pension schemes or complementary to them. Of particular importance are the occupational schemes that play a role equivalent to social security schemes in the overall pension provision. The real rate of return on private funded pensions reflects the long-term interest rate assumptions (see Part I, Chapter 4).

Private individual pensions

In this case, access to the scheme does not require an employment relationship, even though in some cases the contribution is based on the wage. Insured persons have the ownership of pension assets so that they both enjoy the rewards and bear the risks associated to the assets' valuation. The insurance contract specifies a contribution schedule in exchange for which benefits will be paid when the member reaches a specific age, usually the statutory or earliest retirement age. The scheme provider administers the scheme by managing the pension assets through a separate account on behalf of its member.

Private individual pension schemes are mostly non-mandatory, though some countries have introduced mandatory schemes (see Annex 3).

Mandatory private individual pensions

Mandatory private pension schemes are similar to public schemes in that they are compulsory. Transactions occur between the individual and the insurance provider. Transactions are not recorded as government revenues or government expenditure and, therefore, do not have an impact on the government balance. This category of private benefits mostly concerns pensions that were formerly part of the social security scheme but that have been switched to funded private schemes.

In some cases, these pension schemes benefit from government guarantees. Nevertheless, such a guarantee is a contingent liability by nature, and these liabilities are not considered as economic transactions until they materialise. Thus, a government guarantee is not an adequate condition to classify such schemes as social security schemes.

Non-mandatory individual private pensions

Non-mandatory private pensions are based on individual insurance contracts between the individual and the private pension scheme provider, usually an insurance company or a pension fund. They include schemes for which membership is not required by law and is independent of any employment link (even if members are mostly employed people). However, in some cases employers or the State may contribute to the plan. Such schemes may also be joined through membership of an association.

The main difficulty in analysing individual saving provisions stems from the fact that it is hard to distinguish among different types of savings those that are clearly for retirement purposes. Part of the savings that are not specifically labelled as pension savings may be used for retirement purposes,

whereas part of the savings in retirement schemes may in practice not be converted into a periodic retirement income, e.g. in case they result in a one-off lump-sum pay-out or there are early withdrawal possibilities. The extent to which these schemes are effectively retirement savings depends on the attached conditions. Conditions could be, for instance, tax deductions on the condition that savings are converted into a rent rather than paid out as a lump sum, or the minimum age at which people can access their savings.

1.3.3. Benefit ratio and replacement rate at retirement

The benefit ratio and the replacement rate help interpret changes in average pension benefits.

Benefit ratio

The benefit ratio is the average pension benefit over the average wage. If private pensions are reported, also a total benefit ratio is available.

The benefit ratio projections capture several dynamics. First, they reflect the increase in average pensions due to indexation rules, the maturity of the system (especially in case schemes are being phased in or out), rising contribution periods, as well as possible changes in the pension formula. Second, it reflects the changes in average wages that result from the labour productivity assumptions. Third, it captures the changes in the structure of the respective population groups, namely the share of pensioners and workers over the projection period.

Replacement rate at retirement

The average replacement rate at retirement is the ratio of the first average pension benefit of new retirees in a given year over the average wage at retirement. The latter usually differs from the average wage unless a flat wage profile over the entire working career is assumed in the projection exercise. For public pension schemes, the average replacement rate reflects only earnings-related pensions, including the flat component.

The replacement rate provides insights in the decrease in income that results from moving from employment into retirement. The size of this decline is influenced, for example, by the contribution period, valorisation rules, bonuses/penalties in case of delayed/early retirement, and sustainability factors.

Both gross and net replacement rates are calculated. The gross variant relates the gross average new pension benefit to the gross wage at retirement (excluding employers' contributions), while the net variant relates the net average new pension benefit (excluding taxes and mandatory social contributions if applicable) to the average net wage at retirement (excluding all contributions and personal income taxes).

1.3.4. New public earnings-related pension

Changes in the flows of pensions and pension spending over time should properly reflect the impact of recently legislated reforms on the functioning of pension systems. Therefore, a disaggregation is made of the projected annual flow of new earnings-related old-age and early pension entitlements in its main drivers.

Publicly provided earnings-related pension schemes can be subdivided into the following three broad types: defined benefit (DB), notional defined contribution (NDC) and point system (PS). 16 countries have DB schemes, 6 have NDC systems and 8 are PS schemes (see Table II.1.2) ([22]).

New pension expenditures for DB and NDC systems can be disaggregated as follows:

Table II.1.2: **Earnings-related public pension schemes**

BE	*DB*	LT	*flat rate + PS*
BG	*DB*	LU	*DB*
CZ	*flat rate + DB*	HU	*DB*
DK	*flat rate + DB*	MT	*flat rate + DB*
DE	*PS*	NL	*flat rate + DB*
EE	*flat rate + PS*	AT	*DB*
IE	*flat rate + DB*	PL	*NDC*
EL(1)	*flat rate + DB + NDC*	PT	*DB*
ES	*DB*	RO	*PS*
FR(2)	*DB + PS*	SI	*DB*
HR	*PS*	SK	*PS*
IT	*NDC*	FI	*DB*
CY	*PS*	SE	*NDC*
LV	*NDC*	NO	*NDC*

(1) The NDC is an auxiliary mandatory pension scheme.
(2) PS refers to the complementary schemes AGIRC and ARRCO.
Source: European Commission, EPC.

$$P_{new} = N_{new} \times \overline{C_{new}} \times \overline{A_{new}} \times \overline{PE_{new}} \qquad (1.1)$$

where P_{new} is the overall spending on new pensions, N_{new} is the number of new pensions, $\overline{C_{new}}$ is the average contributory period of new pensions, $\overline{A_{new}}$ is the average effective accrual rate of new pensions, and $\overline{PE_{new}}$ are the average pensionable earnings over the contributory period of new pensions. For some countries, an additional sustainability factor or adjustment factor applies. In the case of DB systems, the accrual rate is predefined. For NDC systems, it is determined by the contribution rate to the notional accounts and the annuity factor ([23]).

For point systems, the breakdown of equation 1.1 is neither feasible, because pensionable earnings are not explicitly considered but rather accounted for through the pension point accumulation, nor meaningful given how a point system operates. Therefore, an alternative formula is used to break down new spending for point systems:

$$P_{new} = N_{new} \times \overline{P_{new}} = N_{new} \times v_T \times \overline{pp_T} \qquad (1.2)$$

where the total new pension expenditure P_{new} is the product of the number of new pensioners N_{new} and the average new pension benefit $\overline{P_{new}}$. The latter equals the pension point value at retirement v_T multiplied by $\overline{pp_T}$, which is the average number of pension points new pensioners accumulated. For some countries a sustainability factor or adjustment factor applies.

The average number of pension points $\overline{pp_T}$ can be further disaggregated:

$$\overline{pp_T} = \overline{C_T} \times \overline{pp_t} \qquad (1.3)$$

Where $\overline{C_T}$ is the average contributory period and $\overline{pp_t}$ the average number of points accrued annually. The latter can be interpreted as the accrual rate in the case of point systems: the number of pension points at retirement divided by the contributory period.

If the old-age pension includes a flat component, the relevant subcomponents are projected separately.

([22]) Counting twice France (DB and PS) and Greece (DB and NDC).

([23]) Contributions are credited to individual accounts. These accounts are notional since contributions pay the pension benefits of current pensioners. At retirement, the accumulated notional balance is converted into an annuity by means of an annuity factor that accounts for the estimated remaining life expectancy and an assumed rate of return on the contributions.

1.3.5. Number of pensions and pensioners

Number of pensions

The number of pensions totals all pensions paid out to individuals, with one person possibly receiving several pensions. Figures are reported by scheme and by age group and should be consistent with the projections for population, labour force and number of pensioners. Pensions paid overseas should be included.

Number of pensioners

The number of pensioners is reported for the overall public scheme as well as separately for each of the sub-schemes, allowing for the fact that a person may combine multiple benefits. Pensions paid overseas should be included. The projections should assume a constant ratio between pensions and pensioners in the absence of reforms affecting the pension take-up ratio or a process of merging/closing of pension schemes.

A breakdown of public pensioners by age and sex is provided as well, allowing to assess the consistency with the demographic and labour market assumptions. The overall number of pensioners by age group should be consistent with the labour force figures. The share of pensioners in each age group should be below – but close to – the number of inactive people in the same group.

The availability of data on pensioners (or pensions as a second best) is relevant when disaggregating the pension expenditure-to-GDP ratio. Aside from calculating the average pension benefit – and thus the benefit ratio and replacement rates – the data allows for the calculation of the coverage ratio. The total coverage ratio is defined as the number of pensioners of all ages relative to the number of people aged 65 or older. The analysis of the coverage ratio, which is also disaggregated by age group, provides information about how changes in the effective retirement age and the number of people getting a benefit affect pension spending.

1.3.6. Contributions and contributors

Contributions to pension schemes

Contributions to pension schemes paid by both employers and employees as well any legislated contribution by the state or other revenue sources (e.g. nuisance charges, people transferring rights and savings from private schemes to the public scheme) provide information on potential future financing gaps within the pension system, which is then to be covered by central government transfers. If the pension contribution is part of a general social security contribution rate, an estimate should be provided, if possible, for the share of the pension contribution, e.g. based on the most recent expenditure structure. If general tax revenues finance pensions, no estimate should be provided.

Contribution projections should assume that the implicit contribution rates (contributions over gross wages) for the different components remain constant over the projection period or move in line with legislation.

Number of contributors

As is the case with the number of pensioners, the number of contributors to each type of pension should be considered separately, allowing for the fact that the same person may be a contributor to several schemes. This is the case, for instance, for pension systems in which statutory contributions are divided between a public scheme and a mandatory private scheme. However, the number of *total* contributors to the public scheme should be close to the number of employed people or the projected labour force.

1.3.7. Valorisation rules

Unless the pension benefit is based on the final salary, a flat-rate pension or depends on years of residence, pensionable earnings are to be adjusted for the change in living standards. The valorisation of accrued pension rights is an important variable when estimating new pension benefits. Consumer prices, wage growth, or a mixture of the two are the most common valorisation rules (see Annex 3). Valorisation below wage growth leads to declining benefit ratios and replacement rates over time, which might raise questions about the political sustainability of these pension arrangements (see also next section).

1.3.8. Applied indexation

Member States report the indexation factors used to project the expenditure on earnings-related public pensions, the flat component of old-age pensions, and minimum pensions. This information is particularly relevant for pension components for which the effectively assumed future indexation differs from the legally stipulated mechanism (see Annex 3).

Of particular concern is the indexation factor used to project minimum pensions and the interpretation of the standard no-policy change assumption in this regard. When the legislated rule stipulates that lower-than-wage indexation (e.g. pure price indexation or a mixed rule) applies to minimum pensions/minimum income guarantees, expenditure on that specific item is projected to shrink rapidly over time relative to GDP. Past experience on such non-generous indexation rules for minimum pensions shows that, in practice, regular ad hoc interventions are made to realign minimum pension benefits with changes in the standard of living, which is, ultimately, the main objective of a minimum pension scheme.

Therefore, since the 2018 projection round, a common methodology for the indexation of non-contributory minimum pensions has been applied in the projections. To ensure that the projections reflect the 'safety net' role of minimum pensions, benefits are assumed to evolve in line with average wage developments. In practice, the projections therefore apply full wage indexation after a maximum of ten years. This concerns all Member States with below wage indexation (pure price indexation, partial wage indexation, indexation to GDP, no fixed rule, ...).

Beyond the minimum pension scheme there is no common methodology to adjust for below wage indexation. However, below wage indexation in earnings-related pensions leading to substantial projected declines in benefit ratios and replacement rates may raise questions about the political sustainability of these pension arrangements. For this reason, a *constant benefit ratio scenario* is considered (see section 5.3 in Part I).

1.3.9. Assets and reserves of public schemes

Some countries accumulate surpluses of the public pension scheme in pension funds meant to finance future scheme deficits. In such cases, pre-funded or partially funded pension systems alleviate future sustainability concerns. Member States report assets accumulated in a social security fund or a dedicated pension/reserve fund within the general government, for example in the case of partially funded pension schemes, with the goal of providing the public pension scheme with a regular flow of financing at some point in the future. Aside from the stock of assets, also flows directed to the funds are reported. Assets under management of *private* schemes can be reported on a voluntary basis.

2. HEALTH CARE

2.1. INTRODUCTION

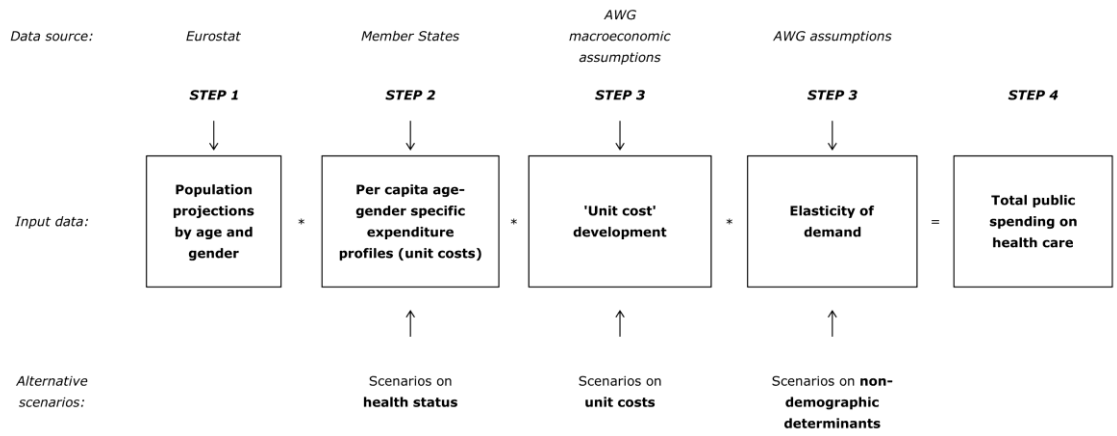
Spending on health care, one of the components of public age-related expenditure, represented 6.8% of GDP in 2023 in the EU ([24]). Standards of health care provision are overall high across the EU, with near universal access to health care services. However, to cope with long-term structural trends such as population ageing and technological progress, while closing some of the resilience gaps identified during the COVID-19 pandemic, more public resources will be necessary. All this makes public spending on health care an integral part of the debates on the long-term sustainability of public finances. This chapter presents the methodology used to project public expenditure on health care in the 27 EU Member States and Norway up to 2080, including the baseline, alternative scenarios and stress tests.

2.2. OVERVIEW OF THE PROJECTION METHODOLOGY

General approach

The Commission (DG ECFIN) simulation model is used to project public health care expenditure. This simulation model is a stylised macro model, capturing future developments of the population structure, age-cost profiles, technological progress and standards of living. The model assumes that the entire population is divided into groups with certain characteristics (e.g. age, gender, per capita expenditure, health status). Changes in these groups lead to expenditure changes over time. This type of model is widely used to prepare long-term expenditure projections, especially when the precise micro information on the individuals and their transition rates from one health status to another is missing or unreliable. The general methodology to project public health care expenditure involves four steps (see Graph II.2.1).

Graph II.2.1: **Schematic overview of the health care projection methodology**



Source: European Commission, EPC.

Step 1: take the baseline population projection (i.e. number of people) by age and sex provided by Eurostat for each year up to 2080.

Step 2: take age/sex-specific public health care expenditure per capita (i.e. the age/gender-specific expenditure profiles) provided by the Member States and Norway based on the latest available data.

([24]) Total public expenditure on health care includes capital formation and excludes long-term care (health).

Step 3: project age/sex public health care expenditure profiles for each year up to 2080 based on different assumptions (i.e. the baseline and alternative scenarios).

Step 4: for each projection year, multiply the projected number of people in each age/sex group by the respective age/sex public health care expenditure profile and sum all groups to obtain the total projected public expenditure on health care.

Key data input and treatment of reforms

The common elements of all scenarios are the EUROPOP2025 projections by Eurostat (see Part I, Chapter 1) and the baseline assumptions on labour force and macroeconomic variables agreed by the Commission and the Ageing Working Group (see Part I, Chapters 2 and 3). The age/sex-specific profiles of public health care expenditure per capita are provided by the Member States and Norway. Moreover, as for previous projection exercises, the age/sex profiles of per capita expenditure on health care are adjusted – in the reference year – to match total public expenditure on health care as reported to international databases and confirmed by the Member States in the health care questionnaire ([25]). This adjustment (shift of the age-sex cost profile) is made by keeping the base year proportions between specific age cohorts constant.

Country-specific information on any relevant recent reform legislated and/or implemented that could have an impact on public health care expenditure (e.g. binding spending ceilings) is as much as possible taken into account in the projections. Information on legislated policy reforms and their quantification, both increases and reductions, is provided by the Member States. The annual percentage reduction/increase is deducted from/added to the level of spending, effectively changing the level of total health care spending.

Additional considerations

Three important aspects of the projection exercise need to be stressed. First, the baseline relies on a "no-policy change assumption": the analysis assumes that government health policy and behaviour of individual participants in the health care market remain unchanged (with respect to the legislated reforms considered). This means that health care provision is assumed to respond "automatically" to the needs resulting from changes in population structure and health status, as well as to changes in income.

Second, many of the determinants of health care expenditure, notably supply-side determinants of spending are either not quantifiable or depend on ad-hoc policy decisions. Therefore, the methodology used to project public health care expenditure mainly reflects demand-side factors such as demographic structure, health status and a moderate effect of non-demographic factors. However, in the risk scenario (see below), the combined impact of non-demographic factors (such as technology, wages, institutional settings) is taken into account and calibrated based on a regression analysis.

Third, given the important uncertainty surrounding long-term projections, a sensitivity analysis is conducted, through several alternative scenarios and stress tests, attempting to identify the impact of each quantifiable determinant separately based on different assumptions.

([25]) The total headline data on total public health care expenditure may differ from the figures resulting from the combination of age/sex cost profiles with underlying population. Differences between the two measures of public health care expenditure can result from differences in their computation. While total expenditure is calculated from an aggregate budgetary perspective, costs per capita are in many countries estimated based on health insurance or hospital inpatient data, which in most countries do not cover all public expenses on health care.

2.3. DIFFERENT SCENARIOS FOR PROJECTING PUBLIC HEALTH CARE EXPENDITURE

The purpose of health care systems is to "improve the health of the population they serve; respond to people's expectations and provide financial protection against the costs of ill-health" (WHO, 2000). In the influential WHO report from 2000, health systems are attributed four vital functions: (1) service provision, i.e. the delivery of personal and non-personal health services; (2) financing, i.e. the revenue collection, the pooling of funds (insurance function) and purchase of services (the process by which pooled funds are paid to providers in order to deliver the health interventions to care users); (3) resource creation, i.e. investment in equipment, buildings and people (training); and (4) stewardship or oversight of all the functions, i.e. the careful and responsible management of the health system.

In this context, public health care expenditure depends on factors that affect the demand and supply of health services and goods. These include:

- The health status of the population.
- Economic growth and development.
- New technologies and medical progress.
- The organisation and financing of the health care system.
- Health care resource inputs, both human and capital.

The long-term projection scenarios for public health care expenditure, described below, capture demand and supply-side factors, and include demographic and non-demographic variables ([26]). The choice of methodology and scenarios is constrained by the availability, accessibility, and quality of data. Therefore, the model may not include all the relevant factors identified as affecting health care spending. To reflect the effects of the different determinants on public expenditure on health care, changes are made to two main inputs: (1) the age-related expenditure profiles (capturing unit costs) and (2) assumptions regarding the development of unit costs over time driven by the macroeconomic variables or assumptions on health status. As in the 2024 projection exercise, the list of determinants to be modelled is not exhaustive.

The scenarios to project public expenditure on health care in the 2027 Ageing Report are summarised in Table II.2.1. Compared to the 2024 projection exercise, there are no changes in methodology in the baseline and alternative scenarios.

Baseline

The *baseline* ([27]) provides the reference scenario used in the context of EU fiscal surveillance. It shows the combined effect of a set of interrelated determinants of public expenditure on health care. It reflects (i) the demographic impact of population ageing, based on Eurostat projections, (ii) a "neutral" assumption on the development of health status, by assuming that half of the extra years of life gained through higher life expectancy are spent in good health, (iii) unit costs assumed to evolve in line with real GDP per capita ([28]) and (iv) the assumption of a moderate non-demographic determinants effect, which is modelled through a cost sensitivity of 1.1 in the base year converging linearly to unity by 2080.

([26]) See also Annex 5 for a mathematical illustration of the health care scenarios.

([27]) Up to the 2021 Ageing Report, the baseline was called "AWG reference scenario".

([28]) Real GDP per capita at 2025 prices.

Table II.2.1: **Overview of health care scenarios**

	Baseline	**Demographic scenario**	**No healthy ageing scenario**	**Healthy ageing scenario**	**Labour cost scenario**	**Sector-specific composite indexation scenario**	**Risk scenario**	**Additional sensitivity tests**
	I	II	III	IV	V	VI	VII	
Population projection	Eurostat 2025-based population projections	Eurostat 2025-based population projections	Eurostat 2025-based population projections	Eurostat 2025-based population projections	Eurostat 2025-based population projections	Eurostat 2025-based population projections	Eurostat 2025-based population projections	additional sensitivity test scenarios
Age-related expenditure profiles	2025 profiles shift by half the change in age-specific life expectancy	2025 profiles shift by half the change in age-specific life expectancy	2025 profiles held constant over the projection period	2025 profiles shift in line with changes in age-specific life expectancy	2025 profiles shift by half the change in age-specific life expectancy	2025 profiles shift by half the change in age-specific life expectancy	2025 profiles shift by half the change in age-specific life expectancy	2025 profiles shift by half the change in age-specific life expectancy
Unit cost development	real GDP per capita	real GDP per capita	real GDP per capita	real GDP per capita	real GDP per hours worked	real GDP per capita	real GDP per capita	additional sensitivity test scenarios
Elasticity of demand	Cost sensitivity of **1.1** in 2025, converging to 1 by 2080	**1**	Cost sensitivity of **1.1** in 2025, converging to 1 by 2080	Cost sensitivity of **1.1** in 2025, converging to 1 by 2080	Cost sensitivity of **1.1** in 2025, converging to 1 by 2080	Input-specific indexation	Cost sensitivity of **1.3** in 2025, converging to 1 by 2080	Cost sensitivity of **1.1** in 2025, converging to 1 by 2080

Source: European Commission, EPC.

Demographic scenario

The aim of the *'demographic scenario'* is to estimate the pure ageing effect on future public health care expenditure. The age/sex public health care expenditure groups evolve in line with the population projections up to 2080. Compared with the baseline, this scenario assumes that unit costs – i.e. the health care expenditure per capita for each year of age – evolve only in line with real GDP per capita without considering the impact of any non-demographical determinants. Other assumptions are unchanged compared with the baseline.

No healthy ageing scenario

The *'no healthy ageing scenario'* allows assessing the impact of the *expansion of morbidity* hypothesis on public health spending projections. It assumes that age/sex-specific morbidity rates and the structure of health care provision do not change over time. This, in turn, means that age/sex-specific per capita public health care expenditure profiles, which can be considered as proxies for the morbidity rates ([29]), remain constant in real terms over the whole projection period. As in the baseline, the scenario relies on the latest Eurostat population projections, assuming a gradual increase in life expectancy. This increase in life expectancy together with no change in the health status, as compared to today's health status, mean that all the gains in life expectancy are assumed to be spent in poor health. The number of years spent in good health remains constant. Other assumptions are unchanged compared with the baseline.

Healthy ageing scenario

The *'healthy ageing scenario'* is based on the *relative compression of morbidity* hypothesis. It simulates an improvement in health status in line with declining mortality rates and increasing life expectancy. It assumes that the number of years spent in poor health during a lifetime remains constant over the projection period. This means that all future gains in life expectancy are assumed to be spent in good

([29]) Strictly speaking, age-sex profiles of expenditure illustrate exclusively public health care spending per person of a given age cohort. As such it is not a measure of health status or morbidity. However, given the lack of reliable and comparable data on the latter, one can plausibly assume that the shape of the profile follows the development of health status over the lifespan, i.e. over time we assume that the same segments of the curve (early childhood, old age and motherhood) follow the same pattern.

health. Consequently, the morbidity rate and therefore the age/sex-specific per capita public expenditure profiles decline with the mortality rate ([30]). This 'outward' shift is proportional to the projected gains in life expectancy as given by the Eurostat population projections. For each projection year the change in life expectancy in relation to the base year is calculated ([31]). Other assumptions are unchanged compared with the baseline.

Labour intensity scenario

The *'labour intensity scenario'* aims at estimating the development of public health care expenditure considering that health care is and will remain a highly labour-intensive sector. Therefore, it is assumed that unit costs (age/sex-specific per capita public expenditure profiles used in the baseline scenario) evolve in line with changes in labour productivity (modelled by real GDP per hours worked) ([32]), rather than real GDP per capita growth (as assumed in the baseline). This assumption implies that wages in the health sector grow in line with productivity in the overall economy and generally faster than GDP per capita. Other assumptions are unchanged compared with the baseline.

Sector-specific composite indexation scenario

The *'sector-specific composite indexation scenario'* explores the use of sector-specific rather than economy-wide indexation of unit costs in the model, given the specific features of the health care sector (high level of government regulation, investment in new technologies, high labour intensity, separate financing instruments in inpatient and outpatient care). In practice, this scenario looks at the past cost development of hospital care, outpatient care and outpatient pharmaceutical spending and indexes each of them in a separate way, creating a country-specific composite indexation for unit cost development.

To build this index, health care expenditure is disaggregated in its different components, broadly reflecting the different sectors of the health system, including: (1) inpatient care; (2) outpatient care and ancillary services; (3) pharmaceuticals and therapeutic appliances; (4) preventive care; (5) governance and administration; and (6) capital investment ([33]). For each of these components, the share in total public health care expenditure is calculated and then applied to the age-sex specific per capita public expenditure. In doing this, each age-sex specific per capita public expenditure is divided (mechanically) into six sub-items of expenditure.

Next, the past change in public expenditure on each of those inputs is considered. For each of the six components, the average annual expenditure growth over the past 10 years is calculated. Then, the ratio of each of these 10-year average expenditure growth rates to the 10-year average GDP growth rate is computed.

Due to the high volatility of the relative growth rates for the sub-components on prevention, governance and administration, and capital formation, these items are excluded from the indexation. The other three sub-items of the age-sex specific per capita public expenditure (hospitals, outpatient care and medical goods) are multiplied by their respective growth rate (capped at their respective 25th

([30]) In this scenario, the country-specific age/gender per capita expenditure profiles are progressively shifted outwards, in line with increasing life expectancy. The method is applied to those age/gender groups where expenditure per capita is growing. For the young and the oldest, the reference age/gender and therefore age/gender per capita public expenditure profile remains the same over the whole projection period.

([31]) The following example illustrates the approach: the life expectancy of a 50-year-old man in a given Member State is assumed to increase by 4 years from 30 years in year *t* to 34 years in year *t+20*. Then, the scenario assumes that in *t+20* a 50-year-old man will have a per capita public expenditure profile of a (50-4) = 46-year-old man in year *t* (the latter adjusted as usual with the GDP per capita growth rate over the last 20 years).

([32]) Real GDP per hours worked at 2025 prices.

([33]) They are largely based on the SHA 2011 classification of health care functions. For exact allocation of SHA functions to the six components see Annex 4, Table II.A4.1.

and 75th percentiles, as in previous Ageing Reports) ([34]). It is then assumed that the growth ratio multiplying each sub-item of expenditure converges linearly to 1 in 2080.

Other assumptions are unchanged compared with the baseline.

Risk scenario

The *'risk scenario'* ([35]) aims at fully accounting for technological changes, institutional mechanisms and other non-demographic factors, which have driven expenditure growth in recent decades. Econometric studies show that demographic factors such as ageing have a positive but relatively small impact on spending when compared with other drivers, such as income, technology, relative prices (wages) and institutional settings (Maisonneuve and Martins, 2013). By only considering moderate non-demographic factor effects, the baseline implicitly assumes a substantial progressive downward slope of past trends in health care spending, flattening out at the end of the period. To address this critical aspect, the risk scenario considers a stronger impact of non-demographic factors (e.g. technology or relative prices) on health care expenditure.

This scenario uses panel regression techniques to estimate the country-specific non-demographic cost of health care. The non-demographic cost is defined as the excess of growth in real per capita health care expenditure over the growth in real per capita GDP after controlling for demographic composition effects. Alternatively, the results can also be expressed in terms of country-specific average income elasticities of health care expenditure. A proxy for the non-demographic costs with an estimated EU average elasticity of 1.3, based on Commission research ([36]) endorsed by the Ageing Working Group and recalculated for the 2027 Ageing Report with the latest available data, is used in 2025 and then converges linearly to 1 by the end of the projection period in 2080.

Other assumptions are unchanged compared with the baseline.

Other sensitivity scenarios

Alternative sensitivity tests are applied to the baseline to show the effect of key demographic and macroeconomic assumptions on long-term public health expenditure projections. These alternative sensitivity tests are applied to all age-related items and are therefore described in Part I, Chapter 5.

([34]) Assume that per capita public expenditure on health care for a 20-year-old man is EUR 2 000 in year t. Assume also that, in line with total public expenditure on health care, this is made up of 40% inpatient care, 30% outpatient care and ancillary services, 17% pharmaceuticals and therapeutic appliances, 3% preventive care, 5% governance and administration, and 5% capital investment. Therefore, the per capita public expenditure is divided into six sub-items: EUR 800 for inpatient care, EUR 600 for outpatient care and ancillary services, EUR 340 for pharmaceuticals and therapeutic appliances, EUR 60 for preventive care, EUR 100 for governance and administration, and EUR 100 for capital investment. Then, in year t+1, expenditure increases as follows: EUR 800 x 1.2 + EUR 600 x 1.1 + EUR 340 x 1.3 + EUR 60 x 1.0 + EUR 100 x 1.0 + EUR 100 x 1.0, where 1.2, 1.1, and 1.3 are the (illustrative) past growth ratios observed for the first three components, while the other items are not indexed by their past observed growth rates. As far as the pattern of convergence is concerned, we can use past observations to determine the convergence pattern of the growth ratios.

([35]) Up to the 2021 Ageing Report, the *risk scenario* was named "*AWG risk scenario*".

([36]) Medeiros and Schwierz (2013).

3. LONG-TERM CARE

3.1. INTRODUCTION

Long-term care, together with pensions and health care, is an important component of age-related public expenditure. Although it is currently the smallest of the three in terms of expenditure (representing an estimated 2% of GDP on average in the EU in 2025), it is the one expected to experience the largest increase according to past Ageing Reports. This chapter presents the methodology used to project long-term care spending in the 27 EU Member States and Norway up to 2080, including the baseline and several alternative scenarios and stress tests designed to assess the potential impact of each of the determinants of long-term care expenditure on future public expenditure.

3.2. OVERVIEW OF THE PROJECTION METHODOLOGY

3.2.1. Methodology

As in previous projection exercises – conducted jointly by the European Commission and the Ageing Working Group (AWG) – the methodology to project long-term care expenditure is based on a stylised macro-simulation model. This model allows capturing future developments of the population structure, of age-cost profiles, of institutional set-up and of standards of living. It assumes that the whole population is divided into groups according to certain characteristics (e.g. age, gender, per capita expenditure, health status, need for care and type of care). If the (relative) size of these groups or their characteristics change over time, long-term care expenditure changes in line with them. These types of models are often used in long-term expenditure projections, in particular in cases where precise information at individual level and on their transition from one status to the next is not available or is unreliable.

The choice of methodology and the various scenarios to be run are limited by the availability, accessibility and quality of long-term care data. Expenditure data from the System of Health Accounts (SHA) are used where available, complemented with proxies calculated based on categories from the European System of Integrated Social Protection Statistics (ESSPROS) and supplemented by national data when necessary.

Dependency rates are based on EU-SILC data ([37]) and dependency is defined as difficulty in performing at least one activity of daily living (ADL) (Katz et al., 1963) ([38]) or at least one instrumental activity of daily living (IADL) (Lawton and Brody, 1969) ([39]). Long-term care is usually defined as a set of services required by people with a reduced degree of functional capacity (whether physical or cognitive) and who therefore depend on help to perform these activities for an extended period of time. The proportion of EU-SILC respondents that report having a severe difficulty in carrying out their daily activities due to a health problem lasting more than six months is used to obtain a proxy of 'dependency' rates ([40]).

Data on the number of recipients and expenditure per recipient are however only available from national sources.

([37]) EU-SILC: The European Statistics on Income and Living Conditions.

([38]) Activities of daily living (ADL) are the things people normally do in daily living, including any daily activity they perform for self-care (such as feeding, bathing or dressing), work, homemaking and leisure (see Webster's New World Medical Dictionary, Wiley Publishing, 2008). If a person has difficulty in performing at least one of them, he or she is considered ADL-dependent.

([39]) IADL includes shopping, laundry, vacuuming, cooking and performing housework, managing finances and using the telephone.

([40]) Note that this is a conservative proxy as EU-SILC is used to identify 'severe' disability and the AWG definition of long-term care is wider, encompassing people who have one IADL and whose level of disability is therefore relatively mild.

The approach aims at examining the impact of the main factors affecting future long-term care expenditure. Specifically, the methodology (described in Graph II.3.1 below) aims at analysing the impact of changes in the assumptions on:

- The number of elderly people (through changes in the population projections).
- The number of dependent people (through changes in the prevalence rates of dependency) ([41]).
- The balance between formal and informal care provision (assuming changes in demand or exogenous changes in the availability of informal carers).
- The balance between home care and residential care within the formal care system.
- The unit costs of care per recipient (and how they evolve over time for different care settings).

The methodology consists of the following steps:

Step 1: Make a **projection of the dependent and non-dependent population**, broken down by age and gender, using the baseline population projections from Eurostat. The dependent population is assumed to need some form of long-term care, while the non-dependent population is assumed not to be in need of long-term care. This projection is made by taking age- and gender-specific dependency rates ([42]) at the value observed in the base year (estimated using existing indicators of disability from comparable sources) and multiplying them by the baseline population projection ([43]) to obtain the number of dependent people over the projection period.

Step 2: Divide the projected dependent population by age and gender into four groups depending on the type of care they receive, namely (1) **informal care**, which is assumed to have no impact on public spending, (2) **in-kind care at home**, (3) **in-kind care in institutions** and (4) **cash benefits**, with the latter three all having an impact on public spending. The proportions of those in the dependent population that belong to groups 2 to 4 can be derived by dividing the numbers of recipients for each care setting reported by the Member States by the overall dependent population derived from EU-SILC data ([44]). It is assumed that the difference between the total number of dependent people and the total number of people receiving formal care (at home, in institutions or as cash benefits) is the number of people who rely exclusively on informal care. The proportion of the dependent population that receives informal care can therefore be calculated as a residual by subtracting from the total the proportions of those that receive other types of care.

Step 3: Calculate the age-gender profiles of expenditure per capita for the three types of formal long-term care services based on Member States and Norway data, Eurostat SHA and ESSPROS data. For the base year of the projection, the total public expenditure on home care, residential care and cash benefits for each age and sex group is divided by the number of people receiving in-kind care at home, in long-term care institutions and receiving cash benefits in that group (provided by Member States). This gives us a 'unit cost' for each type of care, age and sex group.

Step 4: The unit costs for the base year calculated in Step 3 are projected by applying indexation assumptions. Cash benefits are generally indexed to GDP per capita, while in-kind benefits are generally indexed to GDP per hours worked. In both cases this is done over the whole projection period. This reflects the current imbalance of the care mix, with a relative deficit of formal care provision as well as the labour-intensive nature of long-term care provision. Exceptions apply for Germany, France and Slovenia, as discussed below in Section 3.2.3.

([41]) Based on the original proposal for the development of a long-term care expenditure projection model by Comas-Herrera et al. (2005) that led to the model used in the Ageing Report.

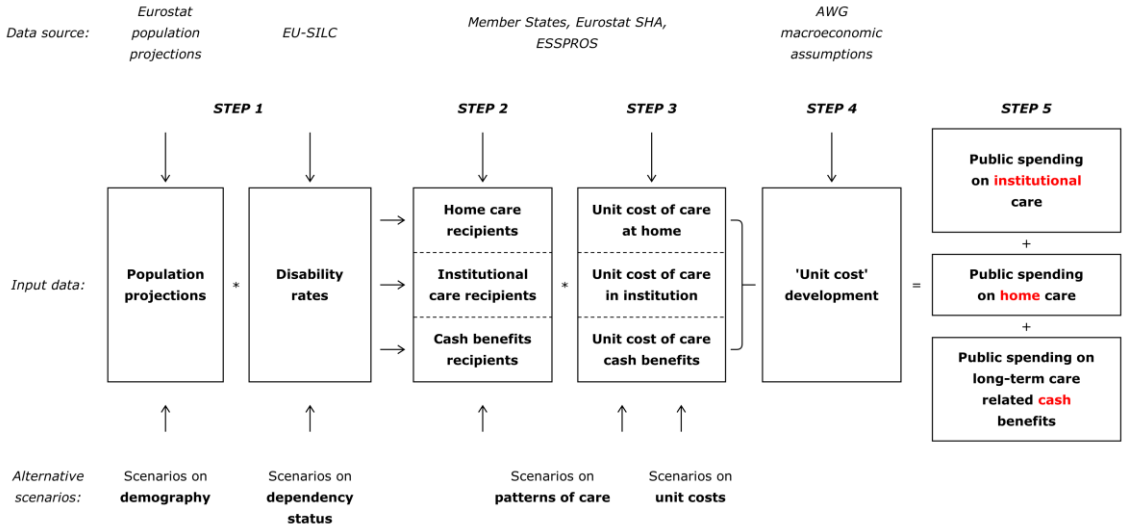
([42]) These dependency rates are averaged over the last five years, excluding data breaks.

([43]) The model has been set up so that the projected number of dependent people (i.e. people with disability) will not decrease due to increasing life expectancy, by ensuring that the number of dependent people in a five-year age class cannot be lower than in the preceding one. The practical impact of this adjustment may be rather small.

([44]) The model implicitly assumes that all those receiving home care, residential care or cash benefits have difficulties with one or more ADLs or IADLs, and that all people classified as dependent receive either informal care, home care, residential care or cash benefits.

Step 5: Calculate public spending for the three care settings. For this purpose, the number of people receiving each type of care (at home, in institutions and receiving cash benefits) is multiplied by the age-gender specific public expenditure per capita (respectively at home, in institutions and for cash benefits) per year. The total public expenditure on long-term care services is obtained by adding up the expenditure on each setting.

Graph II.3.1: **Schematic overview of the long-term care projection methodology**



Source: European Commission, EPC.

3.2.2. Estimating dependency

Overall, as it is possible to identify those affected by disability, the projection methodology described above is more precise than that used for health care expenditure for which there is no direct indicator of health status and the age-related expenditure profile is used as a proxy. However, an important caveat is that, while dependency rates are an indicator of the need for care, this need does not necessarily translate into actual public expenditure, for at least two reasons.

First, the links between disability levels and demand/use of long-term care are not straightforward. There is some uncertainty at each step involved. Many people with some form of disability can live completely independent lives without the need for care services. Furthermore, dependency also depends on a person's perception of their ability to perform activities associated to daily living. On the one hand, survey data can underestimate some forms of disability. People may not report certain socially stigmatised conditions, such as alcohol and drug-related conditions, schizophrenia and mental degeneration. On the other hand, disability data can be too inclusive and measure minor difficulties in functioning that do not require community care. To minimise these potential issues, the focus is on those dependency levels reported as 'severe' ([45]) according to EU-SILC.

Second, the coverage of long-term care systems is not universal in most EU Member States (eligibility conditions may, for example, exclude those with dependency below a certain threshold or those with financial means above a specific threshold) and a significant proportion of long-term care is still provided by unpaid informal carers. As a result, expenditure profiles contain information about the propensity to receive paid formal care, which depends on a number of factors other than dependency that affect the demand for paid care such as household type, availability of informal carers, income or housing situation. Most of these factors are also related to age.

([45]) This is because these people are most in need of income support and services, such as long-term care. This minimises the risk of mistakenly capturing people who are not dependent, although some people with lower levels of dependency may be missed. Therefore, this measure of dependency may underestimate the dependency rates for those EU Member States with comprehensive long-term care systems that cover as well relatively low levels of dependency.

3.2.3. Country-specific legislation on indexation rules of long-term care benefits

If countries can demonstrate that they apply price indexation by law, this is allowed for at least the first 10 years of the projection period. Such exceptions are described below.

Country-specific cases

There are three countries for which the general indexation rules described before are not strictly applied for both *cash* and *in-kind* benefits, given specific legislation. In **Germany**, there is a legislation on the ceiling of public long-term care expenditure. Moreover, under current German rules long-term care benefits *in-kind* and *cash* are indexed to prices. The difference between the amounts financed by the German government and the costs of long-term care is either covered by private insurance or paid by the beneficiaries themselves. The German government is required by law to check every three years the need and extent of adjusting long-term care benefits based on inflation. In **France** and **Slovenia**, *cash* benefits are generally required by law to be indexed to prices.

Although the legislation described above can justify that these Member States apply specific indexation rules, there are limits to the extent to which they can be taken into account in the projection. In an extreme case, indexing all benefits to prices for the duration of the projection period could lead to a significant reduction in long-term care expenditure as a share of GDP and in per capita terms compared to the standard assumptions. This would in fact represent a departure from the 'no policy change assumption' underpinning the baseline.

To account for this legislation, while preserving the realism of the projections, the following assumptions are used for the baseline projections, as in the 2024 Ageing Report:

- For **Germany**, two thirds of the *in-kind* benefit expenditure are indexed in line with the Ageing Report standard assumptions, and the remaining one third in line with prices over the whole projection period. For *cash* benefits, two thirds of the expenditure are indexed in line with prices over the whole projection period and the remaining one third in line with the standard assumptions.
- For **France**, price indexation is applied to *cash* benefit expenditure over the whole projection period, with the rest being indexed according to the standard assumptions.
- For **Slovenia**, price indexation is applied to *cash* benefit expenditure over the first 10 years of the projection, with the rest being indexed according to standard assumptions.

3.3. DIFFERENT SCENARIOS FOR PROJECTING PUBLIC LONG-TERM CARE EXPENDITURE

Table II.3.1: **Overview of long-term care scenarios**

	Baseline	No healthy ageing scenario	Healthy ageing scenario	Coverage convergence scenario	Cost convergence scenario	Risk scenario	Additional sensitivity tests
	I	II	III	IV	V	VI	
Population projection	Eurostat based population projections	Eurostat based population projections	Eurostat based population projections	Eurostat based population projections	Eurostat based population projections	Eurostat based population projections	Additional sensitivity test scenarios
Dependency status	Half of projected gains in life expectancy are spent without disability	2022-2025 average dependency rates held constant over projection period	All projected gains in life expectancy are spent without disability	Half of projected gains in life expectancy are spent without disability	Half of projected gains in life expectancy are spent without disability	Half of projected gains in life expectancy are spent without disability	Half of projected gains in life expectancy are spent without disability
Age-related expenditure profiles	2025 cost profiles	2025 cost profiles	2025 cost profiles	2025 cost profiles	Cost profiles per Member State converge upwards to the EU27 average by 2080	Cost profiles per Member State converge upwards to the EU27 average by 2080	2025 cost profiles
Policy setting / Care mix	Probability of receiving each type of care held constant at 2025 level	Probability of receiving each type of care held constant at 2025 level	Probability of receiving each type of care held constant at 2025 level	Probability of receiving in-kind formal care converging until 2080 upwards to the EU27 average	Probability of receiving each type of care held constant at 2025 level	Probability of receiving in-kind formal care converging until 2080 upwards to the EU27 average	Probability of receiving each type of care held constant at 2025 level
Unit cost development	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country specific indexation assumptions*	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country specific indexation assumptions*	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country specific indexation assumptions*	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country specific indexation assumptions*	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country specific indexation assumptions*	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country specific indexation assumptions*	Additional sensitivity test scenarios
Elasticity of demand	1 for MS in highest LTC expenditure quartile in 2025, for the rest 1.1 in 2025 converging to 1 by 2080	1 for MS in highest LTC expenditure quartile in 2025, for the rest 1.1 in 2025 converging to 1 by 2080	1 for MS in highest LTC expenditure quartile in 2025, for the rest 1.1 in 2025 converging to 1 by 2080	1 for MS in highest LTC expenditure quartile in 2025, for the rest 1.1 in 2025 converging to 1 by 2080	1 for MS in highest LTC expenditure quartile in 2025, for the rest 1.1 in 2025 converging to 1 by 2080	1 for MS in highest LTC expenditure quartile in 2025, for the rest 1.1 in 2025 converging to 1 by 2080	1 for MS in highest LTC expenditure quartile in 2025, for the rest 1.1 in 2025 converging to 1 by 2080

Shaded cells indicate parameters that differ from the baseline assumptions.
* Unit cost development also includes different country-specific assumptions for Member States with specific legislation on the indexation of benefits. In the 2027 Ageing Report, these countries are France, Germany and Slovenia.

Source: European Commission, EPC.

3.3.1. Baseline

The baseline is the scenario used by the European Commission in the context of fiscal surveillance and the European Semester. The main assumptions are described below.

- *Population projections* rely on the baseline population projections by Eurostat.
- *Dependency ratio*: it is assumed that half of the projected longevity gains up to 2080 will be spent in good health and free of disability/dependency. The age-gender specific dependency rates are shifted by ½ of the change in life expectancy (e.g. if life expectancy increases by 2 years by year 2080, then the dependency rate of 80-year-old men in 2080 is that of 79-year-old men in 2025).

- *Age-related expenditure profiles*: The age-related expenditure profiles from 2025 are used, uprated in terms of the unit cost development.
- *Public coverage*: the shares of the older disabled population who receive either informal care, cash benefits, formal care at home or residential care that is provided or financed by the public sector are kept constant over the projection period.
- *Unit cost development*: Unit costs are generally indexed according to GDP per hour worked in the case of *in-kind* benefits and to GDP per capita in case of *cash* benefits. This reflects the current imbalance of the care mix, with a relative deficit of formal care provision. Furthermore, the sector is highly labour-intensive and productivity gains due to technology are difficult to achieve. Therefore, public expenditure on long-term care is expected to be rather supply- than demand-driven. For that reason, GDP per worker (which reflects the wage development in all sectors, including in the care sector), rather than GDP per capita was chosen for *in-kind* benefits, the main driver of unit costs. Country-specific indexation assumptions are used for Member States with specific legislation on long-term care expenditure, i.e. Germany, France and Slovenia (see Section 3.2.3).
- *Elasticity of demand*: As countries become richer, they are likely to spend a larger proportion of their GDP on long-term care. This is modelled in the baseline by including the assumption that the income elasticity starts at 1.1 in base year 2025, falling to 1 by the end of the projection period for those countries that are below the first quartile in terms of expenditure on long-term care as a proportion of GDP. Based on current estimates this is expected for all countries except NL, SE, DK, BE, FI, DE, FR and NO.

3.3.2. No healthy ageing scenario

The 'no healthy ageing scenario' is identical to the baseline apart from its assumption on the dependency status. It assumes that the disability rates of the population of a given age will not improve despite increases in life expectancy. This means, for example, that even if life expectancy increases by two years by 2080, the proportion of 80-year-olds who are disabled in 2080 will be the same as it was in 2025.

Those constant proportions are then applied to the projected changes in the dependent population. Since the prevalence of dependency is kept constant over the projection period, the dependent population evolves precisely in line with the total elderly population. This implies that, in practice, none of the gains in life expectancy translate into an improvement of health.

3.3.3. Healthy ageing scenario

This scenario reflects an alternative assumption about the dependency ratio. Inspired by the so-called 'dynamic equilibrium hypothesis' ([46]), it is analogous to the healthy ageing scenario carried out in the framework of the health care expenditure projections. The age-gender specific dependency rates are shifted in line with changes in life expectancy (e.g. if life expectancy increases by 2 years by year 2080, then the dependency rate of 80-year-old men in 2080 will be that of 78-year-old men today). This results in a gradual decrease over time in the prevalence of disability for each age cohort that goes beyond the gradual decrease in the baseline. Lower dependency rates translate in lower demand for and therefore lower expenditure on long-term care services for each age group.

3.3.4. Coverage convergence scenario

This scenario makes a different assumption in terms of policy setting. The pressure for increased public provision and financing of long-term care services may grow substantially in the coming decades, especially in Member States where the bulk of long-term care is currently provided informally.

This scenario assumes that economic convergence across Member States, the exchange of best practices and growing expectations of the populations will drive an expansion of publicly financed

([46]) Rechel et al. (2020).

formal care provision into the groups of the population that have not been covered by the public programmes so far (i.e. widening of the coverage). This is modelled as convergence in the provision of *in-kind* formal care. It should be considered as a policy-change scenario, as it assumes a considerable shift in the current long-term care provision mix from informal care to formal in-kind care, while aiming to take into account the high diversity of the current country-specific care mix in terms of the balance between the two types of in-kind care (home care and residential care).

3.3.5. Cost convergence scenario

This scenario makes a different assumption on the age-related expenditure profiles. It considers the impact of a convergence in the unit costs of care. Similar to the level of coverage, there is a great deal of variation in the unit costs of care across Member States, which is a proxy for the variations in the quantity and quality of care provided to recipients. Just like a convergence in coverage across EU Member States could be expected, an increase in the costs of care (as percentage of GDP per capita) towards the EU average is also a plausible hypothesis (i.e. an expansion in the depth of coverage). The 'cost convergence scenario' is meant to capture the possible effect of a convergence in real living standards (resulting from the macroeconomic assumptions) on long-term care spending.

3.3.6. Risk scenario

The risk scenario from the baseline with regards to the assumptions on age-related expenditure profiles and the policy settings. It is intended to capture the impact of cost drivers additional to demography and health status, i.e. the likely effect of a convergence in real living standards on long-term care spending.

3.3.7. Other sensitivity tests

Several sensitivity tests modify the baseline by making alternative assumptions on factors such as migration, fertility, employment, productivity and life expectancy. The full list and description of the assumptions can be found in Part I, Chapter 5 of this report.

4. EDUCATION

4.1. INTRODUCTION

Government expenditure on education is included in age-related spending as it is largely affected by demographic developments due to the pronounced age profile of enrolment rates. Education expenditure represented around 5% of GDP on average in the EU in 2005-2023 and around 10% of total general government spending ([47]). Expenditure ratios vary considerably across Member States, from a minimum of 3.4% of GDP in Romania to a maximum of 7.3% in Sweden (see Table II.4.1).

Table II.4.1: **Public education expenditure (%GDP)**

	2005	2007	2017	2020	2021	2022	2023	average 2005-2023
BE	5.7	5.5	6.2	6.5	6.2	6.2	6.3	6.1
BG	4.1	3.6	3.5	3.9	4.3	3.9	4.1	3.8
CZ	4.5	4.1	3.8	4.7	4.7	4.5	4.5	4.3
DK	6.3	5.9	6.4	6.2	5.9	5.3	5.6	6.4
DE	4.1	3.9	4.1	4.6	4.5	4.4	4.5	4.2
EE	5.9	5.7	5.6	6.3	5.9	5.7	6.3	6.0
IE	4.1	4.3	3.2	3.1	2.8	2.5	2.8	3.8
EL	4.3	3.6	3.9	4.4	4.0	4.1	4.0	4.1
ES	4.0	4.0	4.0	4.6	4.5	4.3	4.2	4.2
FR	5.5	5.2	5.2	5.2	5.1	5.0	5.0	5.3
HR	5.5	5.2	4.8	5.7	5.4	5.0	5.3	5.2
IT	4.5	4.5	4.0	4.3	4.2	4.0	3.9	4.2
CY	5.7	5.6	5.2	5.7	5.1	4.8	5.2	5.6
LV	5.5	5.8	6.0	6.0	5.9	5.7	6.1	6.0
LT	6.2	5.0	4.5	5.1	4.7	4.9	5.1	5.2
LU	4.9	4.3	4.4	5.0	4.6	4.7	5.0	4.7
HU	6.0	5.5	5.1	4.7	5.0	5.0	5.3	5.2
MT	5.4	5.2	4.1	4.9	4.6	4.4	4.1	4.9
NL	5.1	5.1	5.0	5.1	5.0	4.9	4.9	5.2
AT	4.8	4.7	4.9	5.1	4.9	4.7	4.9	4.9
PL	6.1	5.7	4.9	5.1	4.9	4.5	5.0	5.3
PT	6.6	5.9	4.6	4.7	4.7	4.4	4.3	5.4
RO	3.6	3.9	2.9	3.6	3.2	3.3	3.4	3.4
SI	6.5	5.9	5.5	5.7	5.8	5.6	5.4	6.0
SK	3.9	3.6	3.9	4.7	4.6	4.7	5.0	4.2
FI	6.1	5.8	5.8	6.1	5.9	5.8	6.3	6.1
SE	7.4	6.9	7.5	7.8	7.4	7.2	7.3	7.3
NO	5.2	4.8	5.3	5.6	4.6	3.7	4.4	4.9
EA	5.2	4.9	4.7	5.1	4.9	4.7	4.9	5.0
EU	5.3	5.0	4.8	5.1	5.0	4.8	5.0	5.1

Only selected years over the period 2005-2023 are shown.

Source: European Commission, EPC – based on Eurostat, COFOG data.

The projection exercise mainly aims at assessing the impact of demographic changes per se on public education expenditure ([48]). Therefore, base-line projections are conducted under the assumption of 'no policy change'. However, an alternative scenario – assuming policies favouring higher enrolment rates – and additional stress tests aimed at capturing macro-economic uncertainty, are also considered.

Long-term developments of public education expenditure are affected by two opposite trends. On the one hand, the projected decline in the number of young people is expected to reduce public spending (all else being equal). On the other hand, the increasing enrolment rates, longer periods spent in education, and persistently rising (unitary) costs of tertiary education are likely to put upward pressure on total education expenditure.

The methodology used in the Ageing Report is highly stylised and, as such, cannot fully reflect the complexities of Member States' education systems. It has been set out with a view to use harmonised datasets, secure equal treatment across countries, and be consistent with wide labour market developments, particularly on participation rates.

Projections of *total* expenditure on public education require consideration of a number of important methodological issues, namely (i) the definition (or perimeter) of education activities; (ii) that studying can take place on a part-time basis after compulsory education; and (iii) that there are various outlays for public spending on education ([49]).

([47]) Based on the classification of the functions of government (COFOG) data. In the same period, health expenditure represented 7.1% of GDP (and 14.5% of total general government expenditure), old-age (i.e. pension) expenditure represented 10.2% of GDP (and 21% of total general government expenditure), while 'social protection' (also including the 'old-age' (pensions) function) represented 19.3% of GDP (and 39.7% of total general government expenditure).

([48]) Many other factors also have an important bearing on government education expenditure, for example the involvement of the general government in the education system, the duration of mandatory education, progress in enrolment rates in upper secondary and tertiary education, relative wages in the education sector, the average size of classes, and discretionary saving measures to curb expenditure trends.

([49]) Public spending on education includes direct expenditure on educational institutions as well as educational-related public subsidies given to households and administered by educational institutions. Direct expenditure on educational institutions

4.2. METHODOLOGY TO PROJECT TOTAL EXPENDITURE ON PUBLIC EDUCATION

The methodology used in the Ageing Report is based on a 'quasi-demographic' approach, since it relies on both demographic and participation rate projections. The projections rely on the following elements:

– The use of the UOE ([50]) data collection, which covers enrolment rates, staff levels, the labour force status of students (i.e. part time versus full time) ([51]), and detailed data on total public expenditure. Data are disaggregated by single age and international standard classification of education (ISCED) levels ([52]). As in the 2024 Ageing Report, projections are run separately for four ISCED groupings, representing primary education (ISCED 1), lower secondary education (ISCED 2), upper secondary education (ISCED 3 and 4), and tertiary education (ISCED 5 to 8).

– Simplified assumptions on enrolment rates, with enrolment in primary and lower secondary education levels assumed to be compulsory, while enrolment in upper secondary and tertiary education levels depends on labour market outcomes, as changes in participation rates affect enrolment rates (in the opposite direction)([53]).

– Projections of total expenditure on public education rely on two components: (1) the number of students (see Section 4.2.1) and (2) expenditure per student on public education (see Section 4.2.2).

4.2.1. Number of students

Compulsory levels

For the compulsory levels considered (ISCED 1 and 2), enrolment rates per single age are assumed to remain constant at the level observed in the base year of the projections ([54]). The projected number of students enrolled in ISCED levels 1 and 2 is obtained by multiplying for each specific age group, the enrolment rate of the base year by the corresponding population projection.

Non-compulsory levels

Enrolment rates for ISCED groupings 3-4 and 5-8 consider labour market developments according to the following formula (see Annex 10 for a derivation):

$$e_{i,t} = \frac{1 - p_{i,t} - i^*_{i,t}}{1 - \alpha_{i,t}} \tag{4.1}$$

where $e_{i,t}$ is the total enrolment rate (both full and part-time students) for single age cohort *i* in period *t*; $p_{i,t}$ is the participation rate; $\alpha_{i,t}$ is the fraction of part-time students in the total; and $i^*_{i,t}$ is the fraction of inactive individuals minus full-time students over the total population.

Equation (4.1) will be implemented in terms of differences to a base period (*b*):

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takes two main forms: (i) direct purchases by the government of educational resources to be used by educational institutions (e.g. direct payments of teachers' wages by the education ministry); or (ii) payments by the government to educational institutions that have the responsibility for purchasing educational resources themselves (e.g. a block grant to a university) (OECD, 2022).

([50]) UNESCO-UIS/OECD/Eurostat Data Collection on Education Statistics. The current version of classification is ISCED 2011 which replaced ISCED 1997 and was also used in the 2024 Ageing Report (see Annex 9).

([51]) Students are classified between full-time and part-time based on their intended study load within the reference school or academic year. A full-time student is one who is enrolled in an education programme whose intended study load amounts to at least 75% of the normal full-time annual study load. A part-time student is one who is enrolled in an education programme whose intended study load is less than 75% of the normal full-time annual study load.

([52]) However, data are not disaggregated by sex.

([53]) For further information on the organisational structure of secondary education, see Annex 8.

([54]) In particular, the levels of enrolment rates for ISCED 1 and 2 observed in the base year of the projections are derived from historical information (i.e. using the most recent available data). For details, see Annex 10.

$$e_{i,t} - e_{i,b} = -\frac{\overline{\kappa}_{i,b}}{1 - \overline{\alpha}_{i,b}} * \left(p_{i,t} - p_{i,b}\right) \quad (4.2)$$

where

$$0 \leq \overline{\kappa}_{i,b}, \overline{\alpha}_{i,b} \leq 1$$

where $\overline{\kappa}_{i,b}$ is the ratio between full-time students and total inactive individuals; $\overline{\alpha}_{i,b}$ is the fraction of part-time students over the total number of students. These two ratios are assumed to remain constant throughout the projection period.

According to Equation (4.2), an increase in the participation rate leads to a decrease in the enrolment rate ([55]). Enrolment rates per age are then broken down into ISCED levels (3-4 and 5-8) values, based on student shares in the base year.

4.2.2. Expenditure per student and total expenditure on public education

Key data

Expenditure per student on public education, expressed in purchasing power standards (PPS), varies significantly across educational level and country (see Table II.4.2). Higher levels of expenditure are generally found for the ISCED 3-4 and 5-8 levels. However, in some countries, expenditure tends to be higher for primary and lower secondary education (ISCED 1 and 2 levels). This variability reflects a number of factors, such as wages of teachers and non-teaching staff, different class sizes, differences in capital expenditure, as well as particular national circumstances ([56]).

Methodology

The expenditure (per student) on public education can be broken down into four main components: (i) expenditure on staff compensation (i.e. gross wages and salaries of teaching and non-teaching staff); (ii) other current expenditure; (iii) capital expenditure; and (iv) transfers (e.g. scholarships and public subsidies to private education institutions).

On this basis, we can compute the total expenditure on public education (as percentage of GDP). This is

Table II.4.2: **Expenditure per student on public education in PPS - 2022**

	ISCED 1	ISCED 2	ISCED 3-4	ISCED 5-8
BE	9,355	11,560	11,625	16,104
BG	2,963	3,167	2,639	2,867
CZ	5,156	8,690	7,132	8,149
DK	9,797	11,150	8,829	21,479
DE	8,030	9,905	9,947	14,954
EE	6,992	7,639	4,660	9,868
IE	7,691	8,860	9,435	16,258
EL	4,140	4,526	3,453	2,843
ES	6,106	7,262	8,334	8,468
FR	6,731	8,119	9,915	9,739
HR	:	:	4,810	5,767
IT	8,772	7,182	8,111	8,322
CY	9,393	10,476	11,313	5,171
LV	4,639	4,742	6,151	4,722
LT	5,780	5,916	6,374	7,621
LU	16,053	19,396	18,147	36,386
HU	4,344	4,307	4,660	8,925
MT	6,935	10,142	10,197	14,643
NL	9,307	11,353	10,625	15,238
AT	10,284	11,971	12,002	16,281
PL	6,605	6,071	4,534	8,583
PT	6,445	8,661	7,755	5,738
RO	2,212	5,146	4,567	6,731
SI	7,919	8,127	7,689	12,264
SK	6,314	5,331	6,695	10,644
FI	7,786	12,244	7,579	12,540
SE	9,879	9,963	10,999	21,014
NO	12,382	12,580	15,429	24,719
EA	7,582	8,829	8,450	11,259
EU	7,293	8,535	8,081	11,530

Purchasing Power Standards. Based on full-time equivalents (FTE) by educational level and programme orientation.

Source: European Commission, EPC - based on Eurostat (UOE 2022) data. Simple averages for EU and euro area.

([55]) To the extent that individuals entering the labour force are likely to have been previously involved in education activities. The Labour Force Survey (LFS) variable MAINSTAT, which describes the main labour market status, was used to assess the distribution of inactive individuals by age, distinguishing between schooling and other forms of inactivity, such as retirement and domestic tasks.

([56]) For example, smaller EU Member States tend to have a higher share of tertiary students studying abroad. Where these students receive public financial support, this can add to public expenditure on tertiary education.

done across all ISCED levels: ISCED 1, ISCED 2, ISCED 3-4, and ISCED 5-8 ([57]).

$$\frac{\sum_i EDU_t^i}{GDP_t} = \frac{\sum_i \left[W_t^i + O_t^i + K_t^i + R_t^i\right]}{GDP_t} \qquad (4.3)$$

where EDU_t^i is expenditure on education in ISCED level *i* and year *t*, W_t^i is expenditure on staff compensation, O_t^i is other current expenditure, K_t^i is capital expenditure, R_t^i is transfers; and *i* stands for the ISCED groups: 1, 2, 3-4, and 5-8.

In line with past Ageing Reports, the average expenditure of the last two years of available data is used as the starting point (see Annex 9).

To project the expenditure-to-GDP ratio in the baseline, the main assumptions are the following:

– Expenditure per capita grows in line with labour productivity. Per capita values are defined either in terms of education staff or students. Specifically, the average compensation is defined per member of staff ($\frac{W_t^i}{T_t^i}$), while the other three expenditure variables are defined in terms of student ratios ($\frac{O_t^i}{S_t^i}$, $\frac{K_t^i}{S_t^i}$, $\frac{R_t^i}{S_t^i}$), where T_t^i and S_t^i are the number of workers in the education sector and students, respectively. ([58])

– The education staff-to-student ratio will remain constant over the projection period, which implies that staff adjusts instantaneously and fully to demographic changes.

Assuming that per capita variables grow in line with labour productivity is sufficient to derive the following compact general formula for the projection of the expenditure-to-GDP ratio:

$$\frac{\sum_i EDU_t^i}{GDP_t} = \left[\frac{\sum_i W_0^i}{GDP_0} * \overline{IT}_t + \frac{\sum_i \left[O_0^i + K_0^i + R_0^i\right]}{GDP_0} * \overline{IS}_t\right] * \frac{IP_t}{IG_t} + CE_t \qquad (4.4)$$

where IT_t^i, IS_t^i, IP_t^i, and IG_t^i are indices (assuming the value of 1 in the base period) of respectively, staff, students, labour productivity, and GDP ([59]). A bar over an index represents one calculated over all ISCED levels considered ([60]). CE_t is the composition effect, which is usually a small number compared with the total expenditure-to-GDP ratio ([61]).

([57]) It should be stressed that no attempt is made to project total expenditure on education, as ISCED 0 level expenditure (pre-primary and not allocated by level) is not covered by the analysis.

([58]) These modelling assumptions involve considerable simplifications of the determinants of the unit costs of education. A key variable missing is class size. Research suggests that costs tend to change discontinuously with the creation/abolition of classes. Given the difficulty in obtaining data on the relationship between class size and costs, a reasonable approximation may be using student-to-staff ratios.

([59]) An index $IX_t = \frac{X_t}{X_0}$ measures the ratio between the values of variable *X* in the current period *t* and in base period *0*.

([60])

$$\overline{IT}_t = \frac{\sum_i T_t^i}{\sum_i T_0^i} \quad \text{and} \quad \overline{IS}_t = \frac{\sum_i S_t^i}{\sum_i S_0^i}.$$

([61]) The composition effect is given by:

$$CE_t = \left[\frac{\sum_i W_0^i * \left\{IT_t^i - \overline{IT}_t\right\}}{GDP_0} + \frac{\sum_i \left[O_0^i + K_0^i + R_0^i\right] * \left\{IS_t^i - \overline{IS}_t\right\}}{GDP_0}\right] * \frac{IP_t}{IG_t}$$

Equation (4.4) expresses the expenditure-to-GDP ratio as a function of base period ratios, and indexes for staff, students, labour productivity and GDP.

In the baseline, which assumes a constant ratio of staff-to-students (i.e. $IT_t^i = IS_t^i$), equation (4.4) can be further simplified to:

$$\frac{\sum_i EDU_t^i}{GDP_t} = \frac{\sum_i EDU_0^i}{GDP_0} * \frac{\overline{IS}_t * IP_t}{IG_t} + CE_t \qquad (4.5)$$

Equivalently, equation (4.5) can also be written as:

$$\frac{\sum_i EDU_t^i}{GDP_t} = \frac{\sum_i EDU_0^i}{GDP_0} * \frac{\overline{IS}_t}{IE_t} + CE_t \approx \frac{\sum_i EDU_0^i}{GDP_0} * \frac{\overline{IS}_t}{IE_t} \qquad (4.6)$$

where IE_t is the employment index ([62]).

In the baseline, equation (4.6) allows the following straightforward interpretation: projections for the expenditure-to-GDP ratio are obtained by 'inflating' base period values by a students and labour productivity index and by 'deflating' them by a GDP index ([63]). There are two sources for the increase in expenditure (ratios): the (average) number of students and per capita costs that are assumed to grow in line with labour productivity, conversely GDP growth 'deflates' expenditure ratios.

4.3. SENSITIVITY ANALYSIS

In addition to the baseline described above, a set of sensitivity tests is run.

– *High enrolment rates* – as in the 2024 Ageing Report, a scenario is conducted, assuming a gradual upward convergence of enrolment rates (to be completed by 2045). In particular, enrolment rates in ISCED levels 3-4 and 5-8 are assumed to rise towards the average of the three best performers in the EU. Such a scenario implicitly assumes a policy change supporting such convergence.

– *Additional sensitivity tests:* as in the 2024 Ageing Report, and as done for the other expenditure items, a range of uniform shocks to the baseline projection is applied across different scenarios (e.g. higher/lower productivity, higher/lower migration, lower fertility).

([62]) The approximation assumes that CE_t is a small number.

([63]) The discrepancy being given by the composition effect (CE_t).

ANNEX 1

Cohort Simulation Model

Overall approach

The Cohort Simulation Model (CSM) calculates entry rates to and exit rates from the labour market by gender and cohort. The methodology was initially developed by the OECD ([64]), but its use by the Commission for Ageing Report purposes is based on Carone (2005), with the particular feature of single ages instead of the average of 5-year age groups.

The dynamic cohort approach is based on the estimates of labour market exit and entry rates of a 'synthetic' generation/cohort. The cohort is 'synthetic' because, due to a lack of individual longitudinal data on labour market transitions, the same individual cannot be followed over time. Instead, it is assumed that those individuals aged x+1 at year t+1 are representative of the same generation observed in the previous year (aged x at time t). Due to the lack of specific information on each individual's behaviour, this assumption ignores inflows and outflows from the labour market that cancel out ([65]).

Participation rate projections are produced by applying the average entry and exit rates calculated over the period 2016-2025 by gender and single age to the period 2026-2080. Specifically, average entry rates observed for the period 2016-2025 are kept constant over the entire projection period. For example, average entry rates for persons aged x, calculated on the basis of data for the period 2015-2025 (with x varying between 15 and 74 years of age), are applied to persons aged x over the projection period 2026-2080 to calculate future participation rates. This way, the CSM captures 'cohort effects', namely the one resulting from the stronger attachment of women of the youngest cohorts to the labour market. Before entry and exit rates are computed, the observed participation rates are winsorised at two standard deviations around the age-specific mean, to limit the influence of outliers in the underlying LFS data. Missing observations are filled by linear interpolation.

The CSM is also able to incorporate a broad typology of pension reforms, such as increases in the statutory retirement age, the convergence of lower statutory retirement ages for women to those for men, the linking of the statutory retirement age to changes in life expectancy, the tightening of conditions for early retirement, and changes in incentives affecting the retirement decision. The expected impact of pension reforms is incorporated in the labour force projections by appropriately changing average labour market exit probabilities for people aged 51-74.

The calculation of entry rates

Entry rates into the labour market from inactivity are calculated as follows. The calculation of the number of people that enter the labour market (coming from inactivity) takes into account the size of each gender/age group. It can be expressed as:

$$NLF_x^{t+1} = (WAP_{max} - LF_x^t) - (WAP_{max} - LF_{x+1}^{t+1})$$

$$\text{with } LF_x^t + NLF_{x+1}^{t+1} \leq WAP_{max}$$

where *NLF* is the number of people expected to become active between ages x and x+1; WAP_{max} is the maximum working age population that can potentially enter the labour force, which is usually slightly lower than the overall civilian population of working age, due for example to illness or disability; and *LF* is the number of active people (thus in the labour force) aged x in year t and aged x+1 in year t+1.

By multiplying and dividing by the population aged x at time t, which is supposed to be the same as the population aged x+1 at time t+1, the following equation is obtained:

([64]) See Burniaux et al. (2003) and Scherer (2002), which developed a dynamic version of the methodology in Latulippe (1996).

([65]) For example, this means that if in year t there are 100 persons aged x in the labour force and in the following year, thus aged x+1, these same individuals leave the labour force (for whatever reason, e.g. discouragement, death or emigration), but they are replaced by 100 other individuals aged x+1, previously not part of the labour force, no change in the size of our 'synthetic' cohort is observed. As a consequence, the calculated net rates of exit and entry are equal to zero, while the actual (gross) values are 100%.

$$NLF_x^{t+1} = [(PR_{max} - PR_x^t) - (PR_{max} - PR_{x+1}^{t+1})] \times POP_x^t$$

where PR_{max} is the upper limit to the participation rate, i.e. 100% for both male and female ([66]). Thus, the rate of entry R_{en} can be calculated by dividing the number of people expected to become active by the number of people outside the labour force at time t, that is:

$$R_{en} = \frac{NLF_x^{t+1}}{WAP_{max} - LF_x^t} = [(PR_{max} - PR_x^t) - (PR_{max} - PR_{x+1}^{t+1})] \times \frac{POP_x^t}{WAP_{max} - LF_x^t}$$

which, taking into account that $PR_x^t = \frac{LF_x^t}{POP_x^t}$ and $PR_{max} = \frac{WAP_{max}{}_x^t}{POP_x^t}$, can be reformulated as:

$$R_{en_{x+1}} = [(PR_{max} - PR_x^t) - (PR_{max} - PR_{x+1}^{t+1})] \times \frac{1}{PR_{max} - PR_x^t}$$

or $$R_{en_{x+1}} = \left[1 - \frac{(PR_{max} - PR_{x+1}^{t+1})}{PR_{max} - PR_x^t}\right]$$

or $$R_{en_{x+1}} = \frac{(PR_{x+1}^{t+1} - PR_x^t)}{(1 - PR_x^t)}$$

After re-arranging, the analytical formulation used for projecting participation rates based on these entry rates is obtained:

$$PR_{x+1}^{t+1} = PR_x^t + R_{en_{x+1}} \times (PR_{max} - PR_x^t)$$

In this projection step, PR_{max} is set at 0.99, so that projected participation rates approach but never reach 99%. Thus, projections of participation rates for each single-year cohort x+1 can be calculated by applying the estimated entry rates over the projection period (t = 2026-2080). In practice, the average entry rate applied for age x+1 over the projection period is calculated as the ratio of ten-year sums, i.e. the cumulated net change in the cohort participation rate over 2015-2025 divided by the cumulated entry potential, based on the participation rates over the same period:

$$\overline{R}_{en,x+1} = \frac{\sum_{t=2016}^{2025}(PR_{x+1}^t - PR_x^{t-1})}{\sum_{t=2016}^{2025}(PR_{max} - PR_x^{t-1})} \geq 0$$

Annual changes of opposite sign are netted out rather than discarded: whether an age is treated as an entry age or as an exit age over the projection period is determined by the sign of the cumulated change in the numerator, so that the non-negativity condition applies to the average rate rather than to each individual year. This approach is equivalent to a weighted average of the annual entry rates, with the size of the pool of potential entrants in each year as weights, or to applying the single-year formula above to participation rates averaged over the observation period. It is this average rate that enters the projection formula above.

In the projections, participation rates for ages 15 to 19 are held constant at their base-year level, while rates for ages 20-29 are not allowed to fall below their value in the preceding year. From age 51 onwards, only exit rates are applied: positive average entry rates observed at these ages are disregarded, so that the participation of older workers is fully governed by the (reform-adjusted) exit probabilities.

The calculation of exit rates

In the same way, when participation rates for two adjacent single-year age groups are falling on average over the observation period, an *exit rate from the labour market* (the net reduction in the labour force relative to the number of people who were initially in the labour force in the same cohort the year before) can be calculated as follows. The number of persons that leave the labour market at time t+1 is equivalent to:

$$OP_x^{t+1} = LF_x^t - LF_{x+1}^{t+1}$$

([66]) Burniaux et al. (2003) use as maximum values for the male/female participation rates 0.99/0.95.

where *OP* is the number of people expected to be outside the labour force between age x and x+1, and *LF* is the number of active people (thus in the labour force) aged x in year t and aged x+1 in year t+1.

By multiplying and dividing by the population aged x at time t, which is supposed to remain the same as the population aged x+1 at time t+1, one gets:

$$OP_x^{t+1} = (PR_x^t - PR_{x+1}^{t+1}) \times POP_x^t$$

where *PR* are the participation rates.

Thus, the (conditional) rate of exit, R_{ex}, can be calculated by dividing the number of people that leave the labour force at time t+1 by the number of people active at time t. That is,

$$R_{ex} = \frac{OP_x^{t+1}}{LF_x^t} = (PR_x^t - PR_{x+1}^{t+1}) \times \frac{POP_x^t}{LF_x^t} = 1 - \frac{PR_{x+1}^{t+1}}{PR_x^t}$$

As for entries, the average exit rate applied in the projections is calculated as the ratio of ten-year sums, with the cumulated participation rate of the preceding age as the denominator:

$$\overline{R}_{ex,x+1} = -\frac{\sum_{t=2016}^{2025}(PR_{x+1}^t - PR_x^{t-1})}{\sum_{t=2016}^{2025} PR_x^{t-1}} \geq 0$$

As a consequence, R_{ex} can also be used to project participation rates of older workers as:

$$PR_{x+1}^{t+1} = \left(1 - R_{ex_{x+1}}\right) \times PR_x^t$$

or $$PR_{x+n}^{t+n} = (1 - R_{ex_{x+1}})(1 - R_{ex_{x+2}})(1 - R_{ex_{x+3}}) \ldots \left(1 - R_{ex_{x+n-1}}\right) \times PR_x^t$$

Projecting the labour force

Participation rates by single age and gender are projected in accordance with the above approach. Aggregate values for participation rates are a weighted average of participation rates by single age and gender using population shares as weights. For example, the average participation rate *PR* for age group $\underline{a}$ (lower age) to $\overline{a}$ (upper age) in period *t* is calculated as:

$$PR\left(\underline{a}, \overline{a}, t\right) = \sum_{a=\underline{a}}^{\overline{a}} \sum_{g=m,f} PR_{a,g}^t \times p_{a,g}^t$$

where *a* is the age index, *g* is the gender index, $PR_{a,g}^t$ is the participation rate for single age *a* and gender *g* in period *t*, *pop* is the population; and *p* is the structure of the population:

$$p_{a,g}^t = \frac{pop_{a,g}^t}{\sum_{a=\underline{a}}^{\overline{a}} \sum_{g=m,f} pop_{a,g}^t}$$

The labour force ($LF_{a,g}^t$) or labour supply (for each single age and gender combination) is then calculated by multiplying the age/gender labour force participation rate with the corresponding population projection:

$$LF_{a,g}^t = PR_{a,g}^t \times pop_{a,g}^t$$

The total labour supply for age group $\underline{a}$ (lower age) to $\overline{a}$ (upper age) in period *t* is then calculated as follows:

$$LF\left(\underline{a}, \overline{a}, t\right) = \sum_{a=\underline{a}}^{\overline{a}} \sum_{g=m,f} LF_{a,g}^t = \sum_{a=\underline{a}}^{\overline{a}} \sum_{g=m,f} PR_{a,g}^t \times pop_{a,g}^t$$

Projecting unemployment, employment and hours worked

Beyond participation rates, the CSM also projects unemployment, employment and hours worked. Age- and gender-specific unemployment rates are kept at their base-year structure and rescaled each year by a common factor, so that the aggregate unemployment rate (15-74) follows the agreed NAWRU projection (see Box I.2.3). Employment is obtained by applying the resulting unemployment rates to the projected labour force. Total hours worked are derived by multiplying employment by average annual hours per person employed, held constant at their base-year level, including the full-time/part-time composition of employment.

Estimating the average exit age from the labour market

The CSM allows estimating the 'average exit age' from the labour force, which can be used as an approximation for the effective retirement age. The conditional probability for each person to stay in the labour force at age *a* in year t (conditional on staying in the labour force in year t-1), can be calculated by using the observed activity rates *PR* as follows:

$$Probability\ to\ stay = cProb_{a,t}^{stay} = \frac{PR_a^t}{PR_{a-1}^{t-1}}\ with\ 0 \leq cProb_{a,t}^{stay} \leq 1$$

Thus, at time *t*, the conditional probability for each person to exit at age *a* ($cProb_{a,t}^{ex}$) is equal to:

$$Probability\ of\ exit = cProb_{a,t}^{ex} = 1 - \frac{PR_a^t}{PR_{a-1}^{t-1}} = 1 - cProb_{a,t}^{stay}\ with\ 0 \leq cProb_{a,t}^{ex} \leq 1$$

Assuming that nobody retires before minimum age *m*, the (unconditional) probability that any person will still be in the labour force (that is the probability of not retiring before a given age *a*) can be calculated as the product of all the conditional probabilities to stay in the labour force from age *m* to age *a-1*:

$$Probability\ of\ not\ retiring\ before\ age\ a = Prob_{a,t}^{noret} = \prod_{i=m}^{a-1} cProb_i^{stay}$$

Thus, the probability of retiring at age *a* can be calculated as the product of the unconditional probability of not retiring from age *m* to *a-1* and the (conditional) exit probability:

$$Probability\ of\ retiring\ at\ age\ a = Prob_{a,t}^{ret} = Prob_{a,t}^{noret} \times cProb_{a,t}^{ex}$$

By assuming that everybody will be retired at a given age *M* (e.g. *M* = 74), the sum of the probabilities of retiring between the minimum age *m* and the maximum age *M* is equal to 1:

$$\sum_{a=m}^{M} Prob_a^{ret} = 1$$

The average exit age from the labour market is then calculated as the weighted sum of the retirement ages (between the minimum and the maximum age of retirement, assumed 51 and 74 respectively), where the weights are the probabilities of retiring at each age *a*:

$$Average\ exit\ age = aea = \sum_{a=m}^{M} Prob_a^{ret} \times a$$

ANNEX 2

EUCAM

The *EU's commonly agreed methodology* (EUCAM) is based on a standard production function, in which output depends on total factor productivity (TFP), capital (K) and labour (L). It assumes that output is produced according to a Cobb-Douglas technology with constant returns to scale.

Potential output (Y_{it}^*) results from the same production technology, using potential (or trend) equivalents of the input series ([67]). Concretely, the following equation is solved up to T+55:

$$Y_{it}^* = {L_{it}^*}^{\alpha} \cdot K_{it}^{(1-\alpha)} \cdot TFP_{it}^*$$

where L_{it}^* is trend labour, $K_{it}$is capital and TFP_{it}^* is trend TFP. Indices i and t respectively stand for country and time.

1. Trend labour

The labour input is given by the potential total hours worked of the population aged between 15 and 74 years in the economy. It depends on four input factors:

$$L_{it}^* = \left(WAP_{it} \cdot PR_{it}^* \cdot (1 - NAWRU_{it})\right) \cdot HW_{it}^*$$

a) Working age population (WAP_{it}) projections are based on Eurostat long-term population projections (see Chapter 1).

b) Trend participation rates (PR_{it}^*) are extracted from historical series and extended (up to T+5) through a HP-smoothed ARIMA process of the historical actual series. Then, the growth rates of trend participation rates converge linearly, in 4 years, to those resulting from the cohort simulation model (CSM – see Chapter 2).

c) Trend hours worked per employee (HW_{it}^*) are extracted from historical series and extended (up to T+5) through a HP-smoothed ARIMA process of the historical actual series. Then, the trend series are projected using a simple stabilisation rule:

$$HW_{it}^* = 1.5 \cdot HW_{it-1}^* - 0.5 \cdot HW_{it-2}^*$$

d) Structural unemployment ($NAWRU_{it}$) is estimated (up to T+2) through a trend-cycle decomposition using a multivariate Kalman filter model that reflects the expected dynamics of the Phillips Curve (i.e. through wage bargaining). Between T+3 and T+9, hysteresis-related cyclical fluctuations in the NAWRU are eliminated and the series progressively converges to country-specific structural anchors. Those are estimated, and projected up to T+55, through a panel regression (that includes as regressors the following variables: union density, tax wedge, unemployment benefits replacement rate, demographics/education, and a set of macro control variables, i.e. TFP, real interest rate, employment in the construction sector).

2. Trend TFP

Total factor productivity is computed as the Solow residual:

$$TFP_{it} = \frac{Y_{it}}{L_{it}^{\alpha} \cdot K_{it}^{(1-\alpha)}}$$

To compute trend TFP, a trend-cycle decomposition is applied using a Kalman filter. The same Kalman filter is used to project trend TFP up to T+10, implying a mean reversion. TFP growth is, however, capped (i.e. a ceiling is imposed) to the US TFP growth for the Member States that joined the EU before

([67]) Arévalo et al. (2026) The EU's Commonly Agreed Production Function Methodology for Estimating Potential Output (EUCAM). European Economy. Discussion Paper 256.

2004 ([68]). From T+10 onward, and consistently with the evidence of convergence clubs within the EU, the growth rate of TFP of all Member States is assumed to converge asymptotically to the EU average growth expected in year T+10, but at differentiated speeds. Specifically, convergence is assumed to be complete by T+30 for countries whose TFP growth in T+10 is below the EU average, and by T+55 for countries whose TFP growth in T+10 is above it.

3. Capital

The capital stock evolves according to the standard law of motion of capital:

$$K_{it} = (1 - \delta) \cdot K_{it-1} + I_{it}$$

a) Depreciation rate (δ) is fixed to its last forecast value (i.e. in T+2).

b) Investment (I_{it}) is jointly computed with K_{it} and $YPOT_{it}$ solving the following system (together with the equations of the law of motion of capital and the production function technology):

$$I_{it} = w_t \cdot I_{1it} + (1 - w_t) \cdot I_{2it}$$

$$I_{1it} = \left(ratio\,\frac{I}{Y^*}\right)_{it} \cdot Y^*_{it}$$

$$I_{2it} = \left(\frac{Y^*_{it}}{Y^*_{it-1}} - 1 + \delta\right) \cdot K_{it-1}$$

Where w_t is a weight factor that indicates whether investment is dominated by the *investment rule* (I_{1it}) or by the *capital rule* (I_{2it}). For 13 Member States ([69]), w_t is always equal to 1. For the other Member States, w_t starts with a value of 1 but, as from T+5, it decreases by 0.1 every year to reach 0 from T+15 onwards.

Note that the $ratio\,\frac{I}{Y^*}$ is computed up to year T+2 once the other input factors (L^*_{it} and TFP^*_{it}) are available and is extended until the end of the projection using the best autoregressive process for the series.

4. Output gap

Finally, the actual GDP growth series are generated by linking the short-term forecast to the medium-term path of potential GDP through a gradual elimination of the output gap.

$$Y_{it} = Y^*_{it} \cdot (1 + YGAP_{it})$$

Up to T+2, actual output follows observed data and the Commission forecast, which differ from potential because of cyclical conditions. Each year as of T+3, $YGAP_{it}$ decreases by 1/3rd of the output gap in T+2 (i.e. $YGAP_{iT+3} = 2/3 \cdot YGAP_{iT+2}$). By T+5 the gap is closed (i.e. $YGAP_{iT+5} = 0$) and actual GDP coincides with potential GDP.

([68]) Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland and Sweden. In the current projections, the ceiling only affects Ireland.

([69]) Bulgaria, Czechia, Estonia, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia.

ANNEX 3

Pension systems overview

Table II.A3.1: **Pension schemes in EU Member States and projection coverage**

	Public pensions[3]						Private pensions		
	scheme type	minimum pension[4]	old-age pension	early retirement pension	disability pension	survivor pension	occupational pension scheme	mandatory private individual	voluntary private individual
BE	DB	MT - SA	ER	ER	ER (self-empl: FR)	ER	M* priv[8] V* self-emp	X	yes*
BG	DB	MT - SA	ER	ER	ER	ER	V*	quasi M*	yes*
CZ	flat rate + DB	FR & ER	ER	ER	ER	ER	X	X	yes*
DK	flat rate + DB	FR & MT suppl.	FR & MT suppl.	V	FR	FR	quasi M	X	yes
DE	PS	MT - SA*	ER	ER	ER	ER	V*	X	yes*
EE	flat rate + PS	MT - SA	ER	ER	ER	ER	V*	quasi M	yes*
IE	flat rate + DB	MT - FR & SA	FR	X	FR - MT	FR - MT	M pub quasi M* priv	X	yes*
EL[1]	flat rate + DB + NDC	MT - FR	FR - ER	FR - ER	FR - ER	FR - ER	V*	yes	yes*
ES	DB	MT	ER	ER	ER	ER	V	X	yes
FR[2]	DB + PS	MT - SA	ER	ER	ER	ER	V*	X	yes*
HR	PS	ER	ER	ER	ER	ER	X	yes	yes*
IT	NDC	MT - SA	ER	ER	ER	ER	V*	X	yes*
CY	PS	MT & ER	ER	ER	ER	ER	M* pub V* priv	X	yes*
LV	NDC	FR - SA	ER	ER	ER	ER	X	yes	yes*
LT	flat rate + PS	SA	ER	ER	ER	ER	X	X[10]	yes*
LU	DB	FR[5]	ER	ER	ER	ER	V*	X	yes*
HU	DB	MT - SA[6]	ER	ER	ER	ER	V*	X	yes*
MT	flat rate + DB	MT - SA	FR & ER	FR & ER	FR & ER	FR & ER	V*	X	yes*
NL	flat rate + DB	SA	FR	X	ER	FR	M	X	yes*
AT	DB	MT - SA	ER	ER	ER	ER	V*	X	yes*
PL	NDC	ER	ER	ER	ER	ER	V*	X	yes*
PT	DB	MT - SA[7]	ER	ER	ER	ER	quasi M[9]	X	yes*
RO	PS	SA	ER	ER	ER	ER	X	yes	yes
SI	DB	MT - SA	ER	ER	ER	ER	V*	X	yes*
SK	PS	MT - SA	ER	ER	ER	ER	X	quasi M	yes*
FI	DB	MT	ER	ER	ER	ER	V*	X	yes*
SE	NDC	MT	ER	ER	ER	ER	quasi M	yes	yes
NO	NDC	FR	ER	ER	ER	X	M*	X	yes*

(1) The public supplementary pension fund is NDC since 2015. Since 2022, the supplementary pensions of new labour market entrants are covered by a funded DC scheme, TEKA. It is a public-law entity. Its treatment as a mandatory private individual scheme in this exercise refers to the projection classification, not to its legal status.
(2) Point system refers to the complementary ARRCO-AGIRC schemes.
(3) Public pension expenditure includes all public expenditure on pensions and equivalent cash benefits granted for a long period.
(4) Minimum pensions correspond to minimum pensions and other social allowances for older people not included elsewhere.
(5) The minimum pension constitutes an integral part of the pension, guaranteed for members that have contributed at least 20 years. It is included in the projections. Elder people who do not qualify for a minimum pension can receive the means-tested social inclusion income, which is not included in the projections.
(6) Aside from the old-age allowance, which is not part of the pension system, there is an earnings-related minimum pension under the state pension system. Both are included in the projections.
(7) Includes all pensions of the non-earning-related scheme such as old-age, disability and survivor pensions and the social supplement.
(8) Participation in an occupational scheme is mandatory for employees if their company is subject to a collective agreement that provides for a second pillar.
(9) Occupational pension schemes established under collective bargaining agreements are mandatory for employers, with the possibility to opt-out for employees. Other schemes are voluntary. In terms of assets under management, the former schemes account for the largest share.
(10) Since 1 January 2026, automatic enrolment into the individual scheme was abolished. In addition, a two-year transitional window (until end-2027), allows existing participants to withdraw from the scheme without having to meet any additional conditions.

DB defined benefit
PS point system
NDC notional defined contribution
MT means-tested
FR flat-rate
ER earnings-related
SA social allowance/assistance
X does not exist
V voluntary participation in the scheme
M mandatory participation in the scheme
* not covered in the projections

Source: European Commission, EPC.

Table II.A3.2: **Statutory and early retirement ages**

	Statutory retirement age (early retirement age)								Incentives**	
	MALE				FEMALE					
	2025	2030	2055	2080	2025	2030	2055	2080	penalty	bonus
BE	66 (63)	67 (63)	67 (63)	67 (63)	66 (63)	67 (63)	67 (63)	67 (63)	X	X
BG	64.7 (63.7)	65 (64)	65 (64)	65 (64)	62.3 (61.3)	63.3 (62.3)	65 (64)	65 (64)	X	X
CZ	64.3 (61.3)	65 (62)	67 (64)	67 (64)	63.2 (60.2)	64.9 (61.9)	67 (64)	67 (64)	X	X
DK*	67 (64)	68 (65)	71.5 (68.5)	74 (71)	67 (64)	68 (65)	71.5 (68.5)	74 (71)		
DE	66.1 (63)	66.9 (63)	67 (63)	67 (63)	66.1 (63)	66.9 (63)	67 (63)	67 (63)	X	X
EE*	64.8 (59.8)	65.3 (60.3)	68 (63)	70.6 (65.6)	64.8 (59.8)	65.3 (60.3)	68 (63)	70.6 (65.6)	X	X
IE	66 (66)	66 (66)	66 (66)	66 (66)	66 (66)	66 (66)	66 (66)	66 (66)		
EL*	67 (62)	68 (63)	70 (65)	72 (67)	67 (62)	68 (63)	70 (65)	72 (67)	X	
ES	66.7 (64.7)	67 (65)	67 (65)	67 (65)	66.7 (64.7)	67 (65)	67 (65)	67 (65)	X	X
FR	67 (62.6)	67 (63.6)	67 (64)	67 (64)	67 (62.6)	67 (63.6)	67 (64)	67 (64)	X	X
HR	65 (60)	65 (60)	65 (60)	65 (60)	63.8 (58.8)	65 (60)	65 (60)	65 (60)	X	X
IT*	67 (64)	67.5 (64.5)	69.6 (66.6)	71.6 (68.6)	67 (64)	67.5 (64.5)	69.6 (66.6)	71.6 (68.6)		
CY*	65 (63)	66.1 (64.1)	68 (66)	70.1 (68.1)	65 (63)	66.1 (64.1)	68 (66)	70.1 (68.1)	X	X
LV	65 (63)	65 (63)	65 (63)	65 (63)	65 (63)	65 (63)	65 (63)	65 (63)		
LT	64.8 (59.8)	65 (60)	65 (60)	65 (60)	64.7 (59.7)	65 (60)	65 (60)	65 (60)	X	X
LU	65 (57)	65 (57)	65 (57)	65 (57)	65 (57)	65 (57)	65 (57)	65 (57)		
HU	65 (65)	65 (65)	65 (65)	65 (65)	65 (65)	65 (65)	65 (65)	65 (65)		X
MT	64 (61)	65 (61)	65 (61)	65 (61)	64 (61)	65 (61)	65 (61)	65 (61)		X
NL*	67 (67)	67.3 (67.3)	68 (68)	69.8 (69.8)	67 (67)	67.3 (67.3)	68 (68)	69.8 (69.8)		
AT	65 (60)	65 (60)	65 (60)	65 (60)	61 (60)	63.5 (60)	65 (60)	65 (60)	X	X
PL	65 (65)	65 (65)	65 (65)	65 (65)	60 (60)	60 (60)	60 (60)	60 (60)		
PT*	66.6 (60)	67 (60)	68.3 (60)	69.7 (60)	66.6 (60)	67 (60)	68.3 (60)	69.7 (60)	X	X
RO*	65 (60)	65 (60)	65.9 (60.9)	67.5 (62.5)	62.4 (57.4)	63 (58)	65.9 (60.9)	67.5 (62.5)	X	
SI	65 (60)	65.8 (60.8)	67 (62)	67 (62)	65 (60)	65.8 (60.8)	67 (62)	67 (62)	X	X
SK*	63.2 (61.2)	64 (62)	66.3 (64.3)	68.9 (66.9)	62.2 (60.2)	63 (61)	65.3 (63.3)	67.9 (65.9)	X	X
FI*	64.8 (61)	65 (62)	66.7 (63.7)	68.3 (65.3)	64.8 (61)	65 (62)	66.7 (63.7)	68.3 (65.3)	X	X
SE*	66 (63)	67 (64)	68 (65)	70 (67)	66 (63)	67 (64)	68 (65)	70 (67)		
NO*	67 (62)	67 (62)	68.1 (63.1)	69.5 (64.5)	67 (62)	67 (62)	68.1 (63.1)	69.5 (64.5)		

CZ – Statutory retirement age depends on the number of children. Values for women with two children are reported.
DK – Increase in the retirement age is subject to a Parliamentary decision. Increases for 2030, 2035 and 2040 have been voted.
ES – People with at least 38.5 contributory years have a statutory retirement age of 65 and an early retirement age of 63.
HU – Women can retire regardless of their age if they have accumulated at least 40 eligible years.
IT – The minimum age for early retirement under the NDC system is reported in brackets (a minimum pension amount of 3 times the old-age allowance is required - 3.2 times as of 2030, lower thresholds apply to women with children - in addition to the minimum of 20 years of contribution). Regardless of age, women can retire after a working life of 41 years and 10 months, men after 42 years and 10 months. All career and contribution requirements are indexed to longevity.
PT – Since 2019, early retirement is possible from the age of 60 with 40 contributory years. For each year the contributory career exceeds 40 years, the statutory retirement age is reduced by 4 months.
SK – The retirement age for women depends on the number of children; figures assume 2 children.
FI – The statutory retirement age corresponds to the lowest old-age retirement age of the earnings-related pension system, which reached 65 in 2026. Early retirement ages are for the partial old-age retirement (25% or 50%), which is possible 3 years in advance.
SE – The retirement age is flexible as of 64 years since 2026 without an upper limit and will increase in line with life expectancy at 65 years. Under the Employment Protection Act, an employee is entitled to stay in employment until the age of 69 (2026).
NO – Retirement is flexible as of the age of 62, linked to life expectancy as of 2031.

* Countries where the statutory retirement age is legislated to increase in line with life expectancy. Retirement ages are estimated on the basis of the national adjustment mechanism and the life expectancy projections from EUROPOP2025.
** Actuarial equivalence is not considered as a penalty/bonus.

Source: European Commission, EPC.

Table II.A3.3: **Main indexation and valorisation parameters for old-age public pensions**

	Pensionable earnings reference	General valorisation variable(s)	General indexation variable(s)
BE	Full career	Prices	Prices and living standard
BG	Full career	Wages	Prices and wages
CZ	Full career	Wages	Prices and wages
DK	Years of residence	Not applicable	Wages
DE	Full career	Wages	Wages
EE	Full career	Prices and social taxes	Prices and social taxes
IE	Flat rate	Not applicable	No fixed rule
EL	Full career	Prices and wages	Prices and GDP (max 100% prices)
ES	324 best months in last 348	Prices	Prices
FR	25 best years (CNAVTS)	Prices	Prices
HR	Full career	Prices and wages	Prices and wages
IT	Full career	GDP	Prices
CY	Full career	Wages	Prices and wages
LV	Full career	Contribution wage sum index	Prices and wage sum
LT	Full career	Wage sum	Wage sum
LU	Full career	Prices and wages	Prices and wages
HU	Full career	Wages	Prices
MT	10 best of last 41 years	Cost of living	Prices and wages
NL	Years of residence	Not applicable	Wages
AT	Full career	Wages	Prices
PL	Full career	NDC 1st: Wages, NDC 2nd: GDP	Prices and wages
PT	Full career up to a limit of 40y	Prices and wages	Prices and GDP
RO	Full career	Prices and wages	Prices and wages
SI	Best 40y (minus worst 5y)	Wages	Prices and wages
SK	Full career	Wages	Prices
FI	Full career	Prices and wages	Prices and wages
SE	Full career	Wages	Wages
NO	Full career	Prices and wages	Prices and wages

BG – Pensionable earnings reference is full career back to 2000.
CZ – Pensionable earnings reference is full career back to 1986.
IE – The projections assume benefits are indexed to nominal wage growth.
EL – Pensionable earnings reference is full career, taking into account insurable wages/income from 2002 onwards.
FR – The pensionable earnings reference is full career in AGIRC-ARRCO; CNAVTS: Caisse nationale de l'assurance vieillesse des travailleurs salariés.
IT – Up to four times the minimum pension, indexation is 100% of price inflation, between four and five times the minimum pension it is 90%, and above five times the minimum pension it is 75%.
LT – Pensionable earnings reference is full career back to 1994. Pensions are indexed to the seven-year average of the wage sum growth over the current, previous three and next three years. The index is applied in case of a balanced budget of the Pension Social Security System in two consecutive years and contingent on positive GDP or wage sum growth.
LU – Indexation rule is real wages and cost of living if sufficient financial resources are available, otherwise real wage indexation is only applied at a rate between 0% and 50%.
MT – Pensionable earnings reference rule applies to people born as of 1969.
PT – Pensionable earnings reference is full career as of 2002. Price and wage valorisation applies to earnings recorded from 2002 onwards.
SE – Indexation rule is wage growth minus 1.6 pps.

Source: European Commission, EPC.

Table II.A3.4: **Automatic adjustment mechanisms**

	Automatic balancing mechanism	Sustainability factor (benefit linked to life expectancy)[6]	Retirement age linked to life expectancy
DK[1]			X
DE[2]	X		
EE			X
EL[3]	X		X
IT		X	X
CY			X
LV		X	
LT	X		
LU	X		
NL[4]			X
PL		X	
PT[4]		X	X
RO[5]			X
SK			X
FI[4]		X	X
SE[4]	X	X	X
NO[4]		X	X

(1) Subject to Parliamentary decision.
(2) Effectively suspended until 2031.
(3) An automatic balancing mechanism is applied in the auxiliary pension system.
(4) The legal retirement age is linked to two thirds of the increase in life expectancy. In the case of NO, the detailed rules are subject to a final decision by Parliament. In the case of FI, the time spent working in relation to the time spent in retirement remains at the 2025 level, which in the projections corresponds to an approximately 75% link.
(5) The legal retirement age is linked to half of the increase in life expectancy.
(6) In NDC systems (IT, LV, PL, SE & NO), the benefit is linked to changes in life expectancy through the annuity factor.

Source: European Commission, EPC.

Table II.A3.5: **Contributions to the public pension system**

	Contribution rate: employer	Contribution rate: employee	State contributions		Contribution rate: self-employed
			Contribution rate	Other provisions	
BE	24.92% (for all Social Security schemes)	13.07% (overall Social Security contribution)	-	Social security spending is also funded by State subsidies (around 19% of total revenue) and alternative funding (around 18%), mainly VAT	In 2026, 20.5% for revenues up to EUR 75,025 and 14.16% for revenues between EUR 75,025 and EUR 110,562.
BG	8.22%	6.58%	-	-	14.8% of declared covered earnings in the preceding year
CZ	21.5%	6.5%	-	-	28% (contribution base amounts to 55% of profit)
DK*	-	-	-	-	-
DE	9.3%	9.3%	-	State subsidies with annual indexation	18.6%
EE	20% (if not participating in 2nd pillar); 16% (if participating in 2nd pillar)	-	-	-	20%
IE	Between 0.85% and 11.40% as of October 2026. Rate increases are legislated until 2028.	Between 0% and 4.35% as of October 2026. Rate increases are legislated until 2028.	-	Social Insurance Fund: funds not required to meet current Social Insurance expenditure requirements are transferred to an investment account and can be used in future years. Social Assistance Benefits: Means-tested benefits that are financed through general taxation.	4.35% as of October 2026, with a minimum annual contribution of EUR 650. Annual contribution rate increases are legislated until 2028.
EL	Main pensions 13.33%; auxiliary pensions 3%	Main pensions 6.67%; auxiliary pensions 3%	-	The national pension is financed directly from the State budget.	Since 2020, contributions have generally been determined by fixed insurance categories rather than declared income. The corresponding imputed pensionable earnings base is derived from the pension contribution using a 20% rate.
ES	Private sector: 23.6% + contribution to Intergenerational Equity Mechanism (0.67% in 2025, rising to 1% in 2029)	Private sector: 4.7% + contribution to Intergenerational Equity Mechanism (0.13% in 2025, rising to 0.2% in 2029)	-	Pension Reserve Fund held EUR 14.1bn in 2025 (primarily Spanish public debt). Starting in 2033, annual funding gaps may be covered through withdrawals from the Fund, with a limit of 0.1% of GDP (rising to 0.5% of GDP by 2053).	28.3% + contribution to Intergenerational Equity Mechanism (0.8% in 2025, rising to 1.2% in 2029)
FR	Private sector (CNAV): 10.66% up to the Social Security Ceiling (SSC) and 2.11% above	Private sector (CNAV): 7.3% up to the social security ceiling (SSC) and 0.4% above	-	-	17.75% up to the SSC and 0.6% above.
HR	4.86% to 17.58% for employees in arduous and hazardous occupations	20%; 15% when participating in both public PAYG scheme and mandatory fully-funded DC scheme	-	-	20%; 15% when participating in both public PAYG scheme and mandatory fully-funded DC scheme
IT	23.81%	9.19%	-	-	24% (for craftsmen and shopkeepers, the minimum annual contribution is EUR 4,521 and EUR 4,612, respectively, in 2026).
CY	8.8%	8.8%	5.2%	-	16.6% of insurable income
LV	Total contribution rate for old-age pension capital (employer and employee): 20% (if no participant of 2nd tier) or 16% (if participant of 2nd tier), with 4% contribution to the 2nd tier	-	-	-	Contribution rate for old-age pension capital: 20% (if no participant of 2nd tier) or 16% (if participant of 2nd tier) with 4% contribution to the 2nd tier.
LT	-	8.72%	-	State provides funds from the national budget to cover the general pension part of the public pension scheme	8.72% - based on 50% of declared earnings (90% when engaged in an individual activity)
LU	8.5%	8.5%	8.5%	Buffer fund of at least 1.5 times the amount of annual pension expenditure	17%
HU	10.8% (part of social contribution tax paid into Pension Insurance Fund)	10%	-	-	10% of declared monthly earnings and 10.8% of declared monthly earnings in the form of a social contribution tax.
MT	10%	10%	10%	-	15% of the annual income, subject to the same ceiling as for employees
NL	-	17.9%	-	-	17.9%
AT	12.55%	10.25%	For farmers, self employed and liberal professions, the difference with the standard contribution rate of 22.8% is borne by federal transfers	-	17% for farmers (17.4% as of 2027), 18.5% for self-employed and 20% for liberal professions
PL	9.76%	9.76%	-	-	19.52%
PT	23.75%	11%	-	Revenues from certain taxes are allocated to the Social Security Public Reserve Fund (FEFSS)	Employee: 21.4% or 25.2%; employer: 10%, if economic dependence is above 80%, 7% otherwise
RO	Between 0% and 8%: 0% (normal working conditions); 4% (difficult working conditions) and 8% (special working conditions)	25%	-	-	25%
SI	8.85%	15.5%	-	-	24.35%
SK	21.75% of gross wage (including disability insurance contribution) if one does not participate in the 2nd pillar; otherwise 4% is sent to the second pillar	7% of gross wage (including disability insurance contribution)	-	Government makes contributions for people insured by the state (e.g. maternity leave) and covers special benefits (e.g. 13th pension, minimum pension).	28.75% (including disability insurance contribution) if only covered in the 1st pillar; otherwise 4% is sent to the second pillar
FI	17.1% for private sector and local government	7.3%	17.1% for State pensions	National and guarantee pensions are fully funded by the State. Part of farmers', self-employed persons' and seafarers' pensions are funded by the State. 25% of private sector pension is prefunded.	24.4%
SE	10.21% (including Premium Pension)	7% (including Premium Pension)	Employer contribution for social insurance	Buffer funds absorb the gap between contributions and payments in the NDC system. If assets fall below the pension liability, indexation of benefits is automatically reduced.	17.21%
NO	14.1% (lower rates for some regions)	7.6% (2026)	-	Pensions are fully financed through the State budget, which receives contributions from the Government Pension Fund.	11.1%

When several schemes exist, the information refers to the main (general regime) public scheme.
* DK: public pension scheme is financed through general taxes.

Source: European Commission, EPC.

ANNEX 4

Data sources for health care expenditure

Data sources health care

The data required to run long-term public expenditure projections in the field of health care ([70]) includes:

- Population by age and sex.
- Total public expenditure on health care.
- Per capita public expenditure on health care by age and sex cohorts (age/sex specific expenditure profiles) ([71]).
- Fiscal impact of legislated policy measures in the health care area.
- Health sector-specific public expenditure shares and their relative growth rates in the past 10 years (for the sector-specific indexation scenario).

The data collection procedure takes two steps. First, the Commission (DG ECFIN) pre-fills data based on existing databases managed by international organisations (Eurostat, OECD, AMECO). The questionnaire is then circulated to Member States and Norway, to endorse the pre-filled figures and complement these with data from national sources if no data was available from international sources. The completed data questionnaires are used for conducting the projections.

Note that age/sex-specific per capita public expenditure on health care are not available in any common international databases. Therefore, they are provided exclusively by the Member States and are based on national sources and methodologies.

Population by age and sex

Eurostat population projections (EUROPOP2025) by age and sex is used for the health care public expenditure projections. Given the universal coverage of health care public provision in the EU and Norway, the whole population is assumed to be covered over the projection horizon. The only exception is Germany, where no legal obligation exists for public provision of health care to the share of the population that is compulsory insured in private health insurance funds (approximately 10% of the German population). Consequently, solely the German population compulsory insured in social insurance funds is used in the health care projections. To that end, national data on projected participation rates by age and sex in the social insurance funds is applied to the EUROPOP2025 projections for Germany.

Computing total public expenditure on health care

To calculate total public health care expenditure, the sum of the following two components is used:

1. Public current expenditure on health care – computed as the sum of all "core" health care System of Health Accounts 2011 (SHA 2011) functions/expenditure categories HC.1 to HC.9, excluding HC.3 (defined as "Long-Term Care (health)" in SHA 2011). More specifically, for the current public expenditure on health care the following SHA 2011 categories are used: Curative care (HC.1); Rehabilitative care (HC.2); Ancillary services (HC.4); Medical goods (HC.5); Preventive care (HC.6); Governance and health system and financing administration (HC.7); Other health care services not elsewhere classified (HC.9).

([70]) As explained below, this definition of health care excludes SHA expenditure category HC.3, which is included in the long-term care expenditure category.

([71]) The age-sex expenditure profiles are accepted for use based on a plausible description of the underlying national methodology and data sources.

2. Public expenditure on gross capital formation in health from the COFOG GF07 "Health" function excluding the GF0705 "R&D Health" category. To smooth the volatility inherent to capital formation, the average value for the last ten years is used ([72]).

SHA data by function/expenditure category and respective sub-functions is available on Eurostat, OECD Health Data, and WHO Data for All. At the time of compiling the questionnaire on health care, SHA data on current public health expenditure is available up to year 2024. The latest available SHA data point is used as a reference to the base year estimate. The data in million euros have been extracted from Eurostat for all countries, except for Germany. For the Ageing Report, data on health care expenditure of the German compulsory private health insurances is not considered. The public current health care expenditure for Germany is therefore comprised by the government and social health insurances shares, which are reported on the OECD database only. The figures in percentage of GDP for all countries are calculated on the basis of the GDP figures in million euros from the AMECO database (spring forecast 2026).

On top of these components, COFOG data on capital formation from Eurostat is added. In past Ageing Reports, to smooth the volatility inherent to capital formation, the average value for the last four years available was normally used. For the 2027 Ageing Report this would have resulted in capturing the 4-year period (2020-2023) or (2021-2024), in which many Member States made substantial investments to improve the resilience of their health care system in the aftermath of the COVID-19 pandemic. This concentrated investment effort can be regarded as a combination of two relevant factors: (i) a catching up effect due to possible underinvestment in past years and (ii) a strong political commitment to make available the necessary public finances, both at European and national level, to build-up resilient health care systems. Considering these developments and the post-pandemic general realisation that investing in resilient health systems has to be sustained over time, in the 2027 Ageing Report the period capturing average public spending on capital formation in health is spread to 10 years. COFOG data on capital formation in million euros has been extracted from Eurostat. The figures in percentage of GDP for all countries are calculated on the basis of the GDP figures in million euros from the AMECO database (spring forecast 2026). For Norway, GDP for *mainland Norway* is used as provided by Statistics Norway.

Per capita public expenditure on health care by age and sex cohorts

The submission of age and sex specific profiles for public health care expenditure is important to track the impact of population ageing on future expenditure and essential for the health care projection model used for the Ageing Report. Countries submit age-sex cost profiles by single age or 5-year age groups. As age-sex cost profiles are computed following national data sources and methodologies, they vary sometimes quite substantially, both over time and across countries. This requires the submission of a documentation of the methodology and data sources used to compute the age-sex public expenditure profiles.

Fiscal impact of policy measures

Fiscal and health care structural reforms may impact on the expenditure path, and the projections in the Ageing Report need to take this into account. This is useful information for correctly determining the situation in the base year and subsequent years of the projections.

Countries submit information and data on relevant or recently legislated or implemented policy measures and reforms that have a potential impact on the health care expenditure path as part of the data collection process. To this end, a description of the policy measures, the legal documents confirming the reforms and the estimated fiscal impact on (if applicable) the components of expenditure is submitted to the Commission.

A distinction is made between one-off (temporary) and permanent fiscal effects of health care policy measures. One-off policy measures are typically capital investments or bonuses paid to health

([72]) In previous Ageing Reports, a 4-year average of latest data available was used to smooth the volatility of the capital formation expenditure.

personnel such as those paid during the COVID-19 crisis. Policy measures with permanent fiscal effects are such as changes of salaries in the health sector, change in the reimbursement volumes or basket of health goods and services, operational costs of new hospitals or other health care institutions. One-off (temporary) public expenditure only affects the projection results of the respective year(s), while policy measures with permanent fiscal effect also affect the projection results of the subsequent years.

Data used for calculating the sector-specific composite indexation

In the '*sector-specific composite indexation scenario*' the importance and evolution of various components to health care provision is captured. The components are: (1) inpatient care, (2) outpatient care and ancillary services, (3) pharmaceuticals and therapeutic appliances, (4) preventive care, (5) governance and administration, and (6) capital investment. They broadly reflect the different sectors of the health system and correspond to the categories of the System of Health Accounts (SHA).

As shown in Table II.A4.1 the respective share in public expenditure on health care of each component is calculated with SHA data for the latest year available, except for the capital formation component, for which COFOG data on gross capital formation on health excluding R&D health is used. These shares are then applied to the age-specific per capita expenditure and by so doing each age-specific per capita expenditure is divided into six sub-items of expenditure.

Table II.A4.1: **Data sources for the sector-specific indexation components**

Sector-specific indexation component		Inpatient care (curative and rehabilitative care)	Outpatient care (curative and rehabilitative care) + Ancillary services	Medical goods (pharmaceuticals and therapeutic appliances)	Preventive care	Governance and administration	Capital formation
Latest available share of public expenditure & Average annual growth rate over the last 10 years (in EUR)	*Classification*	SHA	SHA	SHA	SHA	SHA	COFOG
	Categories	HC.1.1 + HC.1.2 + HC.2.1 + HC.2.2	(HC.1.3 + HC.1.4 + HC.2.3 + HC.2.4) + HC.4	HC.5	HC.6	HC.7 + HC.9	Gross capital formation P5 for GF 07 Health minus gross capital formation P5 for GF 07 05 "R&D Health"
	Data source	Eurostat (OECD for DE)	Eurostat (OECD for DE)	Eurostat (OECD for DE)	Eurostat (OECD for DE)	Eurostat (OECD for DE)	Eurostat

Source: European Commission, EPC.

Next, the past evolution of public expenditure on each of those components is calculated as average annual growth rate for the past 10 years for each country. For building the 10-year time series data based on the SHA 2011 classification is used for the calculation of the average annual expenditure growth rate for each component ([73]).

Lastly, the ratio of each of these 10-year average growth rates to the 10-year average growth rate of GDP is built. Due to high volatility in the relative growth rates for prevention, capital formation and governance and administration, these items are excluded from the indexation. Moreover, the relative growth rates of the other three components (hospitals, outpatient care and medical goods) are capped at their respective 25th and 75th percentiles.

([73]) In previous Ageing Reports, due to data limitations for building 10-year time series from data based on the SHA 2011 classification, data from COFOG categories in correspondence to the SHA 2011 health care functions were used.

ANNEX 5

Mathematical illustration of the health care scenarios

The formal illustration of the scenarios to project public expenditure on health care are presented in the following sections. The scenarios are variations of the baseline.

Baseline

The baseline ([74]) is based on the EUROPOP2025 baseline projections for population and life expectancy. Further, it assumes that costs profiles shift by half the change in age-sex specific life expectancy and that unit costs develop with GDP per capita. It further assumes an elasticity of demand of 1.1 in base year 2025 which converges linearly to 1 over the projection horizon.

To calculate future public expenditure on health care, the age-sex specific per capita public expenditure profiles are multiplied by the respective age-sex population group in each projection year.

This scenario starts with calculating, for each projection year, the change in life expectancy in relation to the base year. The change in life expectancy of a person of sex *g* and age *a* in relation to the base year (say, 2025) for each year of the projections, using the Eurostat population projections 2025 is given by:

$$\Delta LE_{g,a,t,0} = LE_{g,a,t} - LE_{g,a,0} \qquad \text{II.A5.1}$$

where:

$\Delta LE_{g,a,t,0}$ is the additional life expectancy of a person of sex *g* and age *a* in year *t* compared to a person of sex *g* and age *a* in the base year 2025;

$LE_{g,a,t}$ is the life expectancy of a person of sex *g* and age *a* in year *t;* and

$LE_{g,a,0}$ is the life expectancy of a person of sex *g* and age *a* in the base year 2025.

The age-sex specific public expenditure profiles, showing the average public spending on health care per capita for each year of age (from 0 to 100, according to data availability), are assumed to grow over time in line with GDP per capita taking the income elasticity of demand into account, and considering the changing life expectancy. Therefore, the per capita cost (expenditure) in a projected year t is:

$$c_{g,a,0} = c_{g,a,0} \qquad \text{t=0}$$

$$c_{g,a,t} = c_{g,a,t-1} \cdot (1 + \Delta Ypc_t \cdot \varepsilon_t + \Delta c_{g,0,a-0.5*\Delta LE_t}) \qquad \text{t>0} \qquad \text{II.A5.2}$$

where:

$c_{g,a,t}$ is the cost per capita of a person of a given sex *g* and age *a* in period *t*;

$\Delta c_{g,0,a-0.5*\Delta LEt}$ is the growth rate in costs per capita due to the change in life expectancy between year 0 and projection year t. Note that only half the change in life expectancy is considered for the shift.

$$\Delta c_{g,0,a-0.5*\Delta LE_t} = \frac{(c_{g,0,a-0.5*\Delta LE_{g,a,t,0}} - c_{g,0,a})}{c_{g,0,a}} \qquad \text{II.A5.3}$$

where:

([74]) Until the 2021 Ageing Report, the baseline was called '*AWG reference scenario*'.

$c_{g,0,a-\Delta LE_{g,a,t,0}}$ is the cost per capita assigned to a person of sex *g* and of age *a* in the base year 2025 minus half the years gained in life expectancy by a person of sex *g* and age *a* between year *t* and year 2025, specified with a precision to a decimal part of a year in the base year 2025. ([75]) This is done only for those sections of the age-sex profile where the cost per capita is growing. ([76])

ΔYpc_t is GDP per capita growth rate in year *t*.

$$\Delta Ypc_t = \left(\frac{Y_t}{P_t} - \frac{Y_{t-1}}{P_{t-1}}\right) \Big/ \left(\frac{Y_{t-1}}{P_{t-1}}\right) \qquad \text{II.A5.4}$$

with Y_t and P_t representing GDP and total population in projection year *t*;

ε_t is income elasticity of demand, assumed to converge from ε_{2025} to ε_{2080} in 2080 according to the following equation:

$$\varepsilon_t = \varepsilon_{2025} - (t - 2025) \cdot \frac{\varepsilon_{2025} - \varepsilon_{2080}}{2080 - 2025} \qquad \text{II.A5.5}$$

In the baseline where the income elasticity of demand converges from 1.1 in 2025 to 1 in 2080, the values will then be the following:

$$\varepsilon_t = 1.1 - (t - 2025) \cdot \frac{0.1}{55} \qquad \text{II.A5.6}$$

Hence, this 'adjusted' per capita unit cost, $c_{g,a,t}$, is the cost per capita of a person of sex *g* and age *a* in year *t* of the projection period, following the adjustment to GDP per capita growth multiplied with the income elasticity of demand at time t and shifted by half the change in age-specific life expectancy.

Next, in each year the respective unit cost is multiplied by the projected population of each age group (using the baseline population projections) to obtain the total public spending for each age-sex group:

$$S_{g,a,t} = c_{g,a,t} \cdot p_{g,a,t} \qquad \text{II.A5.7}$$

where:

$S_{g,a,t}$ is public spending on health care for all persons of sex *g* and age *a* in year *t*.

Last, the resulting total public spending on health care is divided by the projected GDP to obtain the public health care expenditure as a percentage of GDP:

$$T_t = \frac{\sum S_{g,a,t}}{Y_t} \qquad \text{II.A5.8}$$

where:

T_t is the ratio of total public spending on health care to GDP in year *t*.

Demographic scenario

The aim of the 'demographic scenario' is to estimate the pure effect of an ageing population on future public expenditure on health care. In other words, the income elasticity of demand is assumed to be 1 over the whole projection period. The formula for the 'unit costs' changes to:

([75]) Changes in life expectancy and therefore shifts in the age profile from one year to another are sometimes very small (in a range of a tenth part of a year). However, the data gathered by the Member States does not provide detailed information on costs per capita by single year of age (the most detailed item available is a 5-year average), so an additional calculation needs to be performed. To solve this problem, the intermediate values can be obtained by simple extrapolation/trend-smoothing method from the existing average figures. In this way it is possible to assign a concrete value of cost per capita to each tenth part of a year of age.

([76]) For the young and the oldest old the reference age remains the same over the whole projection period.

$$c_{g,a,0} = c_{g,a,0} \qquad t=0$$

$$c_{g,a,t} = c_{g,a,t-1} \cdot (1 + \Delta Ypc_t + \Delta c_{g,0,a-0.5*\Delta LE_t}) \qquad t>0 \qquad \text{II.A5.9}$$

The other equations stay equal compared to the baseline.

No healthy ageing scenario

The 'no healthy ageing scenario' allows assessing the impact of the *expansion of morbidity* hypothesis on public health spending projections. It assumes that age-sex specific morbidity rates and the structure of health care provision do not change over time. This, in turn, means that age-sex specific per capita public expenditure (on health care) profiles, which can be considered as proxies for the morbidity rates ([77]), remain constant in real terms over the whole projection period. As in the baseline, the scenario relies on Eurostat population projections, assuming a gradual increase in life expectancy. This increase in life expectancy together with no change in health status, as compared to today's health status, mean that all the gains in life expectancy are assumed to be spent in poor health. The number of years spent in good health remains constant. Other assumptions are unchanged compared with the baseline.

The formula for the 'unit costs' changes to:

$$c_{g,a,0} = c_{g,a,0} \qquad t=0$$

$$c_{g,a,t} = c_{g,a,t-1} \cdot (1 + \Delta Ypc_t \cdot \varepsilon_t) \qquad t>0 \qquad \text{II.A5.10}$$

Healthy ageing scenario

The 'healthy ageing scenario' is based on the *relative compression of morbidity* hypothesis, meaning that health status is improving in line with declines in mortality rates and increasing life expectancy. It assumes that the number of years spent in bad health during a lifetime remains constant over the whole projection period. Consequently, the morbidity rate and therefore the age-sex specific per capita public expenditure profiles are declining with the mortality rate.

$$c_{g,a,0} = c_{g,a,0} \qquad t=0$$

$$c_{g,a,t} = c_{g,a,t-1} \cdot (1 + \Delta Ypc_t \cdot \varepsilon_t + \Delta c_{g,0,a-\Delta LE_t}) \qquad t>0 \qquad \text{II.A5.11}$$

Therefore, the scenario mirrors the 'no healthy ageing scenario'.

Labour intensity scenario

The 'labour intensity scenario' estimates the evolution of public expenditure on health care considering that health care is and will remain a highly labour-intensive sector. In practical terms, that means that unit costs are assumed to evolve in line with the evolution of *GDP per hours worked*. Therefore, the

([77]) Strictly speaking, age profiles of expenditure illustrate exclusively public health care spending per person of a given age cohort. As such it is not a measure of health status or morbidity. However, given the lack of reliable and comparable data on the latter, one can plausibly assume that the shape of the profile follows the evolution of health status over the lifespan, i.e. over time, we assume that the same segments of the curve (early childhood, old age, and motherhood) follow the same pattern.

growth in GDP per capita is replaced by the growth in GDP per hours worked, so that the equation for unit costs becomes:

$$c_{g,a,0} = c_{g,a,0} \qquad t=0$$

$$c_{g,a,t} = c_{g,a,t-1} \cdot (1 + \Delta Yphw_t \cdot \varepsilon_t + \Delta c_{g,0,a-0.5*\Delta LE_t}) \qquad t>0 \quad \text{II.A5.12}$$

where:

$\Delta Yphw_t$ is the rate of growth of GDP per hours worked in year t

$$\Delta Yphw_t = \left(\frac{Y_t}{HW_t} - \frac{Y_{t-1}}{HW_{t-1}}\right) \Big/ \left(\frac{Y_{t-1}}{HW_{t-1}}\right) \qquad \text{II.A5.13}$$

where HW stands for total hours worked.

Corresponding equations II.A5.7 and II.A5.8 are then used to calculate total age-sex group expenditure and total public expenditure on health care in each projection year.

Sector-specific composite indexation scenario

The 'sector-specific composite indexation scenario' presents the special character of the health care sector (e.g. high level of government regulation, investment in new technologies, high labour intensity, a shift of provision of some health care services from inpatient to outpatient care) and uses sector-specific elements as unit costs determinants in the model.

This scenario considers that expenditure on health care can be disaggregated in its different components, broadly reflecting the different sectors of the health system: 1) inpatient care, 2) outpatient care and ancillary services, 3) pharmaceuticals and therapeutic appliances, 4) preventive care, 5) governance and administration and 6) capital investment. The different components are treated separately and indexed in a separate/different way, creating a sort of composite indexation for 'unit cost development'.

Due to the high volatility of the relative growth rates for the sub-components on prevention, governance and administration, and capital formation, these items are excluded from the indexation. The other three sub-items of the age-specific per capita expenditure (hospitals, outpatient care and medical goods) are multiplied by their respective growth rate (capped at their respective 25th and 75th percentiles, as in previous Ageing Reports). It is then assumed that the growth ratio multiplying each sub-item of expenditure converges to 1 in a certain year in the future (i.e. grows at the same pace as productivity or GDP). ([78])

In mathematical terms, the different steps of this scenario are as follows: The share of each of the six components in total public expenditure on health care in each year t of available data, up to the baseline year of 2025 is calculated as follows:

([78]) Assume that per capita public expenditure on health care for a 20-year-old man is EUR 2 000 in year t. Assume also that, in line with total public expenditure on health care, this is made up of 40% inpatient care, 30% outpatient care and ancillary services, 17% pharmaceuticals and therapeutic appliances, 3% preventive care, 5% governance and administration, and 5% capital investment. Therefore, the per capita public expenditure is divided into six sub-items: EUR 800 for inpatient care, EUR 600 for outpatient care and ancillary services, EUR 340 for pharmaceuticals and therapeutic appliances, EUR 60 for preventive care, EUR 100 for governance and administration, and EUR 100 for capital investment. Then, in year t+1, expenditure increases as follows: EUR 800 x 1.2 + EUR 600 x 1.1 + EUR 340 x 1.3 + EUR 60 x 1.0 + EUR 100 x 1.0 + EUR 100 x 1.0, where 1.2, 1.1, and 1.3 are the (illustrative) past growth ratios observed for the first three components, while the other items are not indexed by their past observed growth rates. As far as the pattern of convergence is concerned, we can use past observations to determine the convergence pattern of the growth ratios.

$$s_{i,t} = \frac{PE_{i,t}}{\sum_{i=1}^{6} PE_{i,t}} \qquad \text{II.A5.14}$$

where $S_{i,t}$ is the share of public expenditure on component or input *i* at each time *t* to total public expenditure on health care,

$PE_{i,t}$ is total public expenditure on component *i* at each time *t* and

$\sum_{i=1}^{6} PE_{i,t}$ is total public expenditure on health care expressed as the sum of the public expenditure on each of the six components.

The average share of the ten past observations, up to the latest available data, $\bar{s}_i$ of each component is calculated as:

$$\bar{s}_i = \frac{\sum_{t=0}^{-9} s_{i,t}}{10} \qquad \text{II.A5.15}$$

These average shares are combined with the age-sex specific per capita expenditure in 2025 so that this is the sum of the expenditure on the above six components:

$$c_{g,a,0} = \sum_{i=1}^{6} \bar{s}_i \cdot c_{g,a,0} \qquad \text{II.A5.16}$$

We can define the cost per capita in each subsector as:

$$c_{g,a,i,0} = \bar{s}_i \cdot c_{g,a,0} \qquad \text{II.A5.17}$$

To calculate the annual growth rate of public expenditure for each of the six components, the growth rate of public expenditure for component *i* at time *t* of available data up to the baseline year of 2025 included is:

$$\Delta PE_{i,t} = \left(\frac{PE_{i,t} - PE_{i,t-1}}{PE_{i,t-1}} \right) \qquad \text{II.A5.18}$$

and the average annual growth rate of public expenditure for component *i* for the last past 10 years where available, which is:

$$\overline{\Delta PE_i} = \frac{\sum_{t=0}^{-9} \Delta PE_{i,t}}{10} \qquad \text{II.A5.19}$$

Note again that we assume no additional growth in three of the six categories, i.e. $\Delta PE_{i,t} = 1$, for prevention, governance and administration, and capital formation.

Next, we calculate the average annual growth rate of GDP (ΔY) for the past ten years of available data as:

$$\overline{\Delta Y} = \frac{1}{10} \cdot \sum_{t=0}^{-9} \Delta Y_t \qquad \text{II.A5.20}$$

The ratio of average annual growth rate of expenditure on each component to the average annual growth rate of GDP is calculated by dividing equation II.A5.19 by equation II.A5.20.

Following these calculations, the per capita cost is assumed to evolve in the following manner:

$$c_{g,a,t} = \frac{\overline{\Delta PE_i}}{\overline{\Delta Y_i}} \cdot \sum_{i=1}^{5} \left(\bar{s}_i \cdot c_{g,a,t-1} \right) \qquad \text{II.A5.21}$$

where:

ΔY_t is the GDP rate of growth in year *t* for each country.

Each of the six ratios of growth rates (the ratio of $\overline{\Delta PE_i}$ to ΔY) converges linearly to 1 by a specified date, 2080.

Again, corresponding equations II.A5.7 and II.A5.8 are then used to calculate total age-sex group expenditure and total public expenditure on health care in each projection year.

Risk scenario

The 'risk scenario' ([79]) aims at fully considering non-demographic factors, such as technological changes and institutional mechanisms, which have driven expenditure growth in recent decades.

This scenario uses panel regression techniques to estimate the country-specific non-demographic cost of health care. The non-demographic cost is defined as the excess of growth in real per-capita health care expenditure over the growth in real per-capita GDP after controlling for the demographic composition effects. Alternatively, the results can also be expressed in terms of country-specific average income elasticities of health care expenditure. A proxy for the non-demographic costs with an estimated EU average elasticity of 1.3, based on this Commission research (endorsed by the Ageing Working Group) and recalculated for the 2027 Ageing Report including latest data available, is used in 2025 and then converges linearly to 1 by the end of the projection period. The formula for the elasticity of demand changes to:

$$\varepsilon_t = 1.3 - (t - 2025) \cdot \frac{0.3}{55} \qquad \text{II.A5.22}$$

The other equations are the same as in the baseline.

([79]) This is the former '*AWG risk scenario*'.

ANNEX 6

Data sources for long-term care expenditure

As in past projection exercises, the 2027 Ageing Report will rely whenever possible on data following common methodologies and definitions (i.e. the System of Health Accounts - SHA) agreed by international institutions (Eurostat, OECD and WHO), gathered through the joint data collection exercise (i.e. the joint OECD-Eurostat-WHO questionnaire) and reported in Eurostat (Cronos) and OECD (Health Data) databases ([80]).

SHA 2011 expenditure data are available for all EU Member States for variable HC.3, but only for a limited number of Member States for the voluntary variable HC.R.1, which requires the use of the European System of integrated Social Protection Statistics (ESSPROS) database to construct a proxy for this missing variable in several countries.

SHA and ESSPROS data on current long-term public expenditure are available up to the year 2023 or 2024 for some countries. For the Ageing Report, data on health care expenditure of the German compulsory private health insurances are not considered. Current public health care expenditure for Germany is therefore comprised by the government and social health insurance shares, which are only reported on the OECD database. The figures as a percentage of GDP for all countries are calculated based on the GDP figures in million euros from the AMECO database (spring forecast 2026).

When data are not available in the international databases, they have to be provided by each Member State individually. This is particularly the case for the number of recipients, age-cost profiles and the breakdown of expenditure by care setting, as well as for the validation of the HC.R.1 proxy.

The data collection procedure covers the same steps as for health care (see Chapter 2 on health care), with an equivalent questionnaire used to report the data required for the health and long-term care expenditure projections.

The detailed analysis of available data and classifications carried out led to the following agreement. For the Commission (DG ECFIN) to be able to calculate the proposed scenarios and run the relevant sensitivity tests, the Member States provide the following information in the framework of the long-term care expenditure projections: total number of dependent people receiving long-term care a) in institutions, b) at home and c) cash benefits, by sex and five-year cohorts.

- Possible overlaps between the recipients of cash benefits and the recipients of long-term care in-kind services (countries should provide information on whether this is legally possible in their long-term care system, and also on the numbers of those affected).
- Public expenditure per user (patient) on long-term care, by sex and single age or five-year cohorts (so-called 'age-related expenditure profiles').
- Public expenditure breakdown by care setting (residential care, home care, cash benefits).
- Data on all policy measures implemented since 2019 that have a potential impact on the long-term care expenditure path as part of the data collection process.

In addition, the Commission (DG ECFIN) pre-filled (according to data availability) the following items, which the Member States had to verify/confirm:

- Total public spending on long-term care, disaggregated, into services of long-term nursing care (classified as HC.3 in the System of Health Accounts) and social services of long-term care (classified as HC.R.1). If HC.R.1 is not published for that country, the Member States should validate or amend the proxy calculated by the Commission.
- Breakdown of total public spending on long-term care into spending on residential care, home care and long-term care-related cash benefits derived from ESSPROS and/or SHA.
- Disability rates by sex and five-year cohorts (based on EU-SILC data).

([80]) See the SHA 2011 Manual (OECD, Eurostat, WHO, 2011). The manual contains guidelines for reporting health expenditure according to an international standard. It proposes a common boundary of health care as well as a comprehensive and detailed structure for classifying the components of total expenditure on health.

Public expenditure on long-term care overview

The data sources on long-term care expenditure are described in Table II.A6.1.

According to the System of Health Accounts classification, public expenditure on long-term care is defined as the sum of the following publicly financed items:

- Services of long-term nursing care (HC.3 in SHA 2011) (which is also called 'long-term health care' and includes both nursing care and medical care related to the cause of the dependency as well as assistance with ADL tasks).
- 'Social services' of long-term care (HC.R. 1 in SHA 2011), which represent the 'assistance services' part, relating primarily to assistance with IADL tasks.

Taken together these should represent the total benefits allocated to dependent people, although, as explained below, due to data availability issues, these data have to be supplemented to different degrees with ESSPROS data to fulfil the projection needs.

Table II.A6.1: **Long-term care public expenditure base data requirements according to availability**

I. Preferred solution: SHA, when data are available (all countries except those listed below)

LTC (health)	LTC (social)	LTC (residential care)	LTC (home care)	LTC (cash benefits)
SHA: HC.3	**SHA**: HCR.1	**SHA**: (HC.3+HCR.1). Residential care share according to **ESSPROS**, **SHA**, **ESSPROS**+**SHA** or **national data**	**SHA**: (HC.3+HCR.1). Home care share according to **ESSPROS**, **SHA**, **ESSPROS**+**SHA** or **national data**	**SHA**: (HC.3+HCR.1). Cash benefits share according to **ESSPROS**, **SHA**, **ESSPROS**+**SHA** or **national data**

II. Alternative: When data on LTC (social) HCR.1 are not available from SHA for 2019, a proxy is constructed based on ESSPROS data (BG, DE, IE, HR, IT, HU, MT, AT, PL and SK)

LTC (health)	LTC (social)	LTC (residential care)	LTC (home care)	LTC (cash benefits)
SHA: HC.3	**ESSPROS**: proxy based on cash and in-kind benefits according to disability and old-age functions, including 'Accommodation', 'Home help', 'Periodic care allowance', and in the disability function 'Lump sum care allowance'. Adjusted to reduce potential double-counting with expenditure already included within HC.3 in SHA.	**SHA**: (HC.3+HCR.1). Residential care. Share according to **ESSPROS**, **SHA**, **ESSPROS**+**SHA** or **national data**	**SHA**: (HC.3+HCR.1). Home care share according to **ESSPROS**, **SHA**, **ESSPROS**+**SHA** or **national data**	**SHA**: (HC.3+HCR.1). Cash benefits share according to **ESSPROS**, **SHA**, **ESSPROS**+**SHA** or **national data**

Source: European Commission, EPC.

Long-term care (health) public expenditure

The health component of long-term care (HC.3) includes a range of services required by persons with a reduced degree of functional capacity, physical or cognitive, and who are consequently dependent on help with basic activities of daily living (ADL), such as bathing, dressing, eating, getting in and out of bed or chair, moving around and using the bathroom. The underlying physical or mental disability can be the consequence of chronic illness, frailty in old age, mental retardation or other limitations of mental functioning and/or cognitive capacity. It also includes any further medical treatment linked to the cause of the disability as well as basic medical services including help with wound dressing, pain management, medication, health monitoring, prevention, rehabilitation or services of palliative care.

Finally, HC.3 also includes any cash benefits spent on the services detailed above. However, these cash benefits cannot be identified in the SHA data, since they are assigned to the category that they are spent on by the recipients.

Long-term care (social) public expenditure

Long-term care recipients may also need help with instrumental activities of daily living (IADL) more generally, such as help with activities of housework, meals, shopping, using the telephone and managing one's finances. This type of care is classified in SHA as a 'social' long-term care category HC.R.1. It should be noted that, despite the name, the need for this type of services does not stem from social causes, but from medical conditions, old age or long-term disability that will often progress to more severe dependency. As in HC.3, this category also includes cash benefit expenditure, although the data is not currently populated. A further shortcoming of these data is that the SHA classification does not currently include expenditure on those long-term care recipients that need help with IADL but do not need help with ADL.

As in the case of health care, the SHA figures on public expenditure on long-term care are available in two separate databases: the EUROSTAT database available at NewCronos website and a parallel OECD database 'OECD Health Data'. SHA data on HC.3 are available for all Member States. Data on HC.R.1 is currently available for 19 Member States and Norway. For those not reporting HC.R.1, a proxy is calculated on the basis of the following ESSPROS data categories, adjusted in order to reduce the likelihood of double counting between HC.3 and the ESSPROS proxy:

In-kind benefits in ESSPROS:

- 'Disability' function – 'Accommodation' (residential care) and 'Home help/assistance in carrying out daily tasks' (home care)
- 'Old age' function – 'Accommodation' (residential care) and 'Home help/assistance in carrying out daily tasks' (home care)

Benefits in cash in ESSPROS:

- 'Disability' function – 'Periodic care allowance' and 'Lump sum care allowance'
- 'Old age' function – 'Periodic care allowance'

These proxies are then validated on the basis of national expertise in order to eliminate any possible double counting or under-counting in this area.

Public expenditure by care setting

The long-term care model projects public expenditure separately by care setting. The reason for this is that each care setting covers a different population with different characteristics and its unit costs are affected differently by the ageing of the population.

Residential care refers to long-term care delivered in an institution in which the care recipient lives. It is most appropriate for cases with relatively high degrees of dependency who need a lot of care. Residential care is provided to people with moderate to severe functional restrictions who live permanently or for an extended period of time (usually for six months or longer) in specially designed institutions, or in a hospital-like setting where the predominant service component is long-term care, although this may frequently be combined with other services (basic medical services, help with getting meals, social activities, etc.). In these cases, eligibility is often explicitly assessed and defined by the level (severity) of dependency and level of care needs.

Home care refers to long-term care delivered in the private home of the care recipient. It is most appropriate for cases with lower levels of dependency and can slow down the progression of dependency as recipients age. Services at home include services provided by external home care providers, both public and private, in a person's private home on a long-lasting basis. This includes living arrangements in specially designed or adapted flats for persons who require help on a regular basis, but where this living arrangement still guarantees a high degree of autonomy and self-control

over other aspects of a person's private life. Also included are services received on a day-case basis or in the form of short-term stays in institutions, for example in the form of respite care. During these stays, persons are not considered as receiving residential care but are receiving temporary services to support their continued stay at home. They also include tele-care where the care is provided in the home of the patient through IT.

In contrast to in-kind care like residential care and home care, cash benefits are payments given to care recipients or their families so that they can purchase care directly themselves. Public spending on cash benefits includes social programmes offering care allowances. Care allowances were introduced in a number of countries to allow households for more choice over care decisions, and to support care provided at home or in institutions. They are mainly addressed to persons with long-term care needs who live in their own homes but can also include people who receive care in an institution. However, the design of these programmes varies widely across countries, which reduces the comparability between them. Illustrating this variety of systems, it is noteworthy that in the System of Health Accounts cash benefits can be included just as well in the HC.3 as well as in the HC.R.1 category.

At least three types of cash-benefit programmes and/or consumer-choice programmes can be distinguished: (1) personal budgets and consumer-directed employment of care assistants; (2) payments to the person needing care who can spend it as (s)he likes but has to acquire sufficient care; and (3) payments to informal caregivers.

This approach requires the identification of public expenditure on residential care, home care, and cash benefits.

Splitting long-term care expenditure by care setting according to SHA

In the SHA classification system, we can use the sub-functions of HC.3 to identify residential and home care, but with some limitations as explained below. For HC.R.1, although the classification allows for a breakdown between in-kind care and cash benefits, these variables are not currently submitted to ESTAT by any country.

The SHA function HC.3 (long-term care (health)) can be disaggregated into four sub-items as shown:

- Sub-function HC.3.1 comprises "long-term care (health) services provided in a health care facility (hospital, nursing home) and requiring an overnight stay with medical supervision. The package of services covers nursing and/or personal care, usually provided together, along with a range of other components such as accommodation and support services".
- Sub-function HC.3.2 comprises "planned long-term care (health) services in a health care facility but without an overnight stay. The services may be provided in a hospital or nursing home or in a dedicated or stand-alone day centre facility".
- Sub-function HC.3.3 comprises "long-term care (health) services that have the purpose of managing damaged health conditions and the associated clinical difficulties. Dependent patients with a chronic condition may require periodic verification of medication doses and of the evolution of their condition, and advice on how to handle symptoms that emerge as the disease evolves. These services may refer to regular outpatient visits or to the increasing provision of remote monitoring services for long-term care patients".
- Sub-function HC.3.4 comprises 'long-term care (health) services provided to persons within their own home, or in residential settings such as adapted housing that can be considered as their home, rather than in an 'institution'. Such residential facilities include community-based settings, such as adapted housing, which provide an individual housing environment in combination with certain services, such as health protection and surveillance, often for elderly people who are becoming more dependent. It can involve specialised health care at home and services to support informal (family or community) care. Note that long-term care services of a lower-level social care nature (such as home help) may be included as part of a package of home-based care. If such services cannot be separately accounted for and are not the dominant component of the package, they should be included under HC.3.4; if, however, they are the dominant feature, the complete package of care services should be included under HC.R.1 'Long-term care (social)'.

According to the above definitions, HC.3.1 and HC.3.2 are types of care that are provided in institutions or in community facilities (in any case not at beneficiary's home), while HC.3.4 is provided at home. This delimitation is used as a distinction between the 'medical' components of long-term care being provided in residential and home care respectively. The case of HC.3.3 is different, as the SHA 2011 definition has a degree of ambiguity. However, as the cases described relate mostly to home care, it is considered as home care for the purposes of the Ageing Report.

However, the SHA classification does not provide a cash benefits breakdown for HC.3. Cash benefits are included in the different categories according to the services that they are used to purchase. A cash benefit used to purchase residential care is therefore classified in SHA as expenditure on residential care.

The split by care setting of the 'social' component of long-term care of HC.R.1 in SHA 2011 across care settings is problematic as well, since, although the breakdown between cash and in-kind benefits theoretically exists but is not provided by any Member State.

As a result, SHA can be used to provide an estimated breakdown of expenditure by care settings in Member States that do not have cash benefits.

Splitting long-term care expenditure by care setting according to ESSPROS

An alternative is to use the ESSPROS classification to identify long-term care expenditure by care setting, deriving from the description of the ESSPROS functions - the share of spending that goes to cash benefits, home care and residential care, as explained above.

The accommodation variables in the 'disability' and 'old age' functions can approximate residential care expenditure.

The 'home help/assistance in carrying out daily tasks' variables in the 'disability' and 'old age' functions can be used to estimate home care expenditure.

Finally, the 'periodic care allowance' variable in the 'disability' and 'old age' functions as well as the 'lump sum care allowance' in the 'disability' function can be used to estimate cash benefit expenditure.

With these three elements it is possible to use ESSPROS data to calculate the breakdown of long-term care expenditure by care setting.

However, it should be noted that ESSPROS data also have limitations. Contrary to the SHA classification system, ESSPROS expenditure classification system does not include specific long-term care functions. Therefore, the definition of long-term care is not as clear-cut as in the case of SHA classification system. Additionally, it includes both public and private expenditure. Finally, ESSPROS categories are unlikely to contain all long-term care expenditure since they will not include the medical care component of HC.3.

2027 Ageing Report approach for splitting expenditure according to care setting

There is, therefore, no unambiguous solution to identifying the breakdown of long-term care expenditure by care setting using the available data sets. Neither SHA nor ESSPROS provide a fully satisfactory response.

The approach, as in previous Ageing Reports, uses ESSPROS proportions by type of care as a first approximation, supplemented with SHA data whenever the ESSPROS data collection seems incomplete or the breakdown seems to be of insufficient quality. In a second step, the long-term care expenditure proportions by care setting and type of benefit will be validated against the breakdown derived from national data provided by the Member States. Where available and of sufficient quality, national data will be preferentially used to split total long-term care expenditure by care setting.

Disability rates

Similarly to past Ageing Reports, disability rates are derived from EU-SILC data and more specifically data reported by the Global activity limitation indicator (GALI), on severe "limitations in activities

because of health problems [for at least the last 6 months]" ([81]). EU-SILC data, used to construct the GALI indicator, are available for all EU Member States and Norway by age-sex group and have a disability measure which allows us to identify severe (strongly limited) limitations.

This is considered to be an adequate measure of dependency with a high degree of data availability and comparability. Indeed, it is available for 27 EU Member States and Norway, by age-sex group for people aged 15 years or older. A moving average of the 5 most recent years of data available will be constructed and used for the projections, albeit excluding any data breaks.

For the population below age 16, EU-SILC includes every three years a question on children with limitation in activities due to health problems. The average of the proportion of children who report severe difficulties for the first two years of the data collection (2021 and 2024) is used as an estimate of the disability ratio in younger age-groups, divided by male and female.

Since EU-SILC only covers the population who live in their own private home, for the purposes of the Ageing Report, the reported residential care recipients are added to the dependent population identified through EU-SILC to obtain an estimate of the total dependent population.

([81]) The person's self-assessment of whether they are hampered in their daily activity by any ongoing physical or mental health problem, illness or disability. An activity is defined as 'the performance of a task or action by an individual' and thus activity limitations are defined as 'the difficulties the individual experience in performing an activity'. Limitations should be due to a health condition. The activity limitations are assessed against a generally accepted population standard, relative to cultural and social expectations by referring only to activities people usually do. This is a self-perceived health question and gives no restrictions by culture, age, sex or the subject's own ambition. The purpose of the instrument is to measure the presence of long-standing limitations, as the consequences of these limitations (e.g. care, dependency) are more serious. A 6-month period is often used to define chronic or long-standing diseases in surveys.

ANNEX 7

Mathematical illustration of the long-term care scenarios

General definitions

Let us define $N_{g,a,t}$ as the population of a given sex *g* and age *a* in year *t*. Following the main steps of the general methodology process presented in Chapter 3 on long-term care, the following definitions are derived.

STEP 1: dependent/non-dependent population

The ratio of dependent (resp. non-dependent) persons in the base year *t=b* (e.g. 2025) is derived from the EU-SILC data, for each age – actually, 5-year age groups– and sex group: $d_{g,a,b}$ (resp. *1- $d_{g,a,b}$*). The average dependency rates for the last 5 years are being used, based on data availability. Therefore, the projected dependent population of a given sex *g* and age *a* in a projected year *t* is:

$$D_{g,a,t} = d_{g,a,b} \cdot N_{g,a,t} \qquad \text{II.A7.1}$$

STEP 2: split into types of care

To be able to differentiate the impact of different scenarios according to the respective behaviour of the different types of care, one needs to split the projected dependent population into four groups: those receiving formal in-kind care at home, those receiving formal in-kind care in institutions, those receiving cash benefits (which is also defined as a type of formal care) and those receiving only informal care.

Therefore, one defines $DFh_{g,a,t}$, $DFi_{g,a,t}$, $DI_{g,a,t}$ the projected dependent population of a given sex *g* and age *a* in a projected year *t* receiving respectively in-kind formal care at home (*DFh*), in-kind formal care in institutions (*DFi*), cash benefits and informal care (*DI*), as follows:

$$DFh_{g,a,t} = D_{g,a,t} \cdot p^{Fh}_{g,a,0} \qquad \text{II.A7.2}$$

$$DFi_{g,a,t} = D_{g,a,t} \cdot p^{Fi}_{g,a,0} \qquad \text{II.A7.3}$$

$$DI_{g,a,t} = D_{g,a,t} \cdot (1 - p^{Fh}_{g,a,0} - p^{Fi}_{g,a,0}) \qquad \text{II.A7.4}$$

Where $p^{Fh}_{g,a,0}$ is the probability for a dependent person of sex *g* and age *a* to receive in-kind formal care at home, in the base year *0* (e.g. 2025). Similarly, $p^{Fi}_{g,a,0}$ is the correspondent probability of being taken care of formally in institutions, while $p^{I}_{g,a,0}$ – the probability of being taken care of informally – is defined as not receiving any formal care service.

STEP 3: age-sex profiles of expenditure

Average expenditure is calculated for a base year *0*, to define the long-run unit costs of services. If the data is available (through the SHA joint questionnaire and/or provided by Member States), unit costs for in-kind formal care at home and in-kind formal care in institutions are calculated separately ([82]):

$$c^{Fh}_{g,a,0} = \frac{S^{Fh}_{g,a,0}}{N^{Fh}_{g,a,0}} \qquad \text{II.A7.5}$$

where: $S^{Fh}_{g,a,0}$ is public spending on in-kind formal care at home in the base year (e.g. 2025); and $N^{Fh}_{g,a,0}$ is the number of recipients of a given sex *g* and age *a* of in-kind formal care at home, for the same year.

Similarly, the unit cost per beneficiary of a given sex *g* and age *a* of in-kind formal care in institutions is:

([82]) Otherwise, an average of the age-cost profiles of other EU Member States is used.

$$c^{Fi}_{g,a,0} = \frac{S^{Fi}_{g,a,0}}{N^{Fi}_{g,a,0}} \qquad \text{II.A7.6}$$

Note that two adjustments are made to the derived unit costs. The first one applies when age profiles are not provided separately for the two types of in-kind formal care. The age profiles provided by Member States for public expenditure on in-kind formal care services are then used to 're-calibrate' the unit costs. In other words, the relative size of the amounts provided for each sex/age group is applied to respective 'total' public expenditure aggregates of in-kind formal care at home (S^{Fh}_0) and in-kind formal care in institutions (S^{Fi}_0).

The unit costs evolve in time with the GDP growth, as will be explained in the next section of this annex.

STEP 4: total public expenditure on long-term care services

For a projected year *t*, public spending on both types of in-kind formal care is then computed as:

$$TS^{Fh}_{g,a,t} = c^{Fh}_{g,a,t} \cdot DFh_{g,a,t} \qquad \text{II.A7.7}$$

where: $TS^{Fh}_{g,a,t}$ (resp. $TS^{Fi}_{g,a,t}$) is public spending on formal in-kind care at home (resp. in institution) for all persons of sex *g* and age *a* in year *t*.

Hence, for all age and sex groups:

$$TS^{Fh}_t = \sum TS^{Fh}_{g,a,t} \qquad \text{II.A7.8}$$

and

$$TS^{Fi}_t = \sum TS^{Fi}_{g,a,t} \qquad \text{II.A7.9}$$

STEP 5: total public expenditure on long-term care (services and cash)

Therefore, total public expenditure on both types of formal long-term care services are added to long-term care related cash benefit expenditure, to obtain TS^{LTC}_t for a projected year *t*:

$$TS^{LTC}_t = TS^{Fh}_t + TS^{Fi}_t + TS^{C}_t \qquad \text{II.A7.10}$$

Where TS^{C}_t is projected in a similar manner to expenditure on in-kind benefits ([83]).

These general definitions apply to the general, 'basic' model structure. To run more accurate scenarios, general and scenario-specific assumptions are being applied. These assumptions are illustrated in the following section.

Assumptions for the different scenarios

I. Baseline

The baseline of the 2027 Ageing Report builds onto the general model described above by assuming that for the time horizon of the projection exercise, the age-sex specific public expenditure profiles (showing the average public spending on long-term care per beneficiary for each year of age – or 5-year age group – from 0 to 85+ or more, according to data availability) grow with either GDP per worker (for in-kind benefits) or GDP per capita (for cash benefits). For $t > 0$, the projections of the unit

([83]) The projection of cash benefit expenditure is illustrated in less detail than that for in-kind benefits because the data on recipients is less readily available and therefore the profile is in some cases assumed to be the same as that for in-kind care.

costs profiles develop according to the following equations (subject to the relevant exceptions to reflect country-specific assumptions):

$$c^{F}_{g,a,t} = c^{F}_{g,a,t-1} \cdot (1 + \Delta Yphw_t) \qquad \text{II.A7.11}$$

$$c^{Fc}_{g,a,t} = c^{Fc}_{g,a,t-1} \cdot (1 + \Delta Ypc_t) \qquad \text{II.A7.12}$$

where:

- $c^{F}_{g,a,t}$ is the cost per beneficiary of a given sex *g* and age group *a* in period *t.* F can either be *Fh* for formal in-kind care at home or *Fi* for formal in-kind care in institution.
- $\Delta Yphw_t$ is the rate of growth of GDP per hours worked in year *t*:

$$\Delta Yphw_t = \left(\frac{Y_t}{HW_t} - \frac{Y_{t-1}}{HW_{t-1}}\right) / \left(\frac{Y_{t-1}}{HW_{t-1}}\right) \qquad \text{II.A7.13}$$

- $c^{Fc}_{g,a,t}$ is the cost per beneficiary of a given sex *g* and age group *a* in period *t* in for cash benefits (Fc).
- ΔYpc_t is GDP per capita growth rate in year *t*:

$$\Delta Ypc_t = \left(\frac{Y_t}{P_t} - \frac{Y_{t-1}}{P_{t-1}}\right) / \left(\frac{Y_{t-1}}{P_{t-1}}\right) \qquad \text{II.A7.14}$$

Further, the baseline takes the increase of life expectancy over the projection horizon into account.

It assumes that half of the projected longevity gains up to the end of the projection period will be spent in good health and free of disability/dependency. Accordingly, age-specific disability rates shift along the age profile by half of the projected increase in life expectancy.

In practice that means that one starts by calculating, for each projection year, the change in life expectancy in relation to the base year. For example, life expectancy for a 50-year-old man is expected to increase by 4 years: from 30 years in year *t* to 34 years in year *t+20* in a specific Member State. The scenario assumes that in *t+20*, in that same Member State, a 50-year-old man will have a disability prevalence of a (50 – (4 x 0.5)) = 48-year-old man in year *t*.

Hence, the change in life expectancy of a person of sex *g* and age *a* in relation to the base year (2025) is first calculated for each year of the projections, using the Eurostat population projections:

$$\Delta LE_{g,a,t,0} = LE_{g,a,t} - LE_{g,a,0} \qquad \text{II.A7.15}$$

where:

- $\Delta LE_{g,a,t,0}$ is the additional life expectancy of a person of sex *g* and age *a* in year *t* compared to a person of sex *g* and age *a* in the base year.
- $LE_{g,a,t}$ is the life expectancy of a person of sex *g* and age *a* in year *t*.
- $LE_{g,a,0}$ is life expectancy of an average person of sex *g* and age *a* in the base year.

Then the probability for being a dependent person is adjusted accordingly:

$$p_{g,a-0.5\Delta \text{ LE},t} = p_{g,a,0} \qquad \text{II.A7.16}$$

where Δ LE = $\Delta LE_{g,a,t,0}$

Lastly, for Member States in the highest quartile of long-term care expenditure as a proportion of GDP in the base year, income elasticity of long-term care expenditure is assumed to remain 1 over the projection period. For the rest, income elasticity is assumed to start at 1.1 in the base year of 2025, falling to 1 by the end of the projection period.

II. No healthy ageing scenario

The 'no healthy ageing scenario' is identical to the baseline except for its assumption on the dependency status. It assumes that the disability rates of the population of a given age will not improve despite increases in life expectancy. This means, for example, that even if life expectancy increases by two years by 2080, the proportion of 80-year-olds who are disabled in 2025 will be the same as in 2080.

This implies that the probability of being a dependent person would stay constant over the projection horizon:

$$p_{g,a,t} = p_{g,a,0} \qquad \text{II.A7.17}$$

For all $t > 0$.

Those constant proportions are then applied to the projected changes in the dependent population. Since the prevalence of dependency is kept constant over the projection horizon, the dependent population evolves precisely in line with the total elderly population.

III. Healthy ageing scenario

This scenario reflects an alternative assumption about the dependency ratio. Inspired by the so-called 'dynamic equilibrium hypothesis' ([84]), it is analogous to the healthy ageing scenario carried out in the framework of health care expenditure projections. The profile of age-specific disability rates shifts in line with changes in life expectancy (disability rate in the future is equal to that of a younger - by the same number of years as the change in age-specific life expectancy - age cohort today), resulting in a gradual decrease over time in disability prevalence for each age cohort.

In practical terms, one starts by calculating, for each projection year, the change in life expectancy in relation to the base year. For example, life expectancy for a 50-year-old man is expected to increase by 4 years: from 30 years in year *t* to 34 years in year *t+20* in a specific Member State. Then, the scenario assumes that in *t+20*, in that same Member State, a 50-year-old man will have a disability prevalence of a (50 - 4) = 46-year-old man in year *t*. Equation II.A7.16 is adapted accordingly:

$$p_{g,a-\Delta \mathrm{LE},t} = p_{g,a,0} \qquad \text{II.A7.18}$$

IV. Coverage convergence scenario

This policy-change scenario assumes an expansion of publicly financed formal care provision into the groups of population that have not been covered by the public in-kind programmes so far. 'Formal coverage' covers any of the three types of formal long-term care: in-kind institutional care, in-kind formal home care, and cash benefits. This scenario assumes that coverage of in-kind formal care (institutional and home care) will be extended to cover a proportion of those dependent people who do not receive any type of care in the base year. The assumption is that all recipients of long-term care are dependent. It means that the equations II.A7.2 to II.A7.4 become four equations, with probabilities now changing over time, i.e. depending on *t*, but also country-specific (for a country *i*).

The scenario envisaged is a coverage convergence to the EU average for in-kind care. It is meant to consider the high diversity of country-specific current in-kind care-mix between home care and institutional care. The Member States where the in-kind formal coverage rate for a specific age-range is below the EU average in the starting year are assumed to converge to this average by 2080. For age ranges with coverage above the EU average, this scenario is the same as the base case scenario.

The baseline steps are used for the countries whose formal in-kind coverage for that age-group is the same or greater than the EU average in the base year (2025). For those countries whose in-kind formal

([84]) Rechel et al. (2020).

coverage is below the EU average for that age-group, it is assumed to converge to the EU average. It therefore implies that each type of in-kind formal care converges at a different pace, making up for the respective relative gaps to the EU average. This scenario allows a country to grow faster the relatively less-developed type of in-kind formal care ([85]).

V. Cost convergence to EU average scenario

This policy-change scenario is run in parallel with the analogous scenario on health care expenditure projections. The 'cost convergence scenario' is meant to capture the possible effect of a convergence in real living standards on long-term care spending. It assumes an upward convergence of the relative age-sex specific per beneficiary expenditure profiles (as percent of GDP per capita or per hours worked) of all countries below the corresponding EU average to the EU average. This is done for each type of formal care coverage (i.e. formal care in institutions, formal care at home, cash benefits).

To run this scenario, one builds on the methodology used for the baseline. For those countries whose per beneficiary costs are equal to or above the EU average nothing changes.

For those countries below the EU average per beneficiary costs in the base year (2025) a further change in the way cost per beneficiary evolves over the projection period is assumed to reach the EU average of per beneficiary costs for each age-group. Building on the equations for cash benefits and for in-kind benefits, the real convergence to the EU average is assumed to follow the adjusted equations (for $t > 0$):

$$c^{Fc}_{a,t,i} = c^{Fc}_{a,t-1,i} \cdot \left(1 + \Delta Ypc_{t,i} + m_{a,i}\right) \qquad \text{II.A7.19}$$

$$c^{F}_{a,t,i} = c^{F}_{a,t-1,i} \cdot \left(1 + \Delta Yphw_{t,i} + n_{a,i}\right) \qquad \text{II.A7.20}$$

where:

$c^{F}_{a,t,i}$ is the country *i*-specific cost of in-kind benefits per beneficiary of a given age *a* in period *t*. F is either *Fh* for formal care at home or *Fi* for formal care in institution – adjusted to the GDP per hours worked growth and a catch-up effect if country *i* is below the EU average;

$c^{Fc}_{a,t,i}$ is the country *i*-specific cost of cash benefits per beneficiary of a given age a in period t –adjusted to GDP per capita growth and a catch-up effect if country *i* is below the EU average;

$\Delta Ypc_{t,i}$ is the GDP per capita growth rate in year t, for country *i*;

$\Delta Yphw_{t,i}$ is GDP per hours worked growth rate in year *t*, for country *i,* and

$m_{a,i}$ and $n_{a,i}$ are hypothetical rates of growth of per beneficiary costs. They are higher than zero for countries whose per beneficiary costs are below the EU average, and equal to zero for those countries whose per beneficiary costs are equal or above the EU average. To close the gap, $m_{a,i}$ is assumed to be constant in time and equal to ([86]):

$$m_{a,i} = \left[\left(\frac{\bar{rc}_{a,EU,2025}}{rc_{a,i,2025}}\right)^{\frac{1}{2080-2025}}\right] - 1 \qquad \text{II.A7.21}$$

if $\bar{rc}_{a,EU,2025} \geq rc_{a,i,2025}$

where:

([85]) Note that the convergence to the EU average is done for each type of care and for each 5-year age group and sex separately.

([86]) Assumptions for different convergence paths according to the initial country-specific situation - comparing to the EU average age profile - could be explored further when data is made available.

$\overline{rc}_{a,EU,2025}$ is the weighted EU average relative cost per beneficiary of age *a* calculated in the base year of 2025 and

$\overline{rc}_{a,i,2025}$ is the relative cost per beneficiary of age *a* for country *i* calculated in the base year of 2025 defined as:

$$rc_{a,i,2025} = \left(\frac{c_{a,i,2025}}{Yphw_{a,i,2025}}\right) \qquad \text{II.A7.22}$$

and

$$\overline{rc}_{a,EU,2025} = \left(\frac{\bar{c}_{a,EU,2025}}{\overline{Yphw}_{a,EU,2025}}\right) \qquad \text{II.A7.23}$$

where:

$\bar{c}_{a,EU,2025}$ is the weighted EU average cost per beneficiary of age *a* calculated in the base year (2025); and

$\overline{Yphw}_{a,EU,2025}$ is the average GDP per hours worked in the EU calculated in the base year (2025).

The same type of reasoning can be run with the corresponding equations for cash benefits, adjusted to GDP per capita growth instead of GDP per hours worked growth.

Then after country-specific per beneficiary cost has been calculated, subsequent corresponding equations are used to obtain total age-sex group expenditure and then total public expenditure on long-term care in each projection year.

VI. Risk scenario

While the 'Risk scenario' keeps the assumption that half of the future gains in life expectancy are spent without care-demanding disability, as in the baseline, the scenario assumes upwards convergence of both unit costs and coverage to the EU average. Therefore, it combines the convergence assumptions from the 'cost convergence scenario' and the 'coverage convergence' scenario.

ANNEX 8

Organisational structure of secondary education

Three main organisational models can be distinguished: (i) single structure education; (ii) common core curriculum provision; and (iii) differentiated lower secondary education. In Czechia, Latvia, Hungary and Slovakia, elements of the single-structure and common-core models coexist (European Commission/EACEA/Eurydice, 2022).

Single structure education is the main model in Bulgaria, Denmark, Estonia, Croatia, Poland, Portugal, Slovenia, Finland and Sweden, as well as in Iceland and Norway. The end of the single structure does not necessarily coincide with the end of full-time compulsory education or training, which in some countries extends into upper secondary education.

In many European countries, all pupils follow the same general common-core curriculum during lower secondary education. The relationship between the end of lower secondary education and the end of full-time compulsory education or training varies across countries.

In all countries, full-time compulsory education or training includes primary and lower secondary education. In most countries, it also includes one or more grades of upper secondary education. Consequently, in many education systems, pupils remain in compulsory education or training after entering upper secondary education, where different general and vocational pathways may be available.

Among EU Member States, differentiated lower secondary education is the main model in Germany, Lithuania, Luxembourg, Malta, the Netherlands and Austria. In these systems, pupils follow distinct educational pathways or specific types of education, starting either at the beginning or during the course of lower secondary education, and receive different certificates at the end of their studies.

ANNEX 9

Data sources for education expenditure

Data sources and information

To project total expenditure on public education, Eurostat will be the main provider of data, mainly through the UOE data collection ([87]). Consistent with the 2024 Ageing Report, the average of the two last available years (i.e. 2021 and 2022 – or more recent data if available) should be used as the starting point of the projections. In addition, this average is then uprated until the base year of the 2027 Ageing Report projections (i.e. 2025) using COFOG data ([88]).

Specifically, by country, year, and ISCED groupings (1, 2, 3-4, 5-8), the following information from the UOE dataset will be used:

- Total number of students by single age
- Number of working students by single age
- Numbers of teachers and non-teaching staff

Total expenditure in staff compensation ([89])

- Other current (excluding staff compensation) and capital expenditure
- Share of transfers over total public education expenditure
- Share of publicly funded education

Furthermore, and to secure full consistency of the long-term budgetary exercise, the common AWG macroeconomic assumptions for the following variables are used:

- Total population per single age
- Labour force per single age
- GDP per worker
- GDP

([87]) The objective of the UNESCO-UIS/OECD/EUROSTAT (UOE) data collection on education statistics is to provide internationally comparable data on key aspects of education systems, specifically on the participation and completion of education programmes, as well as the cost and type of resources dedicated to education.

([88]) Classification of the Functions of Government (COFOG) data. Because of recurrent lags in the availability of recent UOE data, uprating the starting point until the base year by using COFOG information has the advantage of taking into account the most recent outturns. In practice, the UOE starting value is uprated by applying the ratio of COFOG expenditure in the base year to that in the latest available UOE year for the same category.

([89]) Current expenditure on staff compensation is obtained by deducting expenditure designated for capital, for ancillary services and for R&D from direct expenditure on educational institutions.

ANNEX 10

Estimating the education enrolment rate

Starting with the labour market identity:

where $E_{i,t}$, $U_{i,t}$, $I_{i,t}$ and $P_{i,t}$ are, respectively, employment, unemployment, inactive and the population for age cohort *i* in period *t*.

After adding and subtracting the number of full-time students ($SF_{i,t}$), and of part-time students ($SP_{i,t}$):

$$SF_{i,t} + SP_{i,t} - SP_{i,t} + E_{i,t} + U_{i,t} + I_{i,t} - SF_{i,t} \equiv P_{i,t} \qquad \text{II.A10.1}$$

Let us use the definitions of total students ($ST_{i,t} \equiv SF_{i,t} + SP_{i,t}$), labour force ($LF_{i,t} \equiv E_{i,t} + U_{i,t}$), and inactive minus full-time students ($I^*_{i,t} \equiv I_{i,t} - SF_{i,t}$):

$$ST_{i,t} - SP_{i,t} + LF_{i,t} + I^*_{i,t} \equiv P_{i,t} \qquad \text{II.A10.2}$$

Dividing Equation II.A10.2 by the population ($P_{i,t}$), and defining $\alpha_{i,t} \equiv \frac{SP_{i,t}}{SF_{i,t}+SP_{i,t}} = \frac{SP_{i,t}}{ST_{i,t}}$ as the fraction of part-time students in the total number of students, the following identity is obtained:

$$\frac{ST_{i,t}}{P_{i,t}} - \frac{SP_{i,t}}{ST_{i,t}} * \frac{ST_{i,t}}{P_{i,t}} + \frac{LF_{i,t}}{P_{i,t}} + \frac{I^*_{i,t}}{P_{i,t}} = 1 \qquad \text{II.A10.3}$$

Equation II.A10.3 can be rearranged as:

$$e_{i,t} = \frac{1 - p_{i,t} - i^*_{i,t}}{1 - \alpha_{i,t}} \qquad \text{II.A10.4}$$

where $e_{i,t} = \frac{ST_{i,t}}{P_{i,t}}$ is the enrolment rate for total students; $p_{i,t} = \frac{LF_{i,t}}{P_{i,t}}$ is the participation rate; and $i^*_{i,t} = \frac{I^*_{i,t}}{P_{i,t}}$ is the fraction of inactive minus full-time students over the population.

In Equation II.A10.4, enrolment rates are inversely related to the participation and the (adjusted) inactivity rates.

In most EU Member States, the LFS MAINSTAT variable can be used to assess the distribution of inactivity by age, distinguishing between schooling and other forms of inactivity ([90]).

Assume that the ratio between full-time students and the total inactive ($\overline{K}_{i,b}$) is constant over time at the value observed in the base period (b):

$$\frac{SF_{i,t}}{I_{i,t}} = \frac{SF_{i,b}}{I_{i,b}} = \overline{K}_{i,b} \Rightarrow \frac{I^*_{i,t}}{P_{i,t}} = \left(1 - \overline{K}_{i,b}\right) * \frac{I_{i,t}}{P_{i,t}} \Rightarrow i^*_{i,t} - i^*_{i,b} = \left(1 - \overline{K}_{i,b}\right) * \left(i_{i,t} - i_{i,b}\right) \qquad \text{II.A10.5}$$

where $\overline{K}_{i,b} \leq 1$; and $i_{i,t} \equiv \frac{I_{i,t}}{P_{i,t}}$ and $i^*_{i,t} \equiv \frac{I^*_{i,t}}{P_{i,t}}$ are the inactivity and the adjusted inactivity rates, respectively.

A bar over a variable indicates that it is constant (i.e. time invariant).

([90]) However, the MAINSTAT variable, which describes the main labour market status, is an optional one.

How Equation II.A10.4 is used to project enrolment rates

Expressing Equation II.A10.4 in terms of differences to the base period, substituting Equation II.A10.5, and using the identity $\left(p_{i,t} - p_{i,b}\right) + \left(i_{i,t} - i_{i,b}\right) \equiv 0$:

$$e_{i,t} - e_{i,b} = -\frac{\overline{\kappa}_{i,b}}{1 - \overline{\alpha}_{i,b}} * \left(p_{i,t} - p_{i,b}\right) \qquad \text{II.A10.6}$$

where $\overline{\kappa}_{i,b} = \frac{SF_{i,b}}{I_{i,b}}$; $\overline{\alpha}_{i,b} \equiv \frac{SP_{i,b}}{SF_{i,b}+SP_{i,b}} = \frac{SP_{i,b}}{ST_{i,b}}$, and $0 \leq \overline{\kappa}_{i,b}, \overline{\alpha}_{i,b} \leq 1$.

A value for $\overline{\kappa}_{i,b}$ lower than one means that changes in the labour force do not necessarily reduce one by one enrolment rates, because some people coming from inactivity were not involved in education activities.

Part III

Statistical Annex

The detailed dataset with annual data for 2025-2080 is available online.

1. BELGIUM

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.13	1.44	1.47	1.53	1.54	1.55	1.56	1.57
Life expectancy at birth								
women	5.8	84.5	85.0	86.0	87.1	88.2	89.2	90.3
men	6.5	80.4	81.0	82.1	83.3	84.5	85.7	86.9
Life expectancy at 65 (years)								
women	4.7	22.1	22.5	23.3	24.1	25.0	25.9	26.8
men	4.9	19.2	19.6	20.4	21.3	22.2	23.1	24.1
Net migration (thousands)	-23.6	52.2	44.3	39.0	34.4	31.6	30.3	28.7
Net migration as % of population in t-1	-0.2	0.4	0.4	0.3	0.3	0.3	0.2	0.2
Population (million)	0.7	11.9	12.1	12.4	12.6	12.6	12.6	12.6
share of prime-age population (25-54y)	-4.2	38.7	38.4	38.7	37.7	36.5	35.3	34.5
share of working-age population (20-64y)	-6.1	57.7	57.1	56.4	55.2	54.3	53.5	51.6
share of elderly population (65+)	9.9	20.4	22.1	24.2	25.3	26.8	28.3	30.3
share of very elderly population (80+)	7.1	5.6	6.5	8.2	9.7	10.3	11.4	12.7
share of very elderly population (80+) in elderly population (65+)	14.3	27.6	29.2	33.8	38.3	38.5	40.3	41.9
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.1	1.5	1.1	1.3	1.1	1.1	1.1	0.9
Labour input: hours worked (growth rate)	0.0	0.9	0.5	0.2	-0.1	-0.2	-0.2	-0.4
Labour productivity per hour (growth rate)	1.1	0.6	0.6	1.0	1.2	1.3	1.3	1.3
TFP growth	0.7	0.3	0.3	0.7	0.8	0.8	0.8	0.8
Capital deepening contribution	0.4	0.3	0.3	0.4	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.0	1.0	0.8	1.0	1.1	1.1	1.1	1.0
Potential GDP per worker (growth rate)	1.1	1.1	0.4	1.0	1.2	1.3	1.3	1.3
HICP (growth rate)	2.1	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.2	3.2	4.3	4.8	4.3	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-384	6,870	6,917	7,022	6,973	6,856	6,745	6,486
Working-age population (growth rate)	-0.6	0.2	0.1	0.1	-0.1	-0.1	-0.3	-0.4
Labour force (20-64y; thousands)	-201	5,319	5,395	5,555	5,533	5,413	5,311	5,118
Participation rate (20-64y)	1.5	77.4	78.0	79.1	79.4	79.0	78.8	78.9
young (20-24y)	2.3	50.9	53.0	53.4	53.1	53.1	53.3	53.2
prime-age (25-54y)	0.2	85.9	86.3	86.2	86.1	86.1	86.0	86.1
older (55-64y)	4.7	64.1	64.7	68.5	69.8	69.2	69.3	68.8
oldest (65-69y)	10.3	10.7	14.5	18.9	20.7	21.2	21.2	21.0
Participation rate (20-64y) - women	2.0	73.2	74.3	75.6	75.8	75.3	75.1	75.2
young (20-24y)	2.5	46.1	48.4	48.8	48.5	48.5	48.7	48.6
prime-age (25-54y)	0.2	81.9	82.5	82.5	82.1	82.1	82.1	82.1
older (55-64y)	6.9	59.3	61.5	66.1	67.7	66.6	66.6	66.2
oldest (65-69y)	12.6	7.6	13.6	18.5	20.0	20.5	20.4	20.2
Participation rate (20-64y) - men	0.9	81.6	81.6	82.6	82.9	82.6	82.4	82.5
young (20-24y)	2.1	55.5	57.4	57.8	57.5	57.5	57.6	57.6
prime-age (25-54y)	0.1	89.9	90.1	89.9	89.9	89.9	89.9	90.0
older (55-64y)	2.5	69.0	67.9	70.9	72.0	71.7	71.9	71.5
oldest (65-69y)	7.8	14.1	15.5	19.3	21.4	21.9	22.1	21.8
Average labour market exit age[1]	1.2	63.5	64.2	64.4	64.7	64.7	64.7	64.7
women	1.0	63.7	64.4	64.5	64.7	64.7	64.7	64.7
men	1.5	63.2	64.1	64.4	64.7	64.7	64.7	64.7
Employment rate (20-64y)	2.0	72.9	73.7	74.6	75.2	74.7	74.6	74.9
Employment rate (15-74y)	0.8	58.8	59.1	60.8	61.4	60.3	60.2	59.6
Unemployment rate (20-64y)	-0.8	5.9	5.5	5.6	5.2	5.4	5.3	5.1
Unemployment rate (15-74y)	-0.9	6.2	5.8	5.9	5.5	5.6	5.5	5.3
Employment (20-64y; millions)	-0.1	5.0	5.1	5.2	5.2	5.1	5.0	4.9
Employment (15-74y; millions)	-0.1	5.2	5.3	5.5	5.5	5.4	5.3	5.1
share of young (20-24y)	-0.2	5.8	6.4	5.9	5.3	5.7	5.7	5.5
share of prime-age (25-54y)	-2.7	72.0	71.7	71.7	70.7	69.8	68.5	69.3
share of older (55-64y)	1.3	18.4	17.6	17.9	19.1	19.2	20.5	19.7
share of oldest (65-74y)	1.9	1.8	2.2	2.7	3.1	3.4	3.5	3.7
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	0.9	22.7	21.8	21.2	22.5	22.8	24.2	23.5
Old-age dependency ratio[3]	23.4	35.4	38.7	42.8	45.7	49.3	52.9	58.8
Total dependency ratio[4]	20.6	73.3	75.2	77.3	81.1	84.3	87.0	93.9
Total economic dependency ratio (20-64)[5]	20.3	126.9	126.8	126.2	129.7	134.8	138.9	147.2
Total economic dependency ratio (15-74)[6]	17.1	122.1	121.4	120.6	123.4	127.8	131.6	139.1
Old-age economic dependency ratio (20-64y)[7]	27.8	46.6	50.2	54.4	57.5	62.3	67.1	74.4
Old-age economic dependency ratio (15-74y)[8]	25.5	44.8	48.0	52.0	54.7	59.0	63.6	70.3

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

2. BULGARIA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.08	1.64	1.69	1.77	1.76	1.75	1.73	1.72
Life expectancy at birth								
women	7.8	79.6	80.3	81.6	83.0	84.4	85.9	87.4
men	9.7	72.4	73.1	74.8	76.5	78.3	80.1	82.1
Life expectancy at 65 (years)								
women	5.7	18.8	19.2	20.2	21.2	22.2	23.3	24.5
men	6.3	14.7	15.1	16.2	17.3	18.4	19.7	21.0
Net migration (thousands)	-8.1	21.6	6.4	9.3	10.7	10.5	12.4	13.5
Net migration as % of population in t-1	0.0	0.3	0.1	0.2	0.2	0.2	0.3	0.3
Population (million)	-1.7	6.4	6.2	5.8	5.4	5.1	4.9	4.7
share of prime-age population (25-54y)	-4.6	38.2	36.0	32.9	31.9	33.1	33.5	33.7
share of working-age population (20-64y)	-5.6	56.8	56.1	53.4	50.2	49.5	51.3	51.2
share of elderly population (65+)	5.0	24.1	25.3	28.0	30.4	30.9	29.1	29.1
share of very elderly population (80+)	6.2	5.5	6.8	8.5	9.5	11.5	12.6	11.7
share of very elderly population (80+) in elderly population (65+)	17.4	22.6	27.0	30.4	31.2	37.3	43.3	40.0
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.4	3.4	2.6	1.3	0.9	1.2	1.2	1.1
Labour input: hours worked (growth rate)	-0.6	1.0	0.0	-1.2	-1.1	-0.3	-0.2	-0.3
Labour productivity per hour (growth rate)	2.0	2.4	2.6	2.6	2.1	1.5	1.4	1.4
TFP growth	1.1	1.5	1.4	1.3	1.0	0.9	0.9	0.8
Capital deepening contribution	0.9	0.9	1.2	1.3	1.0	0.6	0.6	0.5
Potential GDP per capita (growth rate)	2.0	3.7	3.3	2.0	1.6	1.8	1.6	1.3
Potential GDP per worker (growth rate)	2.0	1.2	2.9	2.6	2.1	1.5	1.4	1.4
HICP (growth rate)	2.1	3.5	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.2	3.9	4.4	4.5	4.2	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-1,240	3,649	3,498	3,091	2,719	2,526	2,492	2,409
Working-age population (growth rate)	0.5	-0.8	-0.8	-1.4	-1.2	-0.2	-0.3	-0.3
Labour force (20-64y; thousands)	-941	2,912	2,790	2,470	2,204	2,067	2,035	1,971
Participation rate (20-64y)	2.0	79.8	79.8	79.9	81.0	81.8	81.7	81.8
young (20-24y)	2.4	37.3	39.2	39.8	39.5	39.6	39.7	39.7
prime-age (25-54y)	2.8	87.1	88.1	89.1	89.8	90.0	89.8	89.9
older (55-64y)	4.0	73.5	73.9	73.6	75.0	77.8	77.7	77.5
oldest (65-69y)	-2.6	20.6	15.0	16.6	17.3	17.2	18.2	18.0
Participation rate (20-64y) - women	3.0	75.8	76.3	76.3	77.9	78.9	78.7	78.8
young (20-24y)	3.8	30.1	33.2	33.9	33.7	33.7	33.8	33.8
prime-age (25-54y)	3.4	83.6	84.5	85.8	86.9	87.1	86.9	87.0
older (55-64y)	6.0	69.5	71.7	70.2	72.2	75.8	75.7	75.5
oldest (65-69y)	1.3	16.0	11.7	15.1	16.4	16.4	17.4	17.3
Participation rate (20-64y) - men	1.0	83.7	83.1	83.4	84.2	84.7	84.5	84.7
young (20-24y)	1.1	44.1	44.8	45.3	45.1	45.1	45.2	45.2
prime-age (25-54y)	2.3	90.4	91.5	92.4	92.7	92.7	92.7	92.7
older (55-64y)	1.8	77.6	76.1	77.1	77.9	79.9	79.6	79.4
oldest (65-69y)	-7.5	26.3	18.9	18.3	18.2	18.1	18.9	18.8
Average labour market exit age[1]	0.6	63.8	64.2	64.3	64.4	64.4	64.4	64.4
women	1.1	63.3	63.9	64.2	64.4	64.4	64.4	64.4
men	0.0	64.4	64.4	64.4	64.4	64.4	64.4	64.4
Employment rate (20-64y)	0.6	77.0	76.7	76.1	77.1	77.6	77.4	77.6
Employment rate (15-74y)	-0.9	60.7	59.6	58.0	57.5	58.4	60.6	59.8
Unemployment rate (20-64y)	1.7	3.5	3.8	4.8	4.8	5.2	5.2	5.1
Unemployment rate (15-74y)	1.7	3.5	3.9	4.9	4.9	5.3	5.4	5.3
Employment (20-64y; millions)	-0.9	2.8	2.7	2.4	2.1	2.0	1.9	1.9
Employment (15-74y; millions)	-1.0	2.9	2.8	2.4	2.2	2.0	2.0	1.9
share of young (20-24y)	1.0	3.3	4.1	4.2	4.0	4.5	4.4	4.3
share of prime-age (25-54y)	-0.3	70.6	69.3	66.7	68.2	71.5	70.0	70.3
share of older (55-64y)	0.3	22.0	24.0	25.7	24.2	20.9	22.7	22.3
share of oldest (65-74y)	-1.0	3.8	2.3	3.1	3.3	2.8	2.6	2.8
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	-0.8	24.8	26.4	28.7	26.9	22.5	24.3	24.1
Old-age dependency ratio[3]	14.4	42.5	45.1	52.4	60.6	62.5	56.8	56.9
Total dependency ratio[4]	19.3	76.0	78.2	87.1	99.2	102.2	94.9	95.4
Total economic dependency ratio (20-64)[5]	22.4	120.4	125.3	137.2	149.2	151.5	142.9	142.8
Total economic dependency ratio (15-74)[6]	22.9	115.4	122.0	132.6	143.9	146.8	138.7	138.4
Old-age economic dependency ratio (20-64y)[7]	19.3	51.1	56.4	65.6	75.1	77.6	70.5	70.4
Old-age economic dependency ratio (15-74y)[8]	19.2	49.0	54.9	63.4	72.4	75.2	68.5	68.2

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

3. CZECHIA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.35	1.27	1.40	1.61	1.61	1.61	1.62	1.62
Life expectancy at birth								
women	6.2	83.1	83.6	84.7	85.8	87.0	88.1	89.3
men	7.7	77.2	77.9	79.2	80.5	82.0	83.4	84.9
Life expectancy at 65 (years)								
women	5.1	20.7	21.1	22.0	22.8	23.8	24.8	25.8
men	5.7	16.9	17.4	18.3	19.3	20.3	21.4	22.6
Net migration (thousands)	-14.0	42.0	15.8	33.4	28.9	26.0	27.5	28.1
Net migration as % of population in t-1	-0.1	0.4	0.1	0.3	0.3	0.3	0.3	0.3
Population (million)	-1.1	10.9	10.8	10.6	10.6	10.3	10.0	9.9
share of prime-age population (25-54y)	-7.1	41.1	38.8	36.5	35.6	35.1	34.5	34.0
share of working-age population (20-64y)	-6.5	58.2	58.6	57.4	53.0	51.6	53.2	51.7
share of elderly population (65+)	9.4	20.8	22.0	25.0	28.2	29.8	29.0	30.1
share of very elderly population (80+)	7.3	4.9	6.4	7.8	8.5	11.7	12.5	12.2
share of very elderly population (80+) in elderly population (65+)	16.9	23.4	29.3	31.3	30.0	39.2	43.2	40.3
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.1	1.6	1.2	1.2	0.8	1.1	1.2	0.9
Labour input: hours worked (growth rate)	-0.3	1.4	-0.3	-0.3	-0.8	-0.3	-0.1	-0.5
Labour productivity per hour (growth rate)	1.4	0.2	1.5	1.6	1.6	1.3	1.3	1.4
TFP growth	0.9	0.0	0.9	1.0	1.0	0.9	0.9	0.9
Capital deepening contribution	0.5	0.1	0.6	0.5	0.6	0.4	0.4	0.5
Potential GDP per capita (growth rate)	1.4	3.3	1.5	1.3	0.9	1.4	1.5	1.1
Potential GDP per worker (growth rate)	1.5	2.3	1.3	1.6	1.6	1.3	1.3	1.4
HICP (growth rate)	2.0	2.3	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.6	4.3	5.3	5.4	4.5	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-1,252	6,348	6,327	6,099	5,594	5,333	5,343	5,096
Working-age population (growth rate)	-0.6	0.1	-0.2	-0.8	-0.8	-0.1	-0.2	-0.6
Labour force (20-64y; thousands)	-1,025	5,418	5,378	5,183	4,839	4,618	4,601	4,393
Participation rate (20-64y)	0.9	85.3	85.0	85.0	86.5	86.6	86.1	86.2
young (20-24y)	2.7	52.2	54.5	54.8	54.6	54.6	54.9	54.9
prime-age (25-54y)	0.0	90.8	91.2	90.7	90.8	91.4	90.9	90.8
older (55-64y)	5.5	80.3	80.7	83.1	85.1	86.3	86.2	85.8
oldest (65-69y)	10.6	19.4	21.8	25.2	28.2	29.0	30.4	30.0
Participation rate (20-64y) - women	1.3	79.9	80.0	79.9	81.5	81.9	81.3	81.2
young (20-24y)	1.7	45.6	46.7	47.2	47.0	47.0	47.3	47.3
prime-age (25-54y)	-0.4	85.0	85.9	84.7	84.5	85.9	84.9	84.6
older (55-64y)	8.1	76.7	77.2	80.8	84.2	85.3	85.3	84.8
oldest (65-69y)	13.1	16.5	21.1	23.7	27.7	28.6	30.0	29.6
Participation rate (20-64y) - men	0.3	90.6	89.9	89.9	91.3	91.1	90.7	91.0
young (20-24y)	3.5	58.6	61.7	62.0	61.8	61.8	62.0	62.1
prime-age (25-54y)	0.3	96.3	96.3	96.3	96.6	96.5	96.5	96.6
older (55-64y)	2.8	84.0	84.2	85.3	86.1	87.3	87.2	86.8
oldest (65-69y)	7.7	22.7	22.4	26.8	28.7	29.4	30.9	30.4
Average labour market exit age[1]	1.6	64.2	65.0	65.5	65.8	65.8	65.8	65.8
women	1.9	64.0	64.8	65.4	65.8	65.8	65.8	65.8
men	1.3	64.5	65.2	65.5	65.8	65.8	65.8	65.8
Employment rate (20-64y)	0.5	83.1	82.7	82.1	84.2	83.7	83.1	83.6
Employment rate (15-74y)	-0.7	66.9	67.1	66.0	66.1	65.8	67.4	66.2
Unemployment rate (20-64y)	0.4	2.6	2.7	3.4	2.6	3.4	3.5	3.1
Unemployment rate (15-74y)	0.4	2.8	2.9	3.6	2.7	3.6	3.6	3.2
Employment (20-64y; millions)	-1.0	5.3	5.2	5.0	4.7	4.5	4.4	4.3
Employment (15-74y; millions)	-1.0	5.5	5.4	5.3	5.0	4.7	4.7	4.5
share of young (20-24y)	0.5	4.7	5.9	5.9	4.5	5.6	5.7	5.3
share of prime-age (25-54y)	-7.0	72.6	68.8	64.8	67.0	68.4	65.4	65.6
share of older (55-64y)	4.7	18.9	21.7	24.5	23.4	20.8	24.1	23.6
share of oldest (65-74y)	1.9	3.0	2.9	4.2	4.7	4.6	4.3	5.0
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	4.2	20.8	23.6	26.2	25.0	21.9	25.1	25.0
Old-age dependency ratio[3]	22.6	35.7	37.5	43.6	53.3	57.8	54.5	58.3
Total dependency ratio[4]	21.5	71.9	70.8	74.2	88.7	93.9	87.8	93.4
Total economic dependency ratio (20-64)[5]	22.1	100.1	99.7	103.3	115.6	122.4	117.0	122.2
Total economic dependency ratio (15-74)[6]	19.1	96.4	96.2	98.4	109.6	116.1	111.4	115.5
Old-age economic dependency ratio (20-64y)[7]	24.7	39.7	42.3	48.6	58.3	64.1	61.0	64.5
Old-age economic dependency ratio (15-74y)[8]	22.7	38.3	40.8	46.3	55.3	60.8	58.1	60.9

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

4. DENMARK

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.09	1.51	1.55	1.59	1.59	1.60	1.60	1.61
Life expectancy at birth								
women	5.9	84.0	84.5	85.6	86.6	87.7	88.8	89.9
men	6.4	80.3	80.9	82.0	83.1	84.3	85.5	86.7
Life expectancy at 65 (years)								
women	4.9	21.4	21.8	22.6	23.5	24.4	25.3	26.3
men	5.0	18.8	19.2	20.0	20.9	21.8	22.8	23.8
Net migration (thousands)	-16.3	31.6	21.0	18.9	16.3	17.1	16.2	15.3
Net migration as % of population in t-1	-0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.2
Population (million)	0.2	6.0	6.1	6.3	6.3	6.3	6.3	6.2
share of prime-age population (25-54y)	-4.4	38.3	38.1	38.4	37.2	35.7	34.7	33.9
share of working-age population (20-64y)	-6.8	57.7	56.9	55.2	55.4	54.2	52.3	50.9
share of elderly population (65+)	10.1	21.0	22.4	24.5	25.1	27.1	29.5	31.0
share of very elderly population (80+)	7.5	5.8	7.0	7.9	9.5	10.3	11.0	13.3
share of very elderly population (80+) in elderly population (65+)	15.1	27.8	31.4	32.3	38.0	38.0	37.3	42.9
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.4	2.1	1.5	1.9	1.7	1.3	1.2	1.2
Labour input: hours worked (growth rate)	0.2	1.1	0.2	0.5	0.3	0.0	-0.1	-0.1
Labour productivity per hour (growth rate)	1.3	1.0	1.3	1.4	1.3	1.3	1.3	1.3
TFP growth	0.9	0.8	0.9	0.9	0.9	0.8	0.8	0.8
Capital deepening contribution	0.4	0.2	0.4	0.5	0.5	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.4	1.5	1.2	1.8	1.7	1.4	1.3	1.3
Potential GDP per worker (growth rate)	1.3	0.9	0.5	1.4	1.3	1.3	1.3	1.3
HICP (growth rate)	2.0	1.8	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.7	2.3	3.2	3.6	3.9	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-299	3,466	3,492	3,455	3,485	3,400	3,268	3,167
Working-age population (growth rate)	-0.7	0.5	-0.1	0.0	0.1	-0.5	-0.3	-0.3
Labour force (20-64y; thousands)	-65	2,938	2,985	3,035	3,108	3,059	2,958	2,873
Participation rate (20-64y)	6.0	84.8	85.5	87.8	89.2	90.0	90.5	90.7
young (20-24y)	2.8	80.6	83.5	83.5	83.5	83.5	83.5	83.5
prime-age (25-54y)	4.5	87.8	88.7	90.6	91.8	92.2	92.2	92.2
older (55-64y)	11.5	78.0	76.8	80.7	83.8	86.5	88.7	89.4
oldest (65-69y)	38.8	33.2	30.2	43.2	53.2	58.9	65.5	72.0
Participation rate (20-64y) - women	8.3	81.4	82.5	85.9	87.8	89.0	89.5	89.7
young (20-24y)	3.8	79.2	83.0	83.0	83.0	83.0	83.0	83.0
prime-age (25-54y)	6.6	84.4	85.9	88.8	90.5	91.0	91.0	91.0
older (55-64y)	15.0	73.7	72.2	77.8	82.3	85.9	88.1	88.7
oldest (65-69y)	49.0	22.3	21.0	34.8	45.6	55.7	65.2	71.4
Participation rate (20-64y) - men	3.6	88.1	88.4	89.7	90.5	90.9	91.5	91.7
young (20-24y)	1.9	82.0	83.9	83.9	83.9	83.9	83.9	83.9
prime-age (25-54y)	2.3	91.0	91.5	92.3	93.1	93.3	93.3	93.4
older (55-64y)	7.9	82.3	81.6	83.7	85.4	87.1	89.2	90.1
oldest (65-69y)	28.0	44.6	39.8	52.1	61.1	62.2	65.8	72.6
Average labour market exit age[1]	5.3	65.4	66.1	67.8	68.5	69.2	70.0	70.7
women	5.9	64.7	65.6	67.4	68.3	69.1	70.0	70.7
men	4.5	66.2	66.8	68.2	68.8	69.3	70.0	70.7
Employment rate (20-64y)	8.3	79.9	82.1	85.1	86.5	87.5	88.1	88.2
Employment rate (15-74y)	9.7	69.4	70.4	73.2	76.2	77.0	77.8	79.1
Unemployment rate (20-64y)	-3.0	5.8	3.9	3.1	3.0	2.8	2.7	2.8
Unemployment rate (15-74y)	-3.4	6.4	4.3	3.4	3.3	3.0	2.9	3.0
Employment (20-64y; millions)	0.0	2.8	2.9	2.9	3.0	3.0	2.9	2.8
Employment (15-74y; millions)	0.2	3.1	3.2	3.3	3.4	3.4	3.4	3.3
share of young (20-24y)	-1.5	8.7	9.0	8.3	7.7	7.6	7.3	7.2
share of prime-age (25-54y)	-5.0	61.8	62.9	64.1	61.2	58.2	57.5	56.8
share of older (55-64y)	0.7	19.2	18.7	16.9	19.6	20.5	20.1	20.0
share of oldest (65-74y)	6.6	4.6	4.0	5.4	6.2	8.8	10.2	11.2
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	1.1	22.8	22.6	20.4	23.3	24.5	23.9	23.9
Old-age dependency ratio[3]	24.6	36.4	39.3	44.4	45.2	50.0	56.4	61.0
Total dependency ratio[4]	23.0	73.4	75.7	81.1	80.4	84.5	91.4	96.4
Total economic dependency ratio (20-64)[5]	1.9	98.0	98.6	96.6	91.7	91.4	96.0	99.9
Total economic dependency ratio (15-74)[6]	-4.0	87.9	89.3	86.2	81.1	78.9	81.5	83.9
Old-age economic dependency ratio (20-64y)[7]	15.4	40.2	43.4	46.0	45.1	46.9	51.7	55.6
Old-age economic dependency ratio (15-74y)[8]	10.6	36.1	39.3	41.0	39.9	40.4	43.9	46.7

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

5. GERMANY

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.22	1.31	1.37	1.47	1.49	1.50	1.52	1.53
Life expectancy at birth								
women	6.1	83.6	84.1	85.2	86.3	87.4	88.5	89.7
men	7.0	79.0	79.6	80.8	82.1	83.3	84.6	86.0
Life expectancy at 65 (years)								
women	4.9	21.2	21.6	22.5	23.3	24.2	25.2	26.1
men	5.2	18.1	18.5	19.4	20.3	21.3	22.3	23.3
Net migration (thousands)	-52.2	276.9	249.8	239.7	241.8	233.1	224.2	224.7
Net migration as % of population in t-1	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Population (million)	-7.3	83.5	82.9	81.7	80.2	78.4	77.2	76.3
share of prime-age population (25-54y)	-3.1	37.7	37.6	37.1	36.4	35.8	35.3	34.6
share of working-age population (20-64y)	-6.3	58.4	56.3	55.0	54.5	53.4	52.9	52.2
share of elderly population (65+)	7.3	22.9	25.3	27.4	27.7	28.6	29.4	30.3
share of very elderly population (80+)	5.8	7.2	7.1	8.8	11.4	10.7	12.0	13.0
share of very elderly population (80+) in elderly population (65+)	11.8	31.2	28.1	32.1	41.0	37.5	40.8	43.0
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	0.9	0.4	0.6	1.2	0.9	1.0	1.1	1.0
Labour input: hours worked (growth rate)	-0.2	0.2	-0.1	0.0	-0.3	-0.3	-0.2	-0.3
Labour productivity per hour (growth rate)	1.1	0.2	0.7	1.2	1.3	1.3	1.3	1.3
TFP growth	0.8	0.3	0.5	0.8	0.8	0.8	0.8	0.8
Capital deepening contribution	0.4	-0.1	0.2	0.4	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.1	0.4	0.8	1.4	1.2	1.2	1.2	1.1
Potential GDP per worker (growth rate)	1.1	0.4	0.3	1.2	1.3	1.3	1.3	1.3
HICP (growth rate)	2.0	2.3	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.9	2.6	3.5	4.1	4.0	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-9,015	48,813	46,711	44,933	43,706	41,873	40,848	39,797
Working-age population (growth rate)	0.2	-0.5	-0.9	0.1	-0.4	-0.3	-0.2	-0.4
Labour force (20-64y; thousands)	-6,618	41,156	39,475	38,633	37,742	36,354	35,504	34,538
Participation rate (20-64y)	2.5	84.3	84.5	86.0	86.4	86.8	86.9	86.8
young (20-24y)	0.3	75.9	76.2	76.2	76.2	76.2	76.2	76.2
prime-age (25-54y)	2.5	88.4	89.1	90.0	90.7	90.9	90.9	90.9
older (55-64y)	2.5	77.3	75.1	78.5	78.1	79.5	80.2	79.8
oldest (65-69y)	4.4	23.3	21.6	24.9	26.9	26.7	27.5	27.7
Participation rate (20-64y) - women	4.5	80.5	81.2	83.6	84.4	85.1	85.2	85.0
young (20-24y)	0.2	73.5	73.6	73.6	73.6	73.6	73.6	73.7
prime-age (25-54y)	4.3	84.5	85.7	87.5	88.5	88.8	88.8	88.7
older (55-64y)	6.1	73.3	71.6	76.5	77.1	79.1	79.9	79.4
oldest (65-69y)	7.2	20.4	19.9	23.6	26.2	26.4	27.4	27.6
Participation rate (20-64y) - men	0.4	88.0	87.8	88.3	88.3	88.5	88.6	88.5
young (20-24y)	0.5	78.1	78.6	78.6	78.6	78.6	78.6	78.6
prime-age (25-54y)	0.8	92.1	92.2	92.3	92.8	92.9	92.8	92.9
older (55-64y)	-1.2	81.3	78.6	80.5	79.1	79.9	80.5	80.1
oldest (65-69y)	1.4	26.5	23.4	26.4	27.6	27.1	27.7	27.8
Average labour market exit age[1]	1.0	64.7	65.2	65.7	65.7	65.7	65.7	65.7
women	1.1	64.6	65.1	65.7	65.7	65.7	65.7	65.7
men	0.8	64.8	65.2	65.7	65.7	65.7	65.7	65.7
Employment rate (20-64y)	2.6	81.1	81.6	82.8	83.5	83.8	83.8	83.8
Employment rate (15-74y)	1.0	67.7	66.1	67.5	69.2	68.3	68.7	68.7
Unemployment rate (20-64y)	-0.3	3.8	3.4	3.7	3.4	3.5	3.6	3.5
Unemployment rate (15-74y)	-0.3	3.9	3.5	3.8	3.4	3.5	3.7	3.5
Employment (20-64y; millions)	-6.3	39.6	38.1	37.2	36.5	35.1	34.2	33.3
Employment (15-74y; millions)	-6.4	42.4	40.9	39.9	39.2	37.8	36.9	36.0
share of young (20-24y)	0.3	7.3	7.4	8.3	7.2	7.6	7.8	7.6
share of prime-age (25-54y)	1.2	63.0	65.5	65.7	65.3	65.0	64.6	64.2
share of older (55-64y)	-2.2	23.1	20.2	19.2	20.6	20.1	20.3	20.9
share of oldest (65-74y)	0.5	4.0	4.0	3.7	4.2	4.4	4.3	4.5
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	-2.4	26.6	24.2	22.3	24.2	23.4	23.5	24.2
Old-age dependency ratio[3]	18.7	39.3	44.9	49.8	50.8	53.5	55.5	58.0
Total dependency ratio[4]	20.5	71.1	77.5	81.7	83.5	87.3	88.9	91.7
Total economic dependency ratio (20-64)[5]	17.4	99.5	106.3	107.9	108.6	111.7	113.5	116.9
Total economic dependency ratio (15-74)[6]	15.4	92.9	99.0	100.6	101.0	103.5	105.2	108.3
Old-age economic dependency ratio (20-64y)[7]	20.2	44.1	50.7	56.0	56.4	59.1	61.5	64.3
Old-age economic dependency ratio (15-74y)[8]	18.4	41.2	47.2	52.2	52.4	54.8	57.1	59.6

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

6. ESTONIA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.38	1.12	1.24	1.43	1.45	1.47	1.49	1.51
Life expectancy at birth								
women	6.3	83.5	84.1	85.2	86.3	87.5	88.6	89.8
men	8.8	75.2	76.0	77.5	79.0	80.7	82.3	84.0
Life expectancy at 65 (years)								
women	5.0	21.4	21.8	22.7	23.6	24.5	25.4	26.4
men	6.1	16.3	16.8	17.8	18.8	20.0	21.1	22.4
Net migration (thousands)	3.1	1.4	1.9	3.9	4.3	4.2	4.3	4.5
Net migration as % of population in t-1	0.3	0.1	0.1	0.3	0.3	0.3	0.4	0.4
Population (million)	-0.2	1.4	1.3	1.3	1.3	1.2	1.2	1.2
share of prime-age population (25-54y)	-7.3	40.2	39.1	38.0	35.8	34.8	33.6	32.9
share of working-age population (20-64y)	-7.1	57.7	58.0	58.3	54.4	51.6	52.4	50.5
share of elderly population (65+)	12.1	21.1	22.9	25.6	28.5	31.5	31.7	33.2
share of very elderly population (80+)	8.3	5.8	6.5	8.6	9.7	11.4	14.1	14.0
share of very elderly population (80+) in elderly population (65+)	14.9	27.3	28.6	33.5	34.0	36.0	44.5	42.2
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	0.9	-0.2	0.2	1.2	0.7	0.9	1.1	0.9
Labour input: hours worked (growth rate)	-0.3	0.4	-0.6	0.0	-0.8	-0.4	-0.1	-0.4
Labour productivity per hour (growth rate)	1.2	-0.6	0.9	1.2	1.5	1.3	1.2	1.3
TFP growth	0.6	-1.4	0.1	0.8	0.8	0.8	0.8	0.8
Capital deepening contribution	0.5	0.8	0.8	0.4	0.6	0.4	0.4	0.5
Potential GDP per capita (growth rate)	1.2	0.1	0.6	1.4	0.9	1.2	1.4	1.2
Potential GDP per worker (growth rate)	1.2	0.3	0.5	1.2	1.5	1.3	1.2	1.3
HICP (growth rate)	2.1	4.8	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.1	3.3	4.0	4.6	4.2	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-203	788	775	759	694	639	626	586
Working-age population (growth rate)	-0.1	-0.7	-0.1	-0.3	-1.2	-0.3	-0.4	-0.7
Labour force (20-64y; thousands)	-153	693	686	680	631	586	574	540
Participation rate (20-64y)	4.3	87.9	88.4	89.6	90.9	91.8	91.8	92.2
young (20-24y)	5.8	72.9	78.0	78.5	78.3	78.4	78.6	78.6
prime-age (25-54y)	3.8	91.8	93.5	95.0	95.6	95.5	95.5	95.6
older (55-64y)	7.1	81.0	78.1	80.0	82.8	86.2	87.4	88.1
oldest (65-69y)	18.8	40.4	26.9	30.1	37.2	43.8	52.2	59.2
Participation rate (20-64y) - women	5.9	86.9	87.7	89.4	91.3	92.5	92.4	92.8
young (20-24y)	5.6	69.9	74.8	75.2	75.2	75.2	75.5	75.5
prime-age (25-54y)	6.3	90.3	92.8	95.5	96.5	96.5	96.4	96.5
older (55-64y)	6.3	83.3	79.0	79.5	83.2	87.6	88.8	89.6
oldest (65-69y)	21.9	38.1	27.3	29.8	37.2	44.2	53.0	60.1
Participation rate (20-64y) - men	2.7	88.8	89.1	89.8	90.5	91.1	91.1	91.5
young (20-24y)	5.9	75.8	81.1	81.6	81.4	81.4	81.6	81.7
prime-age (25-54y)	1.4	93.4	94.1	94.5	94.8	94.5	94.6	94.7
older (55-64y)	8.1	78.5	77.2	80.5	82.3	84.9	85.9	86.7
oldest (65-69y)	14.9	43.3	26.3	30.5	37.3	43.3	51.5	58.2
Average labour market exit age[1]	3.9	64.5	64.9	65.6	66.3	67.0	67.6	68.5
women	3.9	64.5	64.9	65.6	66.3	67.0	67.6	68.5
men	3.9	64.5	64.9	65.6	66.3	67.0	67.6	68.5
Employment rate (20-64y)	5.3	81.6	82.7	83.9	86.1	86.5	86.4	87.0
Employment rate (15-74y)	4.2	68.2	66.8	68.9	69.8	69.0	72.2	72.4
Unemployment rate (20-64y)	-1.5	7.1	6.5	6.3	5.3	5.8	5.8	5.6
Unemployment rate (15-74y)	-1.7	7.6	6.9	6.7	5.5	6.1	6.1	5.8
Employment (20-64y; millions)	-0.1	0.6	0.6	0.6	0.6	0.6	0.5	0.5
Employment (15-74y; millions)	-0.1	0.7	0.7	0.7	0.6	0.6	0.6	0.6
share of young (20-24y)	0.2	6.1	8.1	7.9	5.5	6.8	6.9	6.2
share of prime-age (25-54y)	-7.2	67.4	68.0	65.8	64.6	64.8	61.1	60.1
share of older (55-64y)	3.8	18.7	19.0	21.0	23.2	20.4	23.4	22.5
share of oldest (65-74y)	3.6	6.5	3.4	4.0	5.7	6.7	7.4	10.0
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	4.5	21.5	22.2	24.5	26.9	23.2	26.5	26.0
Old-age dependency ratio[3]	29.1	36.6	39.5	43.9	52.3	61.1	60.6	65.7
Total dependency ratio[4]	24.4	73.4	72.5	71.6	83.7	93.8	91.0	97.9
Total economic dependency ratio (20-64)[5]	12.8	95.2	95.6	91.4	99.9	108.4	104.6	108.0
Total economic dependency ratio (15-74)[6]	8.2	87.8	90.9	86.6	93.1	99.8	95.6	96.0
Old-age economic dependency ratio (20-64y)[7]	26.3	37.5	44.0	47.9	54.5	63.1	61.7	63.8
Old-age economic dependency ratio (15-74y)[8]	22.1	34.6	41.8	45.4	50.8	58.1	56.4	56.7

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

7. IRELAND

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.09	1.50	1.53	1.57	1.57	1.58	1.59	1.59
Life expectancy at birth								
women	5.6	84.8	85.3	86.3	87.3	88.4	89.4	90.4
men	5.9	81.5	82.0	83.1	84.1	85.2	86.3	87.4
Life expectancy at 65 (years)								
women	4.7	22.1	22.5	23.3	24.2	25.0	25.9	26.8
men	4.6	19.8	20.2	21.0	21.8	22.7	23.6	24.4
Net migration (thousands)	-48.1	69.6	33.0	25.5	25.9	23.9	22.2	21.4
Net migration as % of population in t-1	-0.9	1.3	0.6	0.4	0.4	0.4	0.3	0.3
Population (million)	1.0	5.5	5.8	6.2	6.5	6.6	6.6	6.5
share of prime-age population (25-54y)	-8.9	41.6	40.9	39.3	37.1	35.2	33.3	32.7
share of working-age population (20-64y)	-9.2	59.1	59.7	59.5	55.4	52.8	51.9	49.9
share of elderly population (65+)	17.7	15.8	17.5	21.5	26.2	29.4	31.4	33.5
share of very elderly population (80+)	10.5	3.9	4.7	6.4	8.3	10.8	13.3	14.4
share of very elderly population (80+) in elderly population (65+)	18.4	24.4	26.8	29.7	31.6	36.6	42.3	42.8
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.8	4.9	4.3	2.1	1.2	1.2	1.0	0.8
Labour input: hours worked (growth rate)	0.1	2.1	1.2	0.4	-0.2	-0.2	-0.3	-0.5
Labour productivity per hour (growth rate)	1.7	2.7	3.1	1.6	1.5	1.4	1.3	1.3
TFP growth	1.2	3.3	2.5	1.1	0.9	0.9	0.9	0.8
Capital deepening contribution	0.5	-0.5	0.6	0.6	0.5	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.5	3.2	3.4	1.5	0.9	1.1	1.1	0.9
Potential GDP per worker (growth rate)	1.6	2.8	2.9	1.6	1.5	1.4	1.3	1.3
HICP (growth rate)	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.9	2.9	3.7	4.1	4.0	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-7	3,242	3,476	3,676	3,577	3,477	3,406	3,235
Working-age population (growth rate)	-2.3	1.8	1.2	0.1	-0.4	-0.2	-0.3	-0.6
Labour force (20-64y; thousands)	143	2,714	2,980	3,218	3,154	3,077	3,007	2,857
Participation rate (20-64y)	4.6	83.7	85.7	87.5	88.2	88.5	88.3	88.3
young (20-24y)	3.0	76.1	78.6	79.1	79.0	79.0	79.0	79.1
prime-age (25-54y)	3.9	88.1	89.8	91.2	91.9	92.1	92.0	92.0
older (55-64y)	10.4	71.8	75.9	80.7	81.1	82.3	82.7	82.2
oldest (65-69y)	3.4	30.0	28.9	31.4	31.8	32.5	33.4	33.3
Participation rate (20-64y) - women	6.8	79.0	81.8	84.3	85.4	85.9	85.8	85.8
young (20-24y)	3.7	74.8	78.0	78.6	78.4	78.4	78.5	78.5
prime-age (25-54y)	5.5	83.5	85.8	88.1	88.9	89.1	89.0	88.9
older (55-64y)	15.4	64.9	70.2	76.7	78.7	80.3	80.8	80.3
oldest (65-69y)	10.8	20.7	24.4	28.3	30.0	31.0	31.6	31.5
Participation rate (20-64y) - men	2.3	88.6	89.8	90.8	91.0	91.0	90.7	90.8
young (20-24y)	2.3	77.3	79.2	79.7	79.5	79.5	79.6	79.6
prime-age (25-54y)	2.0	93.0	94.0	94.4	95.0	95.0	94.9	95.0
older (55-64y)	5.1	79.0	81.7	85.1	83.7	84.4	84.6	84.1
oldest (65-69y)	-4.4	39.7	33.6	34.7	33.9	34.1	35.2	35.2
Average labour market exit age[1]	0.1	66.0	66.0	66.1	66.1	66.1	66.1	66.1
women	0.0	66.1	66.1	66.1	66.1	66.1	66.1	66.1
men	0.0	66.1	66.1	66.1	66.1	66.1	66.1	66.1
Employment rate (20-64y)	4.3	80.2	81.7	83.2	84.4	84.6	84.4	84.5
Employment rate (15-74y)	-0.1	68.2	68.7	70.1	69.3	69.0	69.1	68.1
Unemployment rate (20-64y)	0.1	4.2	4.7	4.9	4.3	4.4	4.4	4.3
Unemployment rate (15-74y)	-0.1	4.7	5.2	5.3	4.6	4.7	4.7	4.6
Employment (20-64y; millions)	0.1	2.6	2.8	3.1	3.0	2.9	2.9	2.7
Employment (15-74y; millions)	0.2	2.8	3.0	3.3	3.3	3.2	3.1	3.0
share of young (20-24y)	-1.0	8.2	9.1	8.0	6.9	7.2	7.4	7.2
share of prime-age (25-54y)	-6.5	69.1	67.2	64.6	64.6	64.0	61.7	62.5
share of older (55-64y)	6.0	15.8	17.0	20.7	20.8	20.9	23.0	21.8
share of oldest (65-74y)	2.5	3.5	3.1	4.0	5.2	5.2	5.3	6.0
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	5.8	19.6	20.4	23.8	24.3	24.2	26.4	25.4
Old-age dependency ratio[3]	40.4	26.8	29.3	36.2	47.3	55.7	60.5	67.2
Total dependency ratio[4]	31.2	69.2	67.4	68.2	80.6	89.3	92.7	100.4
Total economic dependency ratio (20-64)[5]	24.4	98.2	91.8	88.9	100.4	109.9	114.4	122.5
Total economic dependency ratio (15-74)[6]	20.8	91.3	85.7	83.0	92.6	101.3	105.3	112.1
Old-age economic dependency ratio (20-64y)[7]	43.2	29.6	32.5	39.1	50.3	60.1	65.8	72.8
Old-age economic dependency ratio (15-74y)[8]	39.1	27.5	30.4	36.5	46.4	55.4	60.6	66.6

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

8. GREECE

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.25	1.20	1.22	1.34	1.37	1.40	1.42	1.45
Life expectancy at birth								
women	5.6	84.5	85.0	86.0	87.0	88.0	89.0	90.1
men	6.9	79.5	80.1	81.3	82.6	83.8	85.1	86.4
Life expectancy at 65 (years)								
women	4.6	21.8	22.2	23.0	23.8	24.7	25.5	26.4
men	5.1	18.7	19.2	20.0	20.9	21.8	22.8	23.8
Net migration (thousands)	-10.9	41.7	13.0	17.6	22.0	25.4	29.2	30.8
Net migration as % of population in t-1	0.0	0.4	0.1	0.2	0.2	0.3	0.4	0.4
Population (million)	-2.7	10.4	10.2	9.7	9.2	8.6	8.0	7.6
share of prime-age population (25-54y)	-5.4	38.3	36.6	34.0	33.9	33.4	33.0	32.9
share of working-age population (20-64y)	-8.0	58.0	57.7	54.1	49.9	50.1	51.1	50.0
share of elderly population (65+)	10.7	23.9	25.9	31.1	34.9	34.7	34.0	34.6
share of very elderly population (80+)	7.7	7.2	7.9	10.2	13.0	15.7	15.8	14.9
share of very elderly population (80+) in elderly population (65+)	13.0	30.1	30.7	32.8	37.3	45.2	46.6	43.1
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	0.8	1.6	1.3	0.4	0.2	1.0	1.0	0.8
Labour input: hours worked (growth rate)	-0.5	0.2	-0.3	-1.0	-1.2	-0.4	-0.3	-0.5
Labour productivity per hour (growth rate)	1.4	1.4	1.6	1.4	1.3	1.3	1.3	1.3
TFP growth	0.9	1.0	1.0	0.9	0.9	0.9	0.8	0.8
Capital deepening contribution	0.5	0.3	0.6	0.5	0.5	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.4	1.7	1.8	0.9	0.8	1.7	1.6	1.2
Potential GDP per worker (growth rate)	1.3	0.8	1.6	1.4	1.3	1.3	1.3	1.3
HICP (growth rate)	2.1	2.9	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.2	3.4	4.4	4.7	4.2	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-2,193	6,011	5,869	5,231	4,571	4,291	4,088	3,818
Working-age population (growth rate)	-0.2	-0.4	-0.7	-1.3	-1.1	-0.4	-0.6	-0.6
Labour force (20-64y; thousands)	-1,576	4,649	4,593	4,117	3,638	3,429	3,281	3,073
Participation rate (20-64y)	3.1	77.3	78.3	78.7	79.6	79.9	80.3	80.5
young (20-24y)	2.6	50.2	52.2	52.8	52.6	52.5	52.7	52.7
prime-age (25-54y)	-0.6	86.2	85.9	85.2	85.4	85.5	85.6	85.7
older (55-64y)	13.2	63.8	69.9	72.9	72.4	75.1	76.9	77.0
oldest (65-69y)	35.9	17.9	24.2	34.9	37.9	41.8	49.2	53.8
Participation rate (20-64y) - women	3.2	69.5	71.2	71.4	71.6	72.0	72.4	72.7
young (20-24y)	2.4	47.1	48.9	49.6	49.3	49.3	49.5	49.5
prime-age (25-54y)	-1.1	78.8	78.2	77.1	77.4	77.5	77.7	77.7
older (55-64y)	14.6	53.3	63.0	66.2	63.3	66.1	67.9	67.9
oldest (65-69y)	35.8	11.7	18.4	32.0	34.1	36.3	43.5	47.6
Participation rate (20-64y) - men	2.1	85.1	85.0	85.5	86.8	86.9	87.1	87.3
young (20-24y)	2.7	52.8	55.1	55.5	55.4	55.3	55.5	55.5
prime-age (25-54y)	-0.9	93.4	93.2	92.4	92.4	92.5	92.4	92.4
older (55-64y)	9.9	75.1	77.1	79.9	81.3	83.4	85.0	85.0
oldest (65-69y)	34.7	24.9	30.8	38.0	42.0	47.4	54.6	59.6
Average labour market exit age[1]	3.7	64.9	65.7	66.0	66.5	67.3	68.0	68.6
women	3.7	64.9	65.7	66.1	66.5	67.3	68.0	68.6
men	3.7	64.9	65.7	66.0	66.5	67.3	68.0	68.6
Employment rate (20-64y)	4.7	70.5	71.4	72.2	73.7	74.1	74.7	75.2
Employment rate (15-74y)	6.5	56.2	57.2	57.7	58.5	60.5	62.2	62.8
Unemployment rate (20-64y)	-2.3	8.9	8.7	8.3	7.4	7.3	6.9	6.5
Unemployment rate (15-74y)	-2.4	8.9	8.8	8.3	7.4	7.3	6.9	6.5
Employment (20-64y; millions)	-1.4	4.2	4.2	3.8	3.4	3.2	3.1	2.9
Employment (15-74y; millions)	-1.2	4.4	4.4	4.1	3.7	3.4	3.4	3.2
share of young (20-24y)	-0.2	5.1	5.8	5.3	4.6	5.2	5.1	4.9
share of prime-age (25-54y)	-9.0	71.1	66.6	62.7	66.7	65.9	62.4	62.1
share of older (55-64y)	1.4	20.2	22.9	24.3	20.2	21.2	23.1	21.6
share of oldest (65-74y)	7.9	2.9	4.0	7.1	8.0	7.2	8.8	10.8
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	0.3	24.9	26.4	27.8	23.8	24.0	26.1	25.1
Old-age dependency ratio[3]	28.0	41.3	44.8	57.5	69.9	69.2	66.5	69.3
Total dependency ratio[4]	27.5	72.4	73.4	84.7	100.3	99.5	95.8	99.9
Total economic dependency ratio (20-64)[5]	14.3	130.7	127.7	137.8	153.6	152.3	143.5	145.0
Total economic dependency ratio (15-74)[6]	2.4	126.1	121.8	127.2	140.5	140.5	130.0	128.5
Old-age economic dependency ratio (20-64y)[7]	23.8	55.3	58.2	71.4	85.5	85.1	78.7	79.1
Old-age economic dependency ratio (15-74y)[8]	16.8	53.3	55.5	65.9	78.2	78.5	71.3	70.1

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

9. SPAIN

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.24	1.11	1.13	1.17	1.22	1.26	1.30	1.34
Life expectancy at birth								
women	4.8	86.6	87.0	87.9	88.8	89.6	90.5	91.4
men	6.0	81.5	82.0	83.1	84.2	85.3	86.4	87.5
Life expectancy at 65 (years)								
women	3.9	23.7	24.0	24.7	25.4	26.2	26.9	27.6
men	4.6	19.9	20.3	21.1	21.9	22.7	23.6	24.5
Net migration (thousands)	-321.6	568.2	368.5	329.1	291.0	273.9	267.3	246.6
Net migration as % of population in t-1	-0.7	1.2	0.7	0.6	0.5	0.5	0.5	0.5
Population (million)	2.2	49.3	51.1	53.0	53.9	53.4	52.4	51.6
share of prime-age population (25-54y)	-7.6	41.0	39.4	37.8	36.8	35.2	33.8	33.3
share of working-age population (20-64y)	-10.6	60.8	60.3	57.2	53.4	52.9	52.3	50.2
share of elderly population (65+)	14.1	20.9	22.9	27.9	31.5	32.3	33.2	35.0
share of very elderly population (80+)	8.6	6.2	6.9	8.8	11.5	14.3	14.5	14.9
share of very elderly population (80+) in elderly population (65+)	12.7	29.8	30.1	31.4	36.7	44.2	43.8	42.5
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.3	2.7	1.9	1.3	1.1	1.3	1.1	1.0
Labour input: hours worked (growth rate)	0.0	2.1	0.8	-0.1	-0.3	-0.1	-0.3	-0.5
Labour productivity per hour (growth rate)	1.3	0.6	1.0	1.4	1.4	1.4	1.4	1.4
TFP growth	0.9	0.7	0.7	1.0	1.0	1.0	1.0	1.0
Capital deepening contribution	0.4	-0.1	0.3	0.4	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.2	1.7	1.3	1.0	1.1	1.5	1.3	1.1
Potential GDP per worker (growth rate)	1.4	-0.1	1.8	1.4	1.4	1.4	1.4	1.4
HICP (growth rate)	2.0	2.7	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.1	3.2	4.1	4.5	4.2	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-4,137	30,022	30,816	30,299	28,768	28,244	27,385	25,885
Working-age population (growth rate)	-1.4	0.9	0.3	-0.6	-0.3	-0.2	-0.5	-0.6
Labour force (20-64y; thousands)	-2,989	24,231	25,072	24,979	23,745	23,193	22,417	21,241
Participation rate (20-64y)	1.3	80.7	81.4	82.4	82.5	82.1	81.9	82.1
young (20-24y)	1.1	57.1	58.0	58.7	58.1	58.0	58.2	58.1
prime-age (25-54y)	-0.8	87.9	87.7	87.2	87.2	87.0	87.1	87.1
older (55-64y)	7.4	69.3	74.0	78.2	77.2	77.2	77.0	76.8
oldest (65-69y)	12.7	13.0	19.6	26.5	25.9	25.7	26.0	25.6
Participation rate (20-64y) - women	2.1	76.6	77.7	78.8	79.0	78.7	78.4	78.6
young (20-24y)	0.6	54.4	54.8	55.6	54.9	54.9	55.1	55.0
prime-age (25-54y)	-0.4	84.1	83.9	83.7	83.7	83.6	83.6	83.7
older (55-64y)	9.5	63.8	70.2	74.0	73.5	73.6	73.4	73.3
oldest (65-69y)	13.1	12.0	19.5	26.1	25.2	25.0	25.5	25.1
Participation rate (20-64y) - men	0.6	84.8	85.0	86.0	86.0	85.5	85.2	85.4
young (20-24y)	1.5	59.6	60.9	61.6	61.1	61.0	61.1	61.1
prime-age (25-54y)	-1.2	91.6	91.4	90.6	90.5	90.3	90.4	90.4
older (55-64y)	5.2	75.1	77.9	82.6	81.1	80.9	80.5	80.3
oldest (65-69y)	12.2	14.1	19.7	26.8	26.6	26.4	26.5	26.2
Average labour market exit age[1]	0.9	64.7	65.3	65.6	65.6	65.6	65.6	65.6
women	0.6	64.9	65.3	65.5	65.5	65.5	65.5	65.5
men	1.2	64.4	65.2	65.6	65.6	65.6	65.6	65.6
Employment rate (20-64y)	3.7	72.4	72.4	73.3	74.7	75.0	75.4	76.1
Employment rate (15-74y)	0.7	58.8	58.6	59.0	59.2	60.3	60.1	59.5
Unemployment rate (20-64y)	-3.0	10.3	11.0	11.1	9.5	8.7	7.9	7.3
Unemployment rate (15-74y)	-3.2	10.5	11.3	11.1	9.5	8.8	8.0	7.3
Employment (20-64y; millions)	-2.1	21.7	22.3	22.2	21.5	21.2	20.6	19.7
Employment (15-74y; millions)	-1.5	22.3	23.2	23.4	22.6	22.2	21.8	20.8
share of young (20-24y)	-0.3	5.4	5.8	5.1	4.7	5.1	5.2	5.2
share of prime-age (25-54y)	-5.1	72.2	68.7	67.0	69.7	67.8	65.6	67.1
share of older (55-64y)	2.5	19.7	21.8	22.9	20.6	22.3	23.9	22.2
share of oldest (65-74y)	2.9	1.8	2.9	4.5	4.3	4.0	4.5	4.7
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	1.6	23.5	24.8	25.4	23.2	24.9	26.8	25.1
Old-age dependency ratio[3]	35.4	34.3	38.0	48.8	58.9	61.0	63.6	69.7
Total dependency ratio[4]	34.9	64.4	65.7	74.8	87.3	89.1	91.3	99.2
Total economic dependency ratio (20-64)[5]	35.5	112.1	112.0	119.8	134.2	137.1	139.1	147.6
Total economic dependency ratio (15-74)[6]	30.4	109.1	107.8	113.7	127.5	130.5	131.7	139.5
Old-age economic dependency ratio (20-64y)[7]	41.0	45.5	49.3	61.6	74.0	76.9	79.4	86.5
Old-age economic dependency ratio (15-74y)[8]	37.4	44.2	47.5	58.5	70.3	73.2	75.2	81.7

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

10. FRANCE

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.13	1.57	1.64	1.73	1.72	1.72	1.71	1.70
Life expectancy at birth								
women	5.3	85.9	86.4	87.4	88.3	89.3	90.3	91.2
men	6.7	80.3	80.9	82.1	83.4	84.6	85.8	87.0
Life expectancy at 65 (years)								
women	4.0	23.7	24.0	24.8	25.5	26.2	27.0	27.7
men	4.7	19.9	20.3	21.1	22.0	22.8	23.7	24.6
Net migration (thousands)	-47.1	175.4	128.5	128.5	131.9	119.9	126.8	128.3
Net migration as % of population in t-1	-0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Population (million)	0.0	69.0	69.6	70.7	70.9	70.2	69.5	69.0
share of prime-age population (25-54y)	-3.8	36.9	36.3	36.2	35.0	34.2	33.3	33.1
share of working-age population (20-64y)	-5.8	55.3	54.9	53.6	52.0	51.6	51.1	49.5
share of elderly population (65+)	9.5	22.0	23.8	26.4	27.5	28.8	29.9	31.5
share of very elderly population (80+)	7.6	6.2	7.6	9.6	11.0	11.9	12.9	13.8
share of very elderly population (80+) in elderly population (65+)	15.5	28.2	32.0	36.6	40.1	41.2	43.1	43.7
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.0	1.2	0.8	1.1	1.0	1.1	1.0	1.0
Labour input: hours worked (growth rate)	0.0	1.0	0.3	0.2	-0.2	-0.1	-0.3	-0.3
Labour productivity per hour (growth rate)	1.0	0.2	0.5	0.9	1.2	1.3	1.3	1.3
TFP growth	0.7	0.1	0.2	0.6	0.8	0.8	0.8	0.8
Capital deepening contribution	0.4	0.1	0.3	0.3	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.0	0.9	0.6	1.0	1.0	1.3	1.1	1.1
Potential GDP per worker (growth rate)	1.1	1.0	-0.1	0.9	1.2	1.3	1.3	1.3
HICP (growth rate)	2.0	0.9	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.3	3.4	4.4	4.8	4.3	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-3,977	38,140	38,232	37,878	36,890	36,217	35,543	34,163
Working-age population (growth rate)	-0.5	0.1	0.0	-0.1	-0.3	-0.1	-0.2	-0.4
Labour force (20-64y; thousands)	-2,052	31,055	31,341	31,925	31,305	30,746	30,117	29,003
Participation rate (20-64y)	3.5	81.4	82.0	84.3	84.9	84.9	84.7	84.9
young (20-24y)	1.2	68.7	69.7	70.0	69.7	69.8	70.0	69.9
prime-age (25-54y)	1.9	88.9	89.6	90.4	90.8	90.8	90.8	90.9
older (55-64y)	8.7	65.4	65.9	72.4	73.7	74.7	74.7	74.1
oldest (65-69y)	9.7	11.4	13.3	17.2	20.7	20.9	21.2	21.1
Participation rate (20-64y) - women	4.6	78.4	79.1	81.8	82.7	83.0	82.8	83.0
young (20-24y)	0.8	64.7	65.2	65.6	65.3	65.4	65.6	65.5
prime-age (25-54y)	3.3	85.6	86.7	88.0	88.8	88.9	88.8	88.9
older (55-64y)	9.9	63.5	64.0	70.5	72.4	73.8	74.1	73.5
oldest (65-69y)	10.9	10.0	12.7	16.7	20.1	20.6	21.0	21.0
Participation rate (20-64y) - men	2.3	84.5	84.9	86.8	87.0	86.8	86.6	86.8
young (20-24y)	1.6	72.5	73.9	74.2	73.9	74.0	74.2	74.1
prime-age (25-54y)	0.5	92.3	92.7	92.7	92.8	92.7	92.8	92.8
older (55-64y)	7.5	67.3	67.8	74.5	75.1	75.6	75.4	74.7
oldest (65-69y)	8.4	13.0	13.9	17.7	21.3	21.2	21.4	21.3
Average labour market exit age[1]	1.6	63.2	63.6	64.6	64.7	64.7	64.7	64.7
women	1.5	63.2	63.6	64.6	64.7	64.7	64.7	64.7
men	1.6	63.1	63.5	64.6	64.7	64.7	64.7	64.7
Employment rate (20-64y)	4.6	75.5	76.5	79.2	80.0	79.9	79.8	80.1
Employment rate (15-74y)	3.3	59.9	60.6	63.4	64.2	63.7	63.8	63.2
Unemployment rate (20-64y)	-1.6	7.2	6.7	6.1	5.7	5.9	5.8	5.6
Unemployment rate (15-74y)	-1.8	7.7	7.1	6.4	6.0	6.2	6.0	5.9
Employment (20-64y; millions)	-1.4	28.8	29.3	30.0	29.5	28.9	28.4	27.4
Employment (15-74y; millions)	-0.9	30.0	30.5	31.5	31.2	30.6	30.0	29.1
share of young (20-24y)	-0.5	7.5	8.0	7.3	6.6	7.3	7.2	6.9
share of prime-age (25-54y)	-2.7	70.5	69.7	69.4	68.6	67.4	66.3	67.7
share of older (55-64y)	1.4	18.1	18.1	18.6	19.5	19.8	21.0	19.5
share of oldest (65-74y)	2.1	1.8	2.1	2.8	3.4	3.5	3.7	3.9
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	0.4	23.0	23.0	22.3	23.3	23.5	24.8	23.4
Old-age dependency ratio[3]	23.8	39.8	43.3	49.2	52.9	55.8	58.5	63.6
Total dependency ratio[4]	21.1	80.8	82.2	86.6	92.2	93.9	95.6	101.9
Total economic dependency ratio (20-64)[5]	12.7	126.5	125.7	123.7	127.8	129.8	132.3	139.2
Total economic dependency ratio (15-74)[6]	9.6	121.5	120.3	117.9	121.0	122.7	124.9	131.1
Old-age economic dependency ratio (20-64y)[7]	24.3	50.7	54.4	59.1	62.3	65.9	69.3	75.1
Old-age economic dependency ratio (15-74y)[8]	22.0	48.7	52.1	56.3	59.0	62.3	65.4	70.7

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

11. CROATIA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.09	1.48	1.53	1.54	1.55	1.56	1.56	1.57
Life expectancy at birth								
women	6.5	81.9	82.4	83.5	84.7	85.8	87.1	88.4
men	8.1	76.1	76.8	78.2	79.6	81.1	82.6	84.2
Life expectancy at 65 (years)								
women	5.2	19.6	20.0	20.9	21.8	22.7	23.8	24.8
men	5.8	16.3	16.7	17.7	18.7	19.7	20.9	22.1
Net migration (thousands)	-8.9	20.1	4.6	4.8	7.5	9.3	10.5	11.3
Net migration as % of population in t-1	-0.1	0.5	0.1	0.1	0.2	0.3	0.3	0.4
Population (million)	-0.9	3.9	3.8	3.6	3.4	3.3	3.1	3.0
share of prime-age population (25-54y)	-4.5	38.8	38.8	37.6	36.8	35.8	34.9	34.3
share of working-age population (20-64y)	-5.9	57.8	57.2	56.5	55.2	54.2	53.0	51.9
share of elderly population (65+)	9.4	23.5	24.9	26.7	28.6	30.1	31.6	32.8
share of very elderly population (80+)	8.0	5.4	6.2	8.7	9.7	10.7	12.2	13.4
share of very elderly population (80+) in elderly population (65+)	17.8	23.0	24.9	32.8	33.8	35.6	38.6	40.8
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.1	4.3	2.0	1.2	0.8	0.7	0.7	0.7
Labour input: hours worked (growth rate)	-0.5	2.0	0.0	-0.5	-0.7	-0.7	-0.6	-0.5
Labour productivity per hour (growth rate)	1.6	2.2	2.0	1.7	1.6	1.4	1.3	1.3
TFP growth	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.8
Capital deepening contribution	0.7	1.2	1.1	0.8	0.7	0.6	0.5	0.5
Potential GDP per capita (growth rate)	1.6	4.1	2.4	1.8	1.4	1.2	1.2	1.1
Potential GDP per worker (growth rate)	1.6	2.8	2.4	1.7	1.6	1.4	1.3	1.3
HICP (growth rate)	2.1	4.4	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.1	3.0	4.1	4.5	4.2	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-687	2,240	2,198	2,055	1,894	1,765	1,649	1,552
Working-age population (growth rate)	-0.5	0.0	-0.5	-0.7	-0.8	-0.7	-0.6	-0.5
Labour force (20-64y; thousands)	-477	1,744	1,748	1,673	1,546	1,438	1,345	1,267
Participation rate (20-64y)	3.7	77.9	79.5	81.4	81.6	81.5	81.5	81.6
young (20-24y)	1.6	50.1	51.4	51.6	51.6	51.6	51.7	51.7
prime-age (25-54y)	1.4	89.1	90.2	90.3	90.5	90.5	90.5	90.5
older (55-64y)	11.7	56.7	59.2	67.9	68.0	68.0	68.4	68.3
oldest (65-69y)	7.6	7.9	12.3	14.0	15.4	15.5	15.6	15.5
Participation rate (20-64y) - women	3.7	74.7	76.2	77.8	78.2	78.3	78.3	78.4
young (20-24y)	0.4	42.3	42.5	42.6	42.7	42.7	42.7	42.7
prime-age (25-54y)	1.0	86.9	87.7	87.8	87.9	87.9	87.9	87.9
older (55-64y)	12.8	53.8	58.1	65.3	66.1	66.1	66.7	66.6
oldest (65-69y)	10.1	4.9	11.1	13.6	14.7	15.1	15.1	15.0
Participation rate (20-64y) - men	3.1	80.9	82.5	84.4	84.3	84.0	84.0	84.0
young (20-24y)	2.7	57.0	59.5	59.6	59.7	59.7	59.7	59.7
prime-age (25-54y)	1.4	91.1	92.5	92.3	92.4	92.4	92.4	92.5
older (55-64y)	9.8	59.8	60.4	70.3	69.6	69.4	69.7	69.6
oldest (65-69y)	4.4	11.5	13.8	14.4	16.1	15.8	15.9	15.8
Average labour market exit age[1]	0.8	62.9	63.3	63.7	63.7	63.7	63.7	63.7
women	1.1	62.6	63.3	63.7	63.7	63.7	63.7	63.7
men	0.5	63.2	63.4	63.7	63.7	63.7	63.7	63.7
Employment rate (20-64y)	2.8	74.3	75.4	76.5	77.0	76.9	77.0	77.2
Employment rate (15-74y)	2.1	57.7	58.9	60.6	60.2	60.2	59.9	59.8
Unemployment rate (20-64y)	0.9	4.5	5.1	6.0	5.7	5.7	5.6	5.5
Unemployment rate (15-74y)	1.0	5.0	5.6	6.6	6.2	6.2	6.1	6.0
Employment (20-64y; millions)	-0.5	1.7	1.7	1.6	1.5	1.4	1.3	1.2
Employment (15-74y; millions)	-0.5	1.7	1.7	1.6	1.5	1.4	1.3	1.2
share of young (20-24y)	-0.6	5.0	5.1	4.5	4.5	4.4	4.4	4.4
share of prime-age (25-54y)	-4.2	75.4	75.3	72.3	72.0	71.4	71.0	71.3
share of older (55-64y)	3.7	17.2	16.9	20.5	20.3	20.9	21.2	20.9
share of oldest (65-74y)	1.2	1.6	2.0	2.1	2.7	2.7	2.8	2.8
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	1.6	23.9	23.0	25.0	24.8	25.6	25.8	25.5
Old-age dependency ratio[3]	22.6	40.6	43.4	47.3	51.9	55.5	59.7	63.2
Total dependency ratio[4]	19.7	73.0	74.8	77.0	81.2	84.6	88.7	92.7
Total economic dependency ratio (20-64)[5]	14.8	125.0	122.8	121.4	125.2	129.9	135.0	139.7
Total economic dependency ratio (15-74)[6]	13.0	122.0	119.6	118.1	121.1	125.7	130.5	135.0
Old-age economic dependency ratio (20-64y)[7]	25.9	52.8	55.4	59.4	64.3	69.2	74.4	78.7
Old-age economic dependency ratio (15-74y)[8]	24.5	51.5	53.9	57.8	62.2	67.0	71.9	76.1

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

12. ITALY

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.25	1.14	1.18	1.25	1.28	1.32	1.35	1.39
Life expectancy at birth								
women	5.1	85.8	86.2	87.1	88.1	89.0	89.9	90.9
men	5.7	81.7	82.2	83.2	84.2	85.3	86.4	87.4
Life expectancy at 65 (years)								
women	4.3	22.8	23.2	23.9	24.7	25.5	26.3	27.1
men	4.6	19.8	20.2	21.0	21.8	22.6	23.5	24.4
Net migration (thousands)	-87.0	295.8	243.6	232.5	210.5	208.1	214.9	208.7
Net migration as % of population in t-1	-0.1	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Population (million)	-11.0	58.9	58.7	57.6	55.6	52.7	49.8	47.9
share of prime-age population (25-54y)	-5.3	37.4	35.8	35.3	34.7	33.4	32.3	32.1
share of working-age population (20-64y)	-9.6	58.3	57.2	53.3	51.1	51.1	50.8	48.7
share of elderly population (65+)	12.1	24.9	27.5	32.8	34.6	34.8	35.4	37.1
share of very elderly population (80+)	8.2	7.8	8.8	10.6	14.1	15.9	15.5	16.0
share of very elderly population (80+) in elderly population (65+)	12.0	31.3	32.1	32.2	40.7	45.8	43.7	43.2
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	0.7	0.8	0.4	0.5	0.8	1.0	0.9	0.7
Labour input: hours worked (growth rate)	-0.3	0.9	0.1	-0.4	-0.5	-0.4	-0.4	-0.6
Labour productivity per hour (growth rate)	1.0	0.0	0.3	0.9	1.3	1.3	1.3	1.3
TFP growth	0.7	-0.2	0.1	0.6	0.8	0.9	0.9	0.9
Capital deepening contribution	0.4	0.2	0.2	0.3	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.1	0.8	0.5	0.8	1.2	1.6	1.4	1.1
Potential GDP per worker (growth rate)	1.1	-0.3	0.9	0.9	1.3	1.3	1.3	1.3
HICP (growth rate)	2.0	1.7	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.3	3.6	4.6	5.0	4.3	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-11,029	34,373	33,568	30,706	28,432	26,940	25,323	23,344
Working-age population (growth rate)	-0.5	-0.3	-0.7	-1.0	-0.6	-0.5	-0.8	-0.7
Labour force (20-64y; thousands)	-6,286	24,685	24,497	23,279	22,117	21,043	19,805	18,399
Participation rate (20-64y)	7.0	71.8	73.0	75.8	77.8	78.1	78.2	78.8
young (20-24y)	1.1	40.5	41.5	41.8	41.5	41.5	41.6	41.6
prime-age (25-54y)	2.8	79.7	80.5	81.7	82.8	82.7	82.4	82.5
older (55-64y)	18.0	63.2	66.5	71.7	75.1	78.3	79.6	81.2
oldest (65-69y)	34.4	18.6	23.0	29.9	36.2	41.8	47.7	53.0
Participation rate (20-64y) - women	8.3	62.0	63.8	67.2	69.2	69.8	69.8	70.3
young (20-24y)	1.1	33.2	34.2	34.5	34.2	34.2	34.4	34.3
prime-age (25-54y)	3.7	69.9	71.0	72.5	73.8	73.8	73.5	73.6
older (55-64y)	20.7	52.6	57.6	64.4	67.5	71.1	72.2	73.4
oldest (65-69y)	37.2	13.7	18.2	27.4	34.4	40.1	45.9	50.9
Participation rate (20-64y) - men	5.0	81.5	81.9	83.9	85.6	85.6	85.8	86.5
young (20-24y)	1.1	47.1	48.1	48.4	48.1	48.1	48.2	48.2
prime-age (25-54y)	1.2	89.4	89.6	90.2	90.8	90.7	90.4	90.6
older (55-64y)	14.1	74.2	75.8	79.3	82.7	84.8	86.5	88.4
oldest (65-69y)	30.9	24.0	28.1	32.6	38.2	43.5	49.3	55.0
Average labour market exit age[1]	3.9	64.8	65.5	66.3	66.9	67.5	68.1	68.7
women	4.4	64.7	65.7	66.6	67.2	67.8	68.4	69.1
men	3.5	64.9	65.4	66.0	66.6	67.1	67.7	68.4
Employment rate (20-64y)	6.3	67.4	67.5	70.4	72.6	72.8	73.0	73.7
Employment rate (15-74y)	6.7	54.3	53.9	55.7	58.8	59.9	60.5	61.0
Unemployment rate (20-64y)	0.4	6.1	7.5	7.2	6.7	6.8	6.7	6.5
Unemployment rate (15-74y)	0.0	6.2	7.5	7.0	6.5	6.6	6.4	6.1
Employment (20-64y; millions)	-6.0	23.2	22.7	21.6	20.6	19.6	18.5	17.2
Employment (15-74y; millions)	-4.6	24.1	23.9	23.3	22.3	21.4	20.6	19.5
share of young (20-24y)	-0.8	4.1	4.2	3.6	3.1	3.4	3.4	3.3
share of prime-age (25-54y)	-7.7	68.4	65.4	66.1	66.8	63.3	60.0	60.7
share of older (55-64y)	0.6	23.6	25.2	23.0	22.6	24.9	26.3	24.2
share of oldest (65-74y)	8.1	3.4	4.9	7.0	7.2	8.1	10.0	11.5
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	-1.3	27.1	28.2	25.3	24.6	26.3	27.9	25.8
Old-age dependency ratio[3]	33.4	42.8	48.1	61.5	67.8	67.9	69.6	76.1
Total dependency ratio[4]	33.9	71.5	74.9	87.5	95.7	95.5	96.8	105.4
Total economic dependency ratio (20-64)[5]	14.3	143.5	145.0	150.4	154.0	151.6	150.5	157.8
Total economic dependency ratio (15-74)[6]	1.2	138.0	137.4	139.4	142.5	138.8	135.1	139.2
Old-age economic dependency ratio (20-64y)[7]	30.2	59.8	66.0	79.6	85.4	84.3	84.1	90.0
Old-age economic dependency ratio (15-74y)[8]	21.8	57.5	62.5	73.8	79.0	77.1	75.4	79.3

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

13. CYPRUS

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.18	1.31	1.34	1.40	1.42	1.44	1.46	1.48
Life expectancy at birth								
women	4.8	85.7	86.1	86.9	87.8	88.7	89.6	90.5
men	5.7	81.6	82.1	83.1	84.1	85.2	86.2	87.3
Life expectancy at 65 (years)								
women	4.1	22.5	22.8	23.5	24.2	25.0	25.8	26.6
men	4.4	19.9	20.2	21.0	21.8	22.6	23.4	24.3
Net migration (thousands)	-8.1	13.6	7.5	6.7	6.6	6.3	5.9	5.5
Net migration as % of population in t-1	-0.9	1.4	0.7	0.6	0.6	0.5	0.5	0.5
Population (million)	0.1	1.0	1.0	1.1	1.1	1.1	1.1	1.1
share of prime-age population (25-54y)	-12.2	44.3	43.4	40.0	36.4	34.4	33.0	32.1
share of working-age population (20-64y)	-12.0	61.5	60.6	59.3	56.5	52.2	50.4	49.6
share of elderly population (65+)	17.8	18.5	20.5	23.9	28.4	33.2	35.3	36.3
share of very elderly population (80+)	12.1	4.5	5.7	7.8	9.5	11.5	14.9	16.7
share of very elderly population (80+) in elderly population (65+)	21.5	24.5	27.8	32.7	33.5	34.8	42.3	45.9
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.7	4.0	2.6	2.1	1.5	1.2	1.2	1.1
Labour input: hours worked (growth rate)	0.0	2.4	0.6	0.4	-0.2	-0.4	-0.2	-0.3
Labour productivity per hour (growth rate)	1.6	1.6	1.9	1.7	1.7	1.6	1.4	1.4
TFP growth	0.9	1.0	0.9	0.9	0.9	0.8	0.8	0.8
Capital deepening contribution	0.8	0.5	1.0	0.8	0.9	0.8	0.6	0.5
Potential GDP per capita (growth rate)	1.5	2.3	1.7	1.7	1.3	1.1	1.4	1.4
Potential GDP per worker (growth rate)	1.7	2.3	2.5	1.7	1.7	1.6	1.4	1.4
HICP (growth rate)	2.0	0.8	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.1	2.9	4.1	4.5	4.2	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-61	610	636	655	641	598	572	548
Working-age population (growth rate)	-1.5	1.1	0.6	0.3	-0.6	-0.6	-0.3	-0.5
Labour force (20-64y; thousands)	-31	515	541	558	548	519	501	484
Participation rate (20-64y)	3.8	84.4	85.0	85.3	85.5	86.8	87.5	88.2
young (20-24y)	6.1	64.3	70.1	70.2	70.4	70.4	70.3	70.4
prime-age (25-54y)	1.8	89.9	90.3	90.6	91.4	91.5	91.6	91.6
older (55-64y)	12.5	72.9	72.3	75.6	76.2	79.8	82.8	85.5
oldest (65-69y)	27.2	24.0	23.6	27.6	33.2	37.8	44.4	51.2
Participation rate (20-64y) - women	5.1	79.8	80.9	81.5	81.8	83.4	84.2	84.9
young (20-24y)	4.0	64.8	68.3	68.4	68.7	68.7	68.7	68.7
prime-age (25-54y)	2.2	86.0	86.4	86.6	88.0	88.1	88.1	88.2
older (55-64y)	18.5	63.5	67.1	72.7	71.8	76.7	79.5	82.0
oldest (65-69y)	34.2	14.9	17.9	25.8	31.9	35.9	42.6	49.1
Participation rate (20-64y) - men	2.1	89.1	89.3	89.0	89.0	89.9	90.5	91.3
young (20-24y)	8.0	63.9	71.7	71.7	71.8	71.9	71.8	71.8
prime-age (25-54y)	0.9	93.9	94.2	94.3	94.5	94.6	94.7	94.7
older (55-64y)	5.6	83.1	78.4	79.0	80.7	83.0	86.0	88.8
oldest (65-69y)	19.6	33.6	29.9	29.9	34.6	39.8	46.2	53.3
Average labour market exit age[1]	3.5	64.6	64.6	65.4	66.0	66.6	67.3	68.0
women	3.6	64.4	64.5	65.4	66.0	66.6	67.3	68.0
men	3.3	64.7	64.8	65.4	66.0	66.6	67.3	68.0
Employment rate (20-64y)	2.8	80.7	80.4	80.3	81.0	82.3	82.9	83.5
Employment rate (15-74y)	0.5	67.8	66.7	66.2	65.9	65.6	67.1	68.3
Unemployment rate (20-64y)	0.9	4.4	5.5	5.9	5.3	5.1	5.3	5.3
Unemployment rate (15-74y)	1.1	4.7	5.9	6.3	5.7	5.5	5.7	5.7
Employment (20-64y; millions)	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Employment (15-74y; millions)	0.0	0.5	0.5	0.6	0.6	0.5	0.5	0.5
share of young (20-24y)	-0.4	5.8	6.1	5.8	5.5	5.4	5.5	5.4
share of prime-age (25-54y)	-12.1	73.5	73.3	68.6	64.5	64.3	63.2	61.4
share of older (55-64y)	7.8	16.3	16.5	21.0	23.6	22.6	23.4	24.2
share of oldest (65-74y)	4.9	3.3	3.1	3.6	5.5	6.8	7.0	8.2
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	7.5	19.4	19.9	24.3	27.7	26.1	26.4	26.9
Old-age dependency ratio[3]	43.1	30.0	33.7	40.3	50.3	63.6	70.1	73.2
Total dependency ratio[4]	39.2	62.5	65.0	68.6	76.9	91.6	98.3	101.8
Total economic dependency ratio (20-64)[5]	33.2	91.7	94.4	98.1	105.2	118.0	124.1	124.9
Total economic dependency ratio (15-74)[6]	25.9	87.7	90.5	93.6	98.5	109.0	114.3	113.6
Old-age economic dependency ratio (20-64y)[7]	44.3	33.6	38.5	46.1	55.9	69.4	76.4	78.0
Old-age economic dependency ratio (15-74y)[8]	38.7	32.2	36.9	44.0	52.3	64.1	70.3	70.9

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

14. LATVIA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.39	1.12	1.24	1.44	1.46	1.48	1.50	1.52
Life expectancy at birth								
women	7.3	81.3	81.9	83.2	84.5	85.8	87.2	88.6
men	10.3	71.6	72.4	74.1	76.0	77.9	79.9	81.9
Life expectancy at 65 (years)								
women	5.5	20.0	20.4	21.4	22.3	23.3	24.4	25.5
men	6.5	15.0	15.5	16.5	17.7	18.9	20.1	21.5
Net migration (thousands)	10.2	-4.2	-0.3	2.4	4.2	4.8	5.4	6.0
Net migration as % of population in t-1	0.7	-0.2	0.0	0.1	0.3	0.3	0.4	0.5
Population (million)	-0.6	1.9	1.8	1.6	1.5	1.4	1.4	1.3
share of prime-age population (25-54y)	-6.2	38.9	37.6	36.4	34.2	33.9	33.2	32.7
share of working-age population (20-64y)	-6.8	57.4	56.8	56.9	53.3	50.5	52.0	50.6
share of elderly population (65+)	11.3	22.1	24.5	27.5	30.2	33.1	32.5	33.5
share of very elderly population (80+)	8.0	6.1	6.6	8.8	10.5	11.7	14.5	14.0
share of very elderly population (80+) in elderly population (65+)	14.6	27.3	27.1	32.1	34.7	35.3	44.5	41.9
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.1	0.9	1.5	1.7	0.7	0.9	1.0	0.7
Labour input: hours worked (growth rate)	-0.8	-1.1	-1.1	-0.5	-1.4	-0.7	-0.4	-0.7
Labour productivity per hour (growth rate)	1.9	2.1	2.6	2.3	2.1	1.6	1.4	1.4
TFP growth	1.1	0.8	1.5	1.4	1.1	1.0	0.9	0.8
Capital deepening contribution	0.8	1.2	1.1	0.8	1.0	0.6	0.5	0.6
Potential GDP per capita (growth rate)	1.8	1.9	2.4	2.4	1.3	1.5	1.5	1.1
Potential GDP per worker (growth rate)	1.9	1.5	2.1	2.3	2.1	1.6	1.4	1.4
HICP (growth rate)	2.1	3.8	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.1	3.3	4.2	4.4	4.1	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-410	1,063	1,002	930	816	724	702	653
Working-age population (growth rate)	0.6	-1.5	-1.0	-0.8	-1.6	-0.5	-0.5	-0.9
Labour force (20-64y; thousands)	-334	897	852	795	701	626	605	563
Participation rate (20-64y)	1.8	84.4	85.0	85.5	85.9	86.5	86.2	86.2
young (20-24y)	2.4	69.7	71.7	72.5	71.7	71.8	72.1	72.1
prime-age (25-54y)	2.2	88.3	89.3	89.7	90.6	90.5	90.4	90.6
older (55-64y)	1.9	78.5	78.5	80.3	79.1	80.9	81.0	80.4
oldest (65-69y)	-2.6	32.8	25.4	28.8	29.9	28.6	30.0	30.2
Participation rate (20-64y) - women	2.1	82.7	83.2	84.0	84.4	85.1	84.8	84.8
young (20-24y)	2.2	67.2	69.1	69.7	69.0	69.1	69.4	69.4
prime-age (25-54y)	2.5	86.1	87.4	87.8	88.5	88.7	88.6	88.6
older (55-64y)	1.8	78.9	78.1	80.5	79.2	81.1	81.3	80.7
oldest (65-69y)	-2.0	32.3	25.9	28.7	29.9	28.7	30.0	30.3
Participation rate (20-64y) - men	1.4	86.2	86.8	87.0	87.4	87.8	87.5	87.6
young (20-24y)	2.4	72.2	74.2	75.0	74.1	74.2	74.5	74.6
prime-age (25-54y)	1.8	90.5	91.2	91.5	92.4	92.0	92.1	92.3
older (55-64y)	2.0	78.0	79.0	80.2	79.0	80.7	80.7	80.1
oldest (65-69y)	-3.5	33.5	24.6	29.0	29.8	28.4	29.9	30.1
Average labour market exit age[1]	0.5	65.5	66.0	66.0	66.0	66.0	66.0	66.0
women	0.5	65.5	66.0	66.0	66.0	66.0	66.0	66.0
men	0.5	65.5	66.0	66.0	66.0	66.0	66.0	66.0
Employment rate (20-64y)	2.4	78.4	79.4	78.8	80.2	80.6	80.5	80.8
Employment rate (15-74y)	-1.0	64.6	62.8	63.5	63.8	61.8	64.9	63.6
Unemployment rate (20-64y)	-0.8	7.1	6.6	7.9	6.6	6.8	6.6	6.3
Unemployment rate (15-74y)	-0.8	7.0	6.6	7.9	6.5	6.7	6.6	6.2
Employment (20-64y; millions)	-0.3	0.8	0.8	0.7	0.7	0.6	0.6	0.5
Employment (15-74y; millions)	-0.3	0.9	0.8	0.8	0.7	0.6	0.6	0.6
share of young (20-24y)	0.5	6.0	7.5	8.0	5.4	6.9	7.0	6.5
share of prime-age (25-54y)	-2.3	66.2	66.3	63.8	63.5	66.3	63.6	63.9
share of older (55-64y)	2.6	20.9	21.3	23.0	25.1	20.9	24.1	23.5
share of oldest (65-74y)	-0.7	6.2	4.2	4.6	5.4	5.2	4.6	5.5
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	2.7	23.9	24.0	25.4	28.7	23.5	26.8	26.6
Old-age dependency ratio[3]	27.6	38.6	43.1	48.4	56.7	65.7	62.6	66.1
Total dependency ratio[4]	23.4	74.1	76.0	75.8	87.6	98.1	92.4	97.5
Total economic dependency ratio (20-64)[5]	24.3	106.5	109.0	108.6	119.9	131.7	126.0	130.8
Total economic dependency ratio (15-74)[6]	23.7	99.1	103.5	102.9	112.7	123.9	119.3	122.8
Old-age economic dependency ratio (20-64y)[7]	33.5	42.4	49.7	56.5	64.8	75.8	72.7	75.9
Old-age economic dependency ratio (15-74y)[8]	31.8	39.4	47.2	53.5	60.9	71.3	68.8	71.2

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

15. LITHUANIA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.38	1.03	1.11	1.28	1.31	1.34	1.38	1.41
Life expectancy at birth								
women	7.0	81.7	82.3	83.5	84.8	86.1	87.4	88.7
men	9.6	73.2	73.9	75.6	77.3	79.1	80.9	82.8
Life expectancy at 65 (years)								
women	5.3	20.3	20.8	21.6	22.6	23.5	24.6	25.6
men	6.4	15.4	15.9	17.0	18.1	19.2	20.5	21.8
Net migration (thousands)	-2.5	16.2	3.2	6.9	12.0	13.2	13.3	13.7
Net migration as % of population in t-1	0.1	0.6	0.1	0.3	0.5	0.6	0.6	0.7
Population (million)	-0.8	2.9	2.8	2.6	2.5	2.3	2.2	2.1
share of prime-age population (25-54y)	-9.1	40.7	40.4	39.2	35.3	33.3	32.2	31.6
share of working-age population (20-64y)	-10.6	59.9	59.1	58.7	56.0	51.7	50.5	49.3
share of elderly population (65+)	16.7	21.2	23.7	27.6	30.7	35.3	37.0	37.9
share of very elderly population (80+)	11.1	5.7	6.1	8.5	10.8	11.9	14.9	16.8
share of very elderly population (80+) in elderly population (65+)	17.5	26.8	25.8	30.7	35.2	33.7	40.3	44.3
Macroeconomic assumptions	**average 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Potential GDP (growth rate)	1.0	2.4	1.7	1.5	0.6	0.4	0.6	0.6
Labour input: hours worked (growth rate)	-0.8	0.9	-0.7	-0.5	-1.2	-1.1	-0.7	-0.8
Labour productivity per hour (growth rate)	1.8	1.5	2.4	2.0	1.9	1.6	1.4	1.3
TFP growth	0.9	0.0	0.9	1.2	1.0	0.9	0.9	0.8
Capital deepening contribution	0.8	1.6	1.5	0.8	0.9	0.7	0.5	0.5
Potential GDP per capita (growth rate)	1.6	2.4	2.3	2.1	1.3	1.1	1.2	1.1
Potential GDP per worker (growth rate)	1.8	3.1	2.0	2.0	1.9	1.6	1.4	1.3
HICP (growth rate)	2.1	3.4	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.1	2.9	3.9	4.7	4.2	4.0	4.0	4.0
Labour force assumptions	**change 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Working-age population (20-64y; thousands)	-701	1,730	1,671	1,549	1,388	1,207	1,112	1,028
Working-age population (growth rate)	-0.4	-0.5	-0.6	-0.7	-1.4	-1.1	-0.7	-0.9
Labour force (20-64y; thousands)	-570	1,486	1,458	1,370	1,229	1,075	992	917
Participation rate (20-64y)	3.2	85.9	87.2	88.4	88.5	89.1	89.2	89.1
young (20-24y)	3.7	67.1	69.7	71.0	70.4	70.5	70.8	70.8
prime-age (25-54y)	3.4	91.4	92.9	93.7	94.7	94.8	94.7	94.9
older (55-64y)	4.4	76.6	77.0	80.2	79.5	80.8	81.5	80.9
oldest (65-69y)	6.1	28.8	30.7	32.6	34.8	33.7	34.8	34.9
Participation rate (20-64y) - women	4.7	85.4	86.7	88.7	89.2	90.1	90.2	90.1
young (20-24y)	4.8	65.4	69.2	70.4	69.8	70.0	70.2	70.2
prime-age (25-54y)	5.0	90.5	92.2	93.8	95.3	95.5	95.4	95.5
older (55-64y)	5.0	78.4	78.3	81.7	80.9	83.0	84.0	83.3
oldest (65-69y)	8.5	27.5	32.1	33.6	35.2	34.1	35.8	36.0
Participation rate (20-64y) - men	1.8	86.5	87.8	88.2	88.0	88.2	88.3	88.3
young (20-24y)	2.8	68.6	70.1	71.5	70.9	71.1	71.3	71.4
prime-age (25-54y)	2.0	92.3	93.5	93.6	94.2	94.2	94.1	94.3
older (55-64y)	4.6	74.4	75.5	78.7	78.4	79.0	79.5	79.0
oldest (65-69y)	3.5	30.6	28.8	31.5	34.4	33.3	33.9	34.1
Average labour market exit age[1]	0.4	65.6	66.0	66.0	66.0	66.0	66.0	66.0
women	0.4	65.6	66.0	66.0	66.0	66.0	66.0	66.0
men	0.4	65.6	66.0	66.0	66.0	66.0	66.0	66.0
Employment rate (20-64y)	3.8	79.9	81.5	82.3	83.3	83.6	83.7	83.7
Employment rate (15-74y)	0.2	65.9	65.5	67.2	67.7	64.8	66.1	66.1
Unemployment rate (20-64y)	-1.0	7.0	6.6	6.9	5.9	6.1	6.2	6.0
Unemployment rate (15-74y)	-1.1	7.0	6.5	6.9	5.8	6.0	6.0	5.9
Employment (20-64y; millions)	-0.5	1.4	1.4	1.3	1.2	1.0	0.9	0.9
Employment (15-74y; millions)	-0.5	1.5	1.4	1.3	1.2	1.1	1.0	0.9
share of young (20-24y)	-0.4	5.4	5.8	5.9	4.2	4.9	5.1	5.0
share of prime-age (25-54y)	-5.4	69.3	69.5	67.6	63.7	64.0	63.7	63.9
share of older (55-64y)	3.9	20.1	19.4	21.1	25.8	23.7	24.5	24.0
share of oldest (65-74y)	2.0	4.8	4.8	5.0	6.0	7.0	6.3	6.7
Dependency ratios	**change 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Share of older population in working-age population[2]	4.6	24.2	23.6	25.0	31.1	28.6	29.1	28.9
Old-age dependency ratio[3]	41.5	35.3	40.0	47.0	54.9	68.3	73.2	76.8
Total dependency ratio[4]	35.8	67.0	69.1	70.2	78.6	93.3	97.8	102.8
Total economic dependency ratio (20-64)[5]	32.1	95.6	94.5	93.4	101.1	116.3	122.4	127.7
Total economic dependency ratio (15-74)[6]	28.0	90.6	89.6	88.3	94.7	107.7	114.3	118.7
Old-age economic dependency ratio (20-64y)[7]	45.3	39.1	43.9	51.7	59.4	74.0	80.6	84.3
Old-age economic dependency ratio (15-74y)[8]	41.3	37.0	41.6	48.9	55.6	68.5	75.2	78.3

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

16. LUXEMBOURG

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.20	1.25	1.26	1.33	1.36	1.39	1.41	1.44
Life expectancy at birth								
women	5.3	85.6	86.1	87.0	88.0	88.9	89.9	90.9
men	6.1	81.1	81.6	82.7	83.8	84.9	86.0	87.2
Life expectancy at 65 (years)								
women	4.4	22.7	23.1	23.9	24.6	25.5	26.3	27.1
men	4.7	19.5	19.9	20.7	21.5	22.4	23.3	24.2
Net migration (thousands)	-4.2	6.8	9.5	7.5	5.1	3.8	3.1	2.6
Net migration as % of population in t-1	-0.7	1.0	1.3	0.9	0.6	0.4	0.3	0.3
Population (million)	0.3	0.7	0.7	0.8	0.9	0.9	1.0	1.0
share of prime-age population (25-54y)	-10.3	45.3	44.7	44.1	41.7	38.7	36.5	35.0
share of working-age population (20-64y)	-11.4	63.8	62.9	62.0	59.8	57.1	55.0	52.4
share of elderly population (65+)	16.0	15.4	17.0	19.7	22.2	25.5	28.6	31.4
share of very elderly population (80+)	9.1	4.0	4.4	5.6	7.5	8.9	10.8	13.0
share of very elderly population (80+) in elderly population (65+)	15.8	25.8	25.8	28.6	33.8	34.8	37.9	41.6
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.3	1.1	1.8	1.9	1.4	1.1	0.9	0.8
Labour input: hours worked (growth rate)	0.4	1.7	1.6	1.0	0.1	-0.2	-0.3	-0.5
Labour productivity per hour (growth rate)	1.0	-0.6	0.2	0.9	1.2	1.3	1.3	1.3
TFP growth	0.6	-0.3	0.1	0.6	0.8	0.8	0.8	0.8
Capital deepening contribution	0.3	-0.3	0.1	0.3	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	0.7	-0.3	0.2	0.8	0.7	0.8	0.9	0.9
Potential GDP per worker (growth rate)	1.0	-0.1	0.1	0.9	1.2	1.3	1.3	1.3
HICP (growth rate)	2.0	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.9	2.9	3.6	3.9	4.0	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	68	438	463	522	546	542	529	505
Working-age population (growth rate)	-1.6	1.1	1.3	0.9	0.2	-0.2	-0.3	-0.5
Labour force (20-64y; thousands)	57	344	369	420	439	431	419	401
Participation rate (20-64y)	0.8	78.6	79.7	80.5	80.5	79.6	79.3	79.4
young (20-24y)	5.1	46.1	51.1	51.3	51.0	51.0	51.1	51.1
prime-age (25-54y)	0.4	90.2	90.6	90.7	90.6	90.5	90.5	90.6
older (55-64y)	6.9	51.8	53.8	57.0	59.2	58.4	59.3	58.8
oldest (65-69y)	2.1	10.2	8.8	11.4	11.9	12.5	12.4	12.3
Participation rate (20-64y) - women	2.5	75.1	77.4	78.6	78.7	77.8	77.5	77.6
young (20-24y)	5.5	43.9	49.3	49.5	49.3	49.3	49.4	49.4
prime-age (25-54y)	1.1	87.4	88.4	88.7	88.5	88.4	88.4	88.5
older (55-64y)	13.5	44.4	50.4	55.7	59.0	57.7	58.5	58.0
oldest (65-69y)	5.2	7.0	6.3	10.6	11.3	12.3	12.1	12.2
Participation rate (20-64y) - men	-0.8	82.0	82.1	82.3	82.1	81.3	81.0	81.1
young (20-24y)	4.8	48.0	52.8	53.0	52.7	52.7	52.8	52.8
prime-age (25-54y)	-0.3	93.0	92.8	92.5	92.7	92.5	92.5	92.6
older (55-64y)	0.7	58.9	57.1	58.3	59.3	59.2	60.0	59.6
oldest (65-69y)	-1.0	13.6	11.2	12.1	12.5	12.6	12.6	12.5
Average labour market exit age[1]	1.2	61.5	62.0	62.3	62.5	62.5	62.6	62.6
women	1.2	61.5	62.0	62.3	62.5	62.5	62.6	62.6
men	1.2	61.5	62.0	62.3	62.5	62.5	62.6	62.6
Employment rate (20-64y)	2.8	73.8	75.6	77.1	77.5	76.7	76.4	76.6
Employment rate (15-74y)	-2.2	62.4	62.8	64.0	63.9	61.7	60.8	60.2
Unemployment rate (20-64y)	-2.6	6.1	5.2	4.2	3.7	3.6	3.6	3.5
Unemployment rate (15-74y)	-2.8	6.6	5.7	4.6	4.0	4.0	4.0	3.9
Employment (20-64y; millions)	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Employment (15-74y; millions)	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.4
share of young (20-24y)	0.4	4.6	5.2	5.2	4.6	5.0	5.2	5.0
share of prime-age (25-54y)	-6.1	79.6	79.0	78.1	76.2	74.6	73.1	73.5
share of older (55-64y)	4.6	13.1	13.2	13.8	16.1	16.9	18.1	17.7
share of oldest (65-74y)	1.0	1.2	1.0	1.3	1.6	1.9	2.0	2.2
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	4.6	20.1	19.8	19.9	22.5	23.6	24.9	24.7
Old-age dependency ratio[3]	35.7	24.1	27.1	31.7	37.1	44.7	52.1	59.9
Total dependency ratio[4]	34.1	56.8	59.0	61.4	67.2	75.1	82.0	91.0
Total economic dependency ratio (20-64)[5]	38.8	102.4	101.4	101.6	108.2	120.4	130.1	141.1
Total economic dependency ratio (15-74)[6]	36.2	99.6	98.7	98.6	104.9	116.1	125.3	135.7
Old-age economic dependency ratio (20-64y)[7]	44.4	31.2	34.6	39.6	46.1	56.1	65.9	75.7
Old-age economic dependency ratio (15-74y)[8]	42.4	30.4	33.7	38.5	44.7	54.1	63.5	72.8

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

17. HUNGARY

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.29	1.30	1.38	1.56	1.57	1.57	1.58	1.59
Life expectancy at birth								
women	7.6	80.0	80.6	81.9	83.3	84.7	86.1	87.6
men	9.1	73.8	74.6	76.1	77.7	79.3	81.1	82.9
Life expectancy at 65 (years)								
women	5.8	18.7	19.1	20.1	21.1	22.2	23.3	24.5
men	6.4	14.9	15.4	16.4	17.5	18.7	20.0	21.3
Net migration (thousands)	22.0	1.7	12.5	24.0	21.0	22.0	22.5	23.7
Net migration as % of population in t-1	0.3	0.0	0.1	0.3	0.2	0.3	0.3	0.3
Population (million)	-1.9	9.5	9.3	8.9	8.5	8.2	7.9	7.6
share of prime-age population (25-54y)	-7.4	41.7	39.9	36.9	36.1	35.2	35.0	34.3
share of working-age population (20-64y)	-7.1	59.6	59.9	57.8	54.4	52.9	53.3	52.5
share of elderly population (65+)	8.8	21.0	21.5	24.5	27.6	29.1	29.1	29.8
share of very elderly population (80+)	7.0	4.9	5.7	7.4	7.9	10.9	11.4	11.9
share of very elderly population (80+) in elderly population (65+)	16.7	23.2	26.6	30.0	28.8	37.5	39.3	39.9
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.1	1.0	1.2	1.3	0.9	0.9	1.0	0.8
Labour input: hours worked (growth rate)	-0.5	0.2	-0.4	-0.7	-0.9	-0.5	-0.4	-0.5
Labour productivity per hour (growth rate)	1.6	0.8	1.6	2.0	1.8	1.5	1.3	1.3
TFP growth	1.0	0.6	0.9	1.2	1.0	0.9	0.9	0.8
Capital deepening contribution	0.6	0.2	0.7	0.8	0.8	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.6	0.9	1.7	1.6	1.3	1.4	1.4	1.1
Potential GDP per worker (growth rate)	1.7	0.0	1.5	2.0	1.8	1.5	1.3	1.3
HICP (growth rate)	3.0	4.4	3.0	3.0	3.0	3.0	3.0	3.0
Nominal interest rate	5.5	6.9	6.2	6.1	5.4	5.0	5.0	5.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-1,665	5,668	5,544	5,127	4,641	4,342	4,186	4,004
Working-age population (growth rate)	0.1	-0.6	-0.5	-1.2	-0.8	-0.5	-0.4	-0.5
Labour force (20-64y; thousands)	-1,321	4,799	4,711	4,377	4,048	3,780	3,638	3,478
Participation rate (20-64y)	2.2	84.7	85.0	85.4	87.2	87.1	86.9	86.9
young (20-24y)	2.0	53.6	55.6	55.5	55.4	55.5	55.6	55.7
prime-age (25-54y)	2.4	91.7	92.9	93.9	94.2	94.3	94.1	94.2
older (55-64y)	5.1	74.4	74.3	75.8	79.4	79.8	79.9	79.5
oldest (65-69y)	-1.1	16.4	13.9	14.2	14.9	15.1	15.3	15.3
Participation rate (20-64y) - women	4.5	80.3	80.9	82.3	85.1	85.1	84.9	84.8
young (20-24y)	1.4	49.2	50.5	50.5	50.3	50.4	50.5	50.6
prime-age (25-54y)	4.5	88.8	90.8	92.8	93.3	93.5	93.3	93.3
older (55-64y)	9.5	66.1	65.7	69.4	75.2	75.9	76.1	75.6
oldest (65-69y)	2.2	13.9	13.5	13.5	15.3	15.9	16.0	16.1
Participation rate (20-64y) - men	-0.1	88.9	88.9	88.3	89.3	88.9	88.8	88.8
young (20-24y)	2.6	57.9	60.4	60.3	60.1	60.3	60.4	60.4
prime-age (25-54y)	0.4	94.5	94.9	94.9	95.0	95.0	94.9	95.0
older (55-64y)	0.0	83.2	83.1	82.4	83.5	83.4	83.5	83.2
oldest (65-69y)	-5.0	19.5	14.4	15.0	14.5	14.4	14.5	14.6
Average labour market exit age[1]	0.7	63.7	63.9	64.4	64.4	64.4	64.4	64.4
women	1.2	62.8	63.1	64.0	64.0	64.0	64.0	64.0
men	0.1	64.7	64.8	64.8	64.8	64.8	64.8	64.8
Employment rate (20-64y)	2.0	81.0	80.7	81.5	83.8	83.2	82.9	83.1
Employment rate (15-74y)	-0.3	65.2	65.6	64.1	64.8	64.6	65.2	64.9
Unemployment rate (20-64y)	0.1	4.3	5.0	4.5	3.9	4.5	4.6	4.4
Unemployment rate (15-74y)	0.1	4.5	5.2	4.7	4.1	4.7	4.8	4.6
Employment (20-64y; millions)	-1.3	4.6	4.5	4.2	3.9	3.6	3.5	3.3
Employment (15-74y; millions)	-1.3	4.8	4.6	4.3	4.0	3.7	3.6	3.4
share of young (20-24y)	0.2	5.1	5.3	5.7	4.7	5.5	5.5	5.4
share of prime-age (25-54y)	-4.8	73.5	71.0	68.0	69.4	69.6	69.0	68.6
share of older (55-64y)	4.6	18.1	21.1	23.1	22.6	21.5	22.2	22.6
share of oldest (65-74y)	0.1	2.7	2.0	2.6	2.8	2.8	2.7	2.8
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	4.3	21.0	24.4	26.6	25.4	23.9	24.6	25.3
Old-age dependency ratio[3]	21.6	35.2	35.8	42.4	50.8	54.9	54.6	56.8
Total dependency ratio[4]	22.7	67.8	66.9	72.9	84.0	88.9	87.7	90.6
Total economic dependency ratio (20-64)[5]	22.2	98.8	98.5	103.7	111.6	118.5	117.9	121.0
Total economic dependency ratio (15-74)[6]	21.4	95.5	95.9	100.3	107.9	114.5	114.0	116.8
Old-age economic dependency ratio (20-64y)[7]	24.9	40.5	42.2	49.2	57.6	63.0	63.1	65.4
Old-age economic dependency ratio (15-74y)[8]	24.1	39.1	41.1	47.6	55.7	60.8	61.0	63.2

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

18. MALTA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.30	1.01	1.05	1.11	1.16	1.21	1.26	1.31
Life expectancy at birth								
women	5.5	84.9	85.4	86.3	87.3	88.3	89.4	90.4
men	5.9	81.3	81.8	82.8	83.9	85.0	86.1	87.2
Life expectancy at 65 (years)								
women	4.5	22.1	22.5	23.3	24.1	24.9	25.8	26.6
men	4.6	19.5	19.8	20.6	21.5	22.3	23.2	24.1
Net migration (thousands)	-6.4	10.6	7.6	6.2	5.3	5.0	4.5	4.2
Net migration as % of population in t-1	-1.3	1.8	1.2	0.9	0.7	0.7	0.6	0.6
Population (million)	0.2	0.6	0.6	0.7	0.7	0.8	0.8	0.8
share of prime-age population (25-54y)	-14.4	50.2	51.9	50.3	44.8	40.1	37.4	35.8
share of working-age population (20-64y)	-12.3	65.5	66.5	68.1	65.6	59.9	55.6	53.2
share of elderly population (65+)	16.6	18.5	18.4	18.6	22.0	28.4	32.9	35.1
share of very elderly population (80+)	10.8	4.4	5.6	6.5	6.6	8.2	11.7	15.2
share of very elderly population (80+) in elderly population (65+)	19.5	23.8	30.4	35.1	29.8	28.9	35.6	43.3
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	2.4	5.3	5.0	3.4	2.1	1.3	1.1	0.9
Labour input: hours worked (growth rate)	0.4	4.5	2.9	0.8	-0.1	-0.6	-0.5	-0.5
Labour productivity per hour (growth rate)	1.9	0.8	2.0	2.5	2.2	1.9	1.6	1.4
TFP growth	1.0	1.2	1.3	1.2	1.0	0.9	0.9	0.8
Capital deepening contribution	0.9	-0.4	0.7	1.3	1.2	1.0	0.7	0.6
Potential GDP per capita (growth rate)	1.8	3.3	3.6	2.7	1.6	1.0	1.0	1.1
Potential GDP per worker (growth rate)	2.0	1.3	2.4	2.5	2.2	1.9	1.6	1.4
HICP (growth rate)	2.0	2.4	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.3	3.4	4.5	4.8	4.3	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	25	380	416	465	474	450	426	405
Working-age population (growth rate)	-2.7	2.2	1.6	0.7	-0.1	-0.7	-0.4	-0.5
Labour force (20-64y; thousands)	35	327	370	420	426	402	381	362
Participation rate (20-64y)	3.3	86.1	89.1	90.3	89.8	89.2	89.5	89.4
young (20-24y)	4.4	76.3	80.8	81.0	80.7	80.8	80.7	80.7
prime-age (25-54y)	3.5	91.8	93.9	95.0	95.3	95.3	95.3	95.3
older (55-64y)	13.4	62.9	67.8	75.7	77.2	75.8	76.7	76.3
oldest (65-69y)	8.3	14.5	17.3	20.2	22.5	22.8	22.8	22.8
Participation rate (20-64y) - women	10.0	78.9	84.5	88.4	89.0	88.9	89.0	88.9
young (20-24y)	6.3	73.9	80.3	80.5	80.3	80.3	80.3	80.3
prime-age (25-54y)	8.5	85.9	90.5	93.6	94.4	94.4	94.4	94.4
older (55-64y)	27.4	49.7	58.4	72.8	77.0	76.9	77.6	77.1
oldest (65-69y)	14.6	8.5	12.8	17.9	21.8	22.9	23.1	23.1
Participation rate (20-64y) - men	-2.2	91.9	92.6	91.7	90.3	89.5	89.8	89.7
young (20-24y)	2.8	78.2	81.3	81.3	81.1	81.2	81.1	81.1
prime-age (25-54y)	-0.3	96.4	96.5	96.0	96.0	96.0	96.0	96.0
older (55-64y)	0.4	75.2	76.3	78.0	77.3	75.1	76.0	75.6
oldest (65-69y)	2.1	20.6	21.6	22.3	23.1	22.8	22.6	22.6
Average labour market exit age[1]	0.6	63.9	64.2	64.4	64.4	64.4	64.4	64.4
women	0.6	63.9	64.1	64.3	64.4	64.4	64.4	64.4
men	0.6	63.8	64.3	64.4	64.4	64.4	64.4	64.4
Employment rate (20-64y)	4.3	83.2	86.6	87.9	87.9	87.5	87.7	87.5
Employment rate (15-74y)	-0.8	71.1	74.6	77.1	74.6	71.0	70.3	70.3
Unemployment rate (20-64y)	-1.2	3.3	2.8	2.7	2.1	1.9	2.0	2.1
Unemployment rate (15-74y)	-1.3	3.6	3.1	2.8	2.2	2.1	2.2	2.2
Employment (20-64y; millions)	0.0	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Employment (15-74y; millions)	0.0	0.3	0.4	0.4	0.4	0.4	0.4	0.4
share of young (20-24y)	-1.3	6.6	5.9	5.3	4.8	5.0	5.2	5.3
share of prime-age (25-54y)	-11.1	79.2	80.0	75.6	69.7	68.1	68.3	68.1
share of older (55-64y)	10.5	10.9	11.1	16.1	21.5	21.8	21.5	21.4
share of oldest (65-74y)	2.0	1.7	1.5	1.7	2.7	3.7	3.6	3.7
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	11.0	15.5	15.0	19.8	26.0	27.0	26.5	26.5
Old-age dependency ratio[3]	37.8	28.2	27.7	27.4	33.6	47.4	59.3	65.9
Total dependency ratio[4]	35.2	52.6	50.3	46.8	52.5	67.0	80.0	87.8
Total economic dependency ratio (20-64)[5]	30.6	76.1	67.3	60.9	67.0	83.4	97.6	106.7
Total economic dependency ratio (15-74)[6]	27.6	73.7	65.3	59.1	64.3	79.1	92.7	101.3
Old-age economic dependency ratio (20-64y)[7]	39.3	32.0	30.5	29.3	35.3	50.1	63.6	71.3
Old-age economic dependency ratio (15-74y)[8]	36.7	30.9	29.5	28.4	33.9	47.6	60.4	67.6

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

19. THE NETHERLANDS

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.14	1.41	1.45	1.51	1.52	1.53	1.55	1.56
Life expectancy at birth								
women	6.1	83.4	83.9	85.0	86.1	87.2	88.3	89.5
men	6.1	80.6	81.1	82.2	83.3	84.4	85.6	86.7
Life expectancy at 65 (years)								
women	4.9	21.0	21.4	22.2	23.1	24.0	24.9	25.9
men	4.7	19.0	19.3	20.1	21.0	21.9	22.8	23.7
Net migration (thousands)	-47.6	94.7	73.1	65.0	57.2	53.6	51.6	47.1
Net migration as % of population in t-1	-0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.2
Population (million)	1.1	18.1	18.4	18.9	19.1	19.1	19.2	19.2
share of prime-age population (25-54y)	-3.4	38.2	38.4	39.2	38.3	36.7	35.6	34.8
share of working-age population (20-64y)	-6.8	58.5	57.4	55.8	55.9	55.3	53.5	51.7
share of elderly population (65+)	9.1	21.0	22.7	24.7	24.6	25.9	28.2	30.1
share of very elderly population (80+)	7.0	5.2	6.5	7.9	9.6	9.6	10.4	12.3
share of very elderly population (80+) in elderly population (65+)	15.8	24.9	28.6	32.2	38.9	36.9	36.8	40.7
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.2	1.6	1.0	1.3	1.5	1.3	1.0	1.2
Labour input: hours worked (growth rate)	0.1	1.1	0.2	0.2	0.2	0.0	-0.2	-0.1
Labour productivity per hour (growth rate)	1.1	0.5	0.8	1.1	1.3	1.3	1.3	1.3
TFP growth	0.7	0.3	0.4	0.7	0.8	0.8	0.8	0.8
Capital deepening contribution	0.4	0.2	0.4	0.4	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.1	1.1	0.7	1.1	1.4	1.3	1.0	1.2
Potential GDP per worker (growth rate)	1.1	1.1	0.4	1.1	1.3	1.3	1.3	1.3
HICP (growth rate)	2.1	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.9	2.8	3.6	4.0	4.0	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-629	10,579	10,579	10,570	10,696	10,591	10,279	9,951
Working-age population (growth rate)	-0.6	0.3	0.0	0.2	0.0	-0.2	-0.3	-0.3
Labour force (20-64y; thousands)	-89	9,130	9,203	9,422	9,641	9,595	9,333	9,041
Participation rate (20-64y)	4.6	86.3	87.0	89.1	90.1	90.6	90.8	90.9
young (20-24y)	1.4	87.0	88.4	88.4	88.4	88.4	88.4	88.4
prime-age (25-54y)	4.2	89.3	90.6	92.2	93.2	93.5	93.5	93.5
older (55-64y)	6.5	77.6	75.7	78.7	81.5	83.4	84.1	84.1
oldest (65-69y)	23.1	30.5	29.8	29.4	34.0	39.7	46.4	53.6
Participation rate (20-64y) - women	7.4	82.5	83.7	87.0	88.7	89.5	89.9	89.9
young (20-24y)	1.8	87.1	89.0	89.0	88.9	89.0	89.0	88.9
prime-age (25-54y)	6.5	85.7	87.6	90.1	91.7	92.3	92.3	92.3
older (55-64y)	12.2	71.4	69.7	75.0	79.5	82.4	83.5	83.6
oldest (65-69y)	29.8	23.4	30.2	27.6	32.7	38.9	46.0	53.2
Participation rate (20-64y) - men	1.7	90.1	90.3	91.3	91.5	91.6	91.7	91.8
young (20-24y)	1.0	86.9	87.9	87.9	87.9	87.9	87.9	87.9
prime-age (25-54y)	1.9	92.9	93.5	94.2	94.6	94.7	94.8	94.8
older (55-64y)	0.8	83.9	81.8	82.5	83.5	84.4	84.7	84.7
oldest (65-69y)	16.2	37.8	29.3	31.2	35.4	40.6	46.8	54.0
Average labour market exit age[1]	2.5	65.4	65.7	66.0	66.2	66.7	67.1	67.8
women	2.5	65.3	65.6	66.0	66.2	66.7	67.1	67.8
men	2.3	65.5	65.8	66.0	66.2	66.7	67.1	67.8
Employment rate (20-64y)	5.6	83.5	84.6	87.0	88.1	88.6	88.9	89.0
Employment rate (15-74y)	4.5	73.2	73.1	74.6	77.0	76.7	76.9	77.8
Unemployment rate (20-64y)	-1.3	3.3	2.7	2.4	2.2	2.2	2.0	2.0
Unemployment rate (15-74y)	-1.5	3.9	3.2	2.8	2.6	2.6	2.4	2.4
Employment (20-64y; millions)	0.0	8.8	9.0	9.2	9.4	9.4	9.1	8.9
Employment (15-74y; millions)	0.3	10.0	10.1	10.2	10.5	10.6	10.5	10.3
share of young (20-24y)	-1.7	9.6	9.2	8.6	7.9	8.3	8.1	7.8
share of prime-age (25-54y)	-0.2	60.0	62.2	65.6	63.6	60.8	60.1	59.9
share of older (55-64y)	-0.3	19.0	17.6	15.8	18.2	19.6	19.4	18.7
share of oldest (65-74y)	2.9	4.2	3.8	3.3	3.4	4.6	6.0	7.1
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	-0.4	23.6	22.5	19.8	22.3	23.8	23.8	23.2
Old-age dependency ratio[3]	22.3	35.9	39.6	44.2	43.9	46.8	52.7	58.2
Total dependency ratio[4]	22.3	71.0	74.3	79.2	78.8	80.7	86.8	93.3
Total economic dependency ratio (20-64)[5]	11.2	87.5	89.9	91.5	88.5	88.1	92.9	98.6
Total economic dependency ratio (15-74)[6]	7.7	77.5	79.9	82.4	79.4	78.1	81.3	85.2
Old-age economic dependency ratio (20-64y)[7]	18.9	38.1	42.4	47.0	46.0	47.5	52.2	57.0
Old-age economic dependency ratio (15-74y)[8]	15.5	33.8	37.7	42.3	41.2	42.1	45.7	49.3

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

20. AUSTRIA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.20	1.29	1.33	1.40	1.42	1.45	1.47	1.49
Life expectancy at birth								
women	5.7	84.4	84.9	85.9	86.9	87.9	89.0	90.1
men	6.6	79.9	80.5	81.6	82.8	84.0	85.2	86.5
Life expectancy at 65 (years)								
women	4.7	21.7	22.1	22.9	23.7	24.6	25.5	26.4
men	5.0	18.7	19.1	20.0	20.8	21.8	22.7	23.7
Net migration (thousands)	-2.8	32.9	40.9	39.7	36.5	34.1	31.5	30.2
Net migration as % of population in t-1	0.0	0.4	0.4	0.4	0.4	0.4	0.3	0.3
Population (million)	-0.1	9.2	9.3	9.4	9.5	9.4	9.3	9.1
share of prime-age population (25-54y)	-6.0	40.0	39.1	38.2	36.9	35.8	34.9	34.0
share of working-age population (20-64y)	-8.8	60.4	58.4	56.5	55.3	53.5	52.8	51.6
share of elderly population (65+)	11.3	20.5	23.0	26.3	27.7	29.4	30.6	31.7
share of very elderly population (80+)	7.7	6.0	6.5	7.9	10.7	11.0	12.3	13.7
share of very elderly population (80+) in elderly population (65+)	13.8	29.5	28.1	30.2	38.7	37.4	40.4	43.3
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	0.9	0.5	0.8	1.1	0.9	0.9	1.0	0.9
Labour input: hours worked (growth rate)	-0.1	0.4	0.3	0.1	-0.3	-0.4	-0.3	-0.4
Labour productivity per hour (growth rate)	1.1	0.1	0.5	1.0	1.2	1.3	1.3	1.3
TFP growth	0.7	0.0	0.2	0.7	0.8	0.8	0.8	0.8
Capital deepening contribution	0.4	0.2	0.2	0.4	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	0.9	0.2	0.6	1.0	1.0	1.1	1.1	1.0
Potential GDP per worker (growth rate)	1.0	0.5	0.0	1.0	1.2	1.3	1.3	1.3
HICP (growth rate)	2.1	3.6	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.0	3.0	3.8	4.2	4.1	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-845	5,562	5,426	5,340	5,242	5,020	4,883	4,716
Working-age population (growth rate)	-0.2	-0.2	-0.5	0.1	-0.4	-0.4	-0.3	-0.5
Labour force (20-64y; thousands)	-535	4,556	4,537	4,550	4,471	4,291	4,175	4,021
Participation rate (20-64y)	3.3	81.9	83.6	85.2	85.3	85.5	85.5	85.2
young (20-24y)	1.9	74.9	76.8	76.8	76.8	76.8	76.8	76.8
prime-age (25-54y)	1.5	90.0	90.5	91.0	91.5	91.6	91.5	91.6
older (55-64y)	8.9	62.8	66.8	71.4	71.6	71.7	72.5	71.7
oldest (65-69y)	5.4	11.8	11.4	16.3	17.0	16.9	17.2	17.2
Participation rate (20-64y) - women	5.2	77.9	80.4	82.7	83.0	83.3	83.4	83.1
young (20-24y)	2.2	72.3	74.4	74.5	74.4	74.4	74.4	74.5
prime-age (25-54y)	2.2	87.0	87.7	88.6	89.1	89.3	89.3	89.3
older (55-64y)	14.3	56.0	62.6	69.3	69.8	70.3	71.1	70.3
oldest (65-69y)	7.6	9.6	8.4	15.9	16.9	16.9	17.2	17.2
Participation rate (20-64y) - men	1.4	85.9	86.8	87.6	87.5	87.5	87.6	87.3
young (20-24y)	1.7	77.3	79.0	79.0	79.0	79.0	79.0	79.0
prime-age (25-54y)	0.7	93.0	93.3	93.4	93.7	93.8	93.7	93.8
older (55-64y)	3.3	69.7	71.1	73.6	73.3	73.1	73.9	73.0
oldest (65-69y)	2.9	14.3	14.7	16.7	17.1	16.9	17.2	17.2
Average labour market exit age[1]	1.1	62.9	63.6	64.0	64.0	64.0	64.0	64.0
women	1.7	62.3	63.2	64.0	64.0	64.0	64.0	64.0
men	0.5	63.5	63.9	64.0	64.0	64.0	64.0	64.0
Employment rate (20-64y)	4.6	77.4	79.6	81.7	82.2	82.3	82.2	82.1
Employment rate (15-74y)	1.2	65.1	64.8	66.6	67.7	66.4	66.7	66.3
Unemployment rate (20-64y)	-1.8	5.5	4.7	4.1	3.6	3.7	3.8	3.7
Unemployment rate (15-74y)	-1.9	5.7	5.0	4.3	3.8	3.8	4.0	3.9
Employment (20-64y; millions)	-0.4	4.3	4.3	4.4	4.3	4.1	4.0	3.9
Employment (15-74y; millions)	-0.4	4.6	4.6	4.7	4.6	4.4	4.3	4.1
share of young (20-24y)	0.1	7.3	7.4	8.0	7.0	7.4	7.6	7.5
share of prime-age (25-54y)	-2.8	69.0	68.8	67.9	67.2	67.0	66.4	66.2
share of older (55-64y)	1.5	18.3	18.4	17.9	19.6	19.0	19.5	19.8
share of oldest (65-74y)	1.1	2.0	1.9	2.6	2.7	3.0	2.9	3.1
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	0.1	24.8	24.0	22.5	24.6	24.0	24.3	24.9
Old-age dependency ratio[3]	27.6	33.9	39.4	46.5	50.1	55.0	57.9	61.4
Total dependency ratio[4]	28.1	65.6	71.3	76.9	80.9	86.9	89.5	93.7
Total economic dependency ratio (20-64)[5]	22.9	101.7	103.8	105.2	109.4	115.8	119.1	124.6
Total economic dependency ratio (15-74)[6]	20.2	96.3	98.1	98.6	102.7	108.2	111.4	116.4
Old-age economic dependency ratio (20-64y)[7]	29.9	41.6	47.4	54.0	57.9	63.5	67.3	71.5
Old-age economic dependency ratio (15-74y)[8]	27.4	39.4	44.8	50.7	54.4	59.4	62.9	66.8

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

21. POLAND

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.33	1.09	1.15	1.29	1.32	1.35	1.39	1.42
Life expectancy at birth								
women	6.9	82.3	82.9	84.1	85.3	86.6	87.9	89.2
men	9.0	75.0	75.7	77.3	78.9	80.5	82.2	84.0
Life expectancy at 65 (years)								
women	5.4	20.5	20.9	21.9	22.8	23.8	24.8	25.9
men	6.1	16.4	16.9	17.9	19.0	20.1	21.3	22.5
Net migration (thousands)	10.7	94.6	-8.9	52.5	74.6	83.5	93.6	105.3
Net migration as % of population in t-1	0.1	0.3	0.0	0.2	0.2	0.3	0.3	0.4
Population (million)	-9.8	37.5	36.6	34.6	32.9	31.1	29.2	27.6
share of prime-age population (25-54y)	-9.8	42.2	41.0	37.7	35.6	34.3	33.1	32.4
share of working-age population (20-64y)	-8.4	58.6	59.0	59.8	54.5	51.2	51.7	50.3
share of elderly population (65+)	13.9	20.8	22.4	25.1	29.9	33.3	33.6	34.7
share of very elderly population (80+)	10.9	4.3	5.6	8.9	9.3	11.9	15.1	15.2
share of very elderly population (80+) in elderly population (65+)	23.2	20.8	25.1	35.6	31.2	35.8	44.8	43.9
Macroeconomic assumptions	**average 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Potential GDP (growth rate)	1.5	3.2	2.3	2.3	1.1	1.0	0.9	0.6
Labour input: hours worked (growth rate)	-0.9	-0.1	-1.1	-0.6	-1.4	-0.8	-0.7	-0.9
Labour productivity per hour (growth rate)	2.4	3.3	3.4	2.9	2.5	1.8	1.6	1.5
TFP growth	1.4	1.9	2.1	1.8	1.3	1.0	0.9	0.8
Capital deepening contribution	1.0	1.4	1.4	1.2	1.2	0.8	0.7	0.6
Potential GDP per capita (growth rate)	2.1	3.7	2.9	2.8	1.6	1.6	1.5	1.1
Potential GDP per worker (growth rate)	2.4	4.8	3.0	2.9	2.5	1.8	1.6	1.5
HICP (growth rate)	2.5	3.3	2.5	2.5	2.5	2.5	2.5	2.5
Nominal interest rate	5.3	5.5	6.3	6.4	5.1	4.5	4.5	4.5
Labour force assumptions	**change 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Working-age population (20-64y; thousands)	-8,079	21,964	21,603	20,660	17,915	15,911	15,110	13,885
Working-age population (growth rate)	-1.3	0.3	-0.2	-0.7	-1.6	-0.8	-0.5	-0.9
Labour force (20-64y; thousands)	-6,456	17,869	17,706	16,780	14,754	13,223	12,453	11,412
Participation rate (20-64y)	0.8	81.4	82.0	81.2	82.4	83.1	82.4	82.2
young (20-24y)	2.4	58.9	60.4	61.3	61.1	61.0	61.3	61.4
prime-age (25-54y)	2.8	89.4	90.3	91.4	92.1	92.2	92.0	92.1
older (55-64y)	3.5	61.5	64.1	64.8	64.7	65.8	66.9	65.0
oldest (65-69y)	2.0	13.5	14.1	15.0	14.9	15.0	15.5	15.5
Participation rate (20-64y) - women	0.8	75.8	76.8	75.7	76.7	78.1	77.2	76.6
young (20-24y)	1.9	53.5	54.4	55.3	55.2	55.1	55.3	55.4
prime-age (25-54y)	3.9	85.6	87.1	88.6	89.4	89.8	89.5	89.5
older (55-64y)	2.1	50.9	53.8	53.9	52.9	54.3	55.8	53.0
oldest (65-69y)	0.9	9.6	9.7	10.0	10.1	10.1	10.4	10.4
Participation rate (20-64y) - men	0.5	87.0	87.1	86.6	87.7	87.8	87.3	87.4
young (20-24y)	2.9	64.3	66.1	67.1	66.9	66.8	67.1	67.1
prime-age (25-54y)	1.4	93.2	93.4	94.0	94.6	94.5	94.3	94.6
older (55-64y)	3.2	73.2	75.1	76.0	76.3	76.8	77.3	76.4
oldest (65-69y)	2.2	18.3	19.4	20.6	20.2	20.1	20.4	20.4
Average labour market exit age[1]	0.0	63.1	63.1	63.1	63.1	63.1	63.1	63.1
women	0.0	61.7	61.7	61.7	61.7	61.7	61.7	61.7
men	0.0	64.8	64.8	64.8	64.8	64.8	64.8	64.8
Employment rate (20-64y)	0.7	78.9	79.6	78.3	80.0	80.4	79.7	79.6
Employment rate (15-74y)	-1.2	62.5	63.3	63.6	61.6	61.2	62.7	61.2
Unemployment rate (20-64y)	0.1	3.0	2.9	3.6	2.9	3.2	3.3	3.1
Unemployment rate (15-74y)	0.1	3.2	3.0	3.7	2.9	3.3	3.4	3.2
Employment (20-64y; millions)	-6.3	17.3	17.2	16.2	14.3	12.8	12.0	11.1
Employment (15-74y; millions)	-6.4	17.9	17.7	16.7	14.9	13.3	12.5	11.5
share of young (20-24y)	0.2	5.2	6.2	6.5	4.7	5.6	5.9	5.5
share of prime-age (25-54y)	-7.1	76.8	74.8	69.2	70.6	71.9	69.3	69.7
share of older (55-64y)	6.2	14.8	16.2	21.3	21.0	18.8	21.5	21.0
share of oldest (65-74y)	0.7	2.5	2.0	2.3	3.2	3.1	2.7	3.3
Dependency ratios	**change 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Share of older population in working-age population[2]	7.3	20.0	21.1	27.2	27.6	24.4	27.2	27.3
Old-age dependency ratio[3]	33.6	35.4	37.9	41.9	54.8	65.0	65.0	68.9
Total dependency ratio[4]	28.4	70.5	69.5	67.3	83.4	95.2	93.3	98.9
Total economic dependency ratio (20-64)[5]	32.8	109.5	107.0	106.7	122.3	135.3	135.5	142.4
Total economic dependency ratio (15-74)[6]	30.9	106.0	104.0	103.6	117.7	130.3	131.0	136.9
Old-age economic dependency ratio (20-64y)[7]	40.9	42.2	45.5	51.1	65.1	77.5	78.8	83.2
Old-age economic dependency ratio (15-74y)[8]	39.1	40.9	44.3	49.6	62.7	74.6	76.1	80.0

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

22. PORTUGAL

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.06	1.45	1.44	1.42	1.44	1.46	1.48	1.50
Life expectancy at birth								
women	5.3	85.3	85.8	86.7	87.7	88.6	89.6	90.6
men	6.8	79.8	80.4	81.6	82.8	84.1	85.3	86.6
Life expectancy at 65 (years)								
women	4.2	22.7	23.0	23.8	24.5	25.3	26.1	26.9
men	4.8	19.3	19.7	20.5	21.3	22.2	23.1	24.1
Net migration (thousands)	-117.4	155.5	54.1	42.2	40.3	40.7	40.0	38.0
Net migration as % of population in t-1	-1.0	1.4	0.5	0.4	0.4	0.4	0.4	0.4
Population (million)	-1.5	10.8	11.1	11.0	10.6	10.2	9.7	9.3
share of prime-age population (25-54y)	-7.5	38.8	37.4	33.8	32.1	31.1	31.2	31.3
share of working-age population (20-64y)	-10.5	58.0	56.6	52.3	49.5	48.6	47.5	47.5
share of elderly population (65+)	11.9	24.5	26.6	31.2	34.6	35.9	36.7	36.4
share of very elderly population (80+)	10.0	7.2	8.2	10.8	13.3	15.8	16.4	17.2
share of very elderly population (80+) in elderly population (65+)	18.0	29.3	30.8	34.6	38.5	44.1	44.6	47.2
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	0.9	2.3	0.9	0.6	0.8	0.9	0.9	1.1
Labour input: hours worked (growth rate)	-0.4	2.0	-0.4	-0.8	-0.6	-0.5	-0.5	-0.3
Labour productivity per hour (growth rate)	1.3	0.3	1.2	1.4	1.4	1.4	1.4	1.4
TFP growth	0.9	0.7	0.8	0.9	0.9	0.9	0.9	0.9
Capital deepening contribution	0.4	-0.4	0.5	0.4	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.1	1.2	0.6	0.8	1.2	1.4	1.4	1.5
Potential GDP per worker (growth rate)	1.3	0.0	1.2	1.4	1.4	1.4	1.4	1.4
HICP (growth rate)	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.1	3.1	4.1	4.5	4.2	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-1,873	6,273	6,306	5,756	5,264	4,937	4,597	4,399
Working-age population (growth rate)	-1.2	0.9	-0.4	-1.1	-0.6	-0.7	-0.6	-0.3
Labour force (20-64y; thousands)	-1,423	5,308	5,390	4,955	4,574	4,317	4,050	3,884
Participation rate (20-64y)	3.7	84.6	85.5	86.1	86.9	87.4	88.1	88.3
young (20-24y)	0.8	58.8	59.7	59.5	59.5	59.7	59.6	59.6
prime-age (25-54y)	1.8	92.3	93.0	93.8	94.0	94.1	94.1	94.1
older (55-64y)	10.5	73.1	74.5	76.0	78.7	81.0	82.7	83.6
oldest (65-69y)	27.5	24.5	28.3	31.6	34.7	39.4	44.9	52.0
Participation rate (20-64y) - women	4.7	82.3	83.6	84.6	85.6	86.2	86.8	87.0
young (20-24y)	0.4	55.7	56.2	56.1	56.1	56.3	56.3	56.2
prime-age (25-54y)	2.5	90.6	91.6	92.6	93.0	93.0	93.1	93.1
older (55-64y)	12.6	69.6	72.5	74.7	77.1	79.7	81.3	82.1
oldest (65-69y)	29.9	21.2	25.1	30.3	34.1	38.5	44.2	51.1
Participation rate (20-64y) - men	2.6	87.1	87.5	87.6	88.3	88.7	89.5	89.7
young (20-24y)	1.2	61.7	63.1	62.9	62.9	63.1	63.0	63.0
prime-age (25-54y)	1.1	94.0	94.5	95.0	95.1	95.1	95.2	95.2
older (55-64y)	8.0	77.1	76.8	77.4	80.4	82.4	84.2	85.1
oldest (65-69y)	24.7	28.3	32.1	33.1	35.4	40.3	45.7	53.0
Average labour market exit age[1]	2.4	65.0	65.1	65.5	65.9	66.4	66.9	67.4
women	2.4	65.0	65.1	65.5	65.9	66.4	66.9	67.4
men	2.4	65.0	65.1	65.5	65.9	66.4	66.9	67.4
Employment rate (20-64y)	3.0	79.6	80.7	80.0	80.9	81.5	82.3	82.6
Employment rate (15-74y)	2.8	64.4	64.9	63.2	63.1	64.9	65.5	67.1
Unemployment rate (20-64y)	0.5	5.9	5.6	7.1	6.9	6.8	6.6	6.4
Unemployment rate (15-74y)	0.3	6.0	5.6	7.1	6.9	6.7	6.5	6.3
Employment (20-64y; millions)	-1.4	5.0	5.1	4.6	4.3	4.0	3.8	3.6
Employment (15-74y; millions)	-1.2	5.2	5.4	4.9	4.6	4.4	4.1	4.0
share of young (20-24y)	-0.4	5.3	5.1	4.6	5.0	4.9	4.8	4.9
share of prime-age (25-54y)	-5.7	70.0	68.8	66.5	65.9	64.1	64.6	64.3
share of older (55-64y)	1.6	20.0	21.1	22.5	22.1	23.4	21.9	21.6
share of oldest (65-74y)	4.5	4.1	4.5	5.9	6.5	7.1	8.1	8.6
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	0.8	24.1	25.2	27.0	26.0	27.0	25.3	24.9
Old-age dependency ratio[3]	34.5	42.3	47.0	59.7	70.0	73.8	77.3	76.7
Total dependency ratio[4]	38.2	72.3	76.8	91.1	102.1	105.8	110.6	110.5
Total economic dependency ratio (20-64)[5]	32.3	104.9	107.4	124.0	134.3	136.3	138.8	137.2
Total economic dependency ratio (15-74)[6]	24.7	99.9	101.9	116.1	124.9	125.9	126.8	124.6
Old-age economic dependency ratio (20-64y)[7]	34.4	48.6	53.4	68.1	79.3	82.6	84.7	83.1
Old-age economic dependency ratio (15-74y)[8]	29.1	46.4	50.7	63.8	73.7	76.3	77.4	75.4

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

The EUROPOP2025 projections, published in April 2026 by Eurostat, precede the revision of Portuguese population for the period 2021–2025 as published by INE in June 2026.

23. ROMANIA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.36	1.29	1.47	1.66	1.65	1.65	1.65	1.65
Life expectancy at birth								
women	7.5	80.4	81.0	82.3	83.6	85.0	86.4	87.9
men	9.6	73.0	73.7	75.4	77.1	78.8	80.7	82.6
Life expectancy at 65 (years)								
women	5.7	19.1	19.6	20.5	21.5	22.5	23.6	24.8
men	6.3	15.2	15.7	16.7	17.8	19.0	20.2	21.5
Net migration (thousands)	-24.5	71.3	8.5	25.9	32.9	35.7	43.2	46.8
Net migration as % of population in t-1	-0.1	0.4	0.0	0.1	0.2	0.2	0.3	0.3
Population (million)	-4.0	19.0	18.7	17.9	17.1	16.3	15.6	15.0
share of prime-age population (25-54y)	-6.0	40.1	39.2	37.7	36.6	35.5	34.7	34.1
share of working-age population (20-64y)	-6.9	58.6	60.1	57.8	54.3	53.4	53.4	51.7
share of elderly population (65+)	10.7	20.4	20.8	24.8	27.5	29.1	29.6	31.0
share of very elderly population (80+)	7.7	4.4	5.2	7.5	8.6	10.8	12.0	12.1
share of very elderly population (80+) in elderly population (65+)	17.2	21.8	25.1	30.0	31.4	37.2	40.4	39.0
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.1	0.7	1.5	1.5	0.8	1.1	1.0	0.8
Labour input: hours worked (growth rate)	-0.6	-1.2	-0.7	-0.6	-1.0	-0.4	-0.4	-0.5
Labour productivity per hour (growth rate)	1.7	2.0	2.2	2.1	1.9	1.5	1.4	1.3
TFP growth	0.9	-0.2	0.9	1.3	1.0	0.9	0.9	0.8
Capital deepening contribution	0.8	2.2	1.3	0.8	0.8	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.5	-0.5	1.9	1.9	1.3	1.6	1.4	1.1
Potential GDP per worker (growth rate)	1.7	2.9	2.1	2.1	1.9	1.5	1.4	1.3
HICP (growth rate)	2.7	6.8	2.5	2.5	2.5	2.5	2.5	2.5
Nominal interest rate	5.5	7.0	7.1	6.5	5.2	4.5	4.5	4.5
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-3,364	11,142	11,208	10,322	9,297	8,700	8,307	7,778
Working-age population (growth rate)	-0.8	0.1	0.1	-0.9	-0.9	-0.4	-0.6	-0.6
Labour force (20-64y; thousands)	-2,384	8,158	8,078	7,457	6,791	6,382	6,112	5,774
Participation rate (20-64y)	1.0	73.2	72.1	72.2	73.0	73.4	73.6	74.2
young (20-24y)	2.1	42.7	44.4	44.8	44.3	44.7	44.9	44.8
prime-age (25-54y)	-0.7	81.8	81.4	80.5	81.1	81.0	81.0	81.1
older (55-64y)	7.1	59.4	58.5	61.5	60.0	63.5	65.1	66.5
oldest (65-69y)	17.8	5.6	11.4	14.0	16.2	17.8	20.8	23.4
Participation rate (20-64y) - women	0.1	63.0	61.7	61.7	62.0	62.4	62.5	63.1
young (20-24y)	1.6	34.4	35.7	36.0	35.5	35.9	36.1	36.0
prime-age (25-54y)	-2.7	71.7	70.9	68.8	69.0	69.0	68.9	69.0
older (55-64y)	8.3	49.1	49.0	54.0	51.8	54.9	56.2	57.4
oldest (65-69y)	16.9	3.3	8.8	13.2	15.0	15.4	18.1	20.2
Participation rate (20-64y) - men	1.0	83.0	81.8	81.8	82.8	82.9	83.2	84.0
young (20-24y)	2.6	50.4	52.6	53.0	52.5	52.9	53.1	53.0
prime-age (25-54y)	0.4	91.2	91.0	90.7	91.6	91.4	91.4	91.7
older (55-64y)	4.1	70.4	68.3	68.8	67.6	71.0	72.8	74.4
oldest (65-69y)	17.6	8.6	14.6	15.0	17.5	20.1	23.3	26.2
Average labour market exit age[1]	2.7	62.7	62.9	63.7	64.0	64.4	64.9	65.4
women	3.2	62.2	62.5	63.7	64.1	64.4	64.9	65.4
men	2.1	63.3	63.3	63.7	64.0	64.4	64.9	65.4
Employment rate (20-64y)	1.3	69.1	68.0	68.2	69.4	69.3	69.6	70.3
Employment rate (15-74y)	1.5	53.7	54.6	53.7	54.2	54.2	55.4	55.3
Unemployment rate (20-64y)	-0.4	5.7	5.6	5.5	5.0	5.5	5.4	5.3
Unemployment rate (15-74y)	-0.5	6.2	6.1	6.0	5.3	5.9	5.8	5.7
Employment (20-64y; millions)	-2.2	7.7	7.6	7.0	6.5	6.0	5.8	5.5
Employment (15-74y; millions)	-2.0	7.8	7.8	7.3	6.7	6.3	6.0	5.8
share of young (20-24y)	-0.1	4.5	5.0	5.0	3.8	4.7	4.5	4.3
share of prime-age (25-54y)	-7.2	75.9	72.8	70.8	72.4	71.0	68.8	68.7
share of older (55-64y)	3.7	18.2	20.3	21.1	20.2	20.6	22.4	21.9
share of oldest (65-74y)	3.7	1.0	1.4	2.6	3.1	3.3	3.9	4.7
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	3.0	22.3	25.0	25.1	25.1	24.2	26.0	25.3
Old-age dependency ratio[3]	25.3	34.8	34.6	42.9	50.6	54.4	55.4	60.0
Total dependency ratio[4]	22.7	70.7	66.5	73.0	84.0	87.3	87.2	93.4
Total economic dependency ratio (20-64)[5]	24.2	139.1	136.2	143.9	155.6	159.7	158.0	163.3
Total economic dependency ratio (15-74)[6]	17.9	137.1	133.7	139.4	150.1	153.8	151.2	155.0
Old-age economic dependency ratio (20-64y)[7]	30.8	49.3	49.3	60.0	69.4	74.9	75.2	80.2
Old-age economic dependency ratio (15-74y)[8]	27.5	48.6	48.3	58.2	67.0	72.1	72.0	76.1

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

24. SLOVENIA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.07	1.52	1.53	1.57	1.57	1.58	1.59	1.59
Life expectancy at birth								
women	5.5	84.8	85.3	86.2	87.2	88.2	89.3	90.3
men	6.7	79.6	80.2	81.4	82.6	83.8	85.1	86.3
Life expectancy at 65 (years)								
women	4.5	22.0	22.3	23.1	23.9	24.8	25.7	26.5
men	5.1	18.5	18.9	19.7	20.7	21.6	22.6	23.6
Net migration (thousands)	-1.4	8.3	6.6	7.0	7.1	6.8	6.8	6.9
Net migration as % of population in t-1	0.0	0.4	0.3	0.3	0.3	0.3	0.3	0.4
Population (million)	-0.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0
share of prime-age population (25-54y)	-5.4	39.4	37.8	35.6	35.1	34.9	34.3	34.0
share of working-age population (20-64y)	-6.8	58.1	57.1	55.7	52.4	51.8	52.5	51.3
share of elderly population (65+)	9.3	22.4	24.4	27.6	30.3	31.0	30.7	31.7
share of very elderly population (80+)	7.6	5.8	6.7	9.4	11.0	12.7	13.8	13.5
share of very elderly population (80+) in elderly population (65+)	16.4	26.1	27.6	34.0	36.2	40.9	44.8	42.5
Macroeconomic assumptions	**average 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Potential GDP (growth rate)	1.5	2.2	2.2	2.1	1.3	1.2	1.2	0.9
Labour input: hours worked (growth rate)	-0.2	0.4	0.0	0.0	-0.6	-0.3	-0.2	-0.4
Labour productivity per hour (growth rate)	1.7	1.8	2.2	2.1	1.9	1.5	1.4	1.4
TFP growth	1.1	1.4	1.4	1.3	1.0	0.9	0.9	0.8
Capital deepening contribution	0.7	0.5	0.8	0.8	0.8	0.6	0.5	0.5
Potential GDP per capita (growth rate)	1.7	1.9	2.2	2.2	1.5	1.5	1.4	1.1
Potential GDP per worker (growth rate)	1.8	2.7	2.7	2.1	1.9	1.5	1.4	1.4
HICP (growth rate)	2.1	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.1	3.1	4.1	4.5	4.2	4.0	4.0	4.0
Labour force assumptions	**change 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Working-age population (20-64y; thousands)	-237	1,239	1,220	1,183	1,098	1,059	1,046	1,002
Working-age population (growth rate)	-0.1	-0.3	-0.3	-0.5	-0.7	-0.1	-0.2	-0.5
Labour force (20-64y; thousands)	-147	1,015	1,007	1,016	953	918	905	868
Participation rate (20-64y)	4.7	81.9	82.5	85.9	86.8	86.7	86.5	86.6
young (20-24y)	1.3	58.4	59.0	59.9	59.8	59.6	59.8	59.7
prime-age (25-54y)	0.5	92.6	92.6	92.9	93.1	93.1	93.0	93.1
older (55-64y)	19.5	59.7	64.2	78.4	79.1	79.4	79.8	79.2
oldest (65-69y)	19.8	10.9	14.1	22.6	30.5	30.5	30.9	30.7
Participation rate (20-64y) - women	6.0	79.1	80.0	83.9	85.2	85.2	84.9	85.1
young (20-24y)	1.8	51.8	52.9	53.8	53.6	53.5	53.6	53.6
prime-age (25-54y)	1.0	91.0	91.1	91.6	92.0	92.0	91.9	92.0
older (55-64y)	22.1	56.4	61.6	76.9	78.1	78.7	79.1	78.4
oldest (65-69y)	23.3	7.0	12.4	22.1	30.0	30.1	30.6	30.4
Participation rate (20-64y) - men	3.5	84.4	84.8	87.6	88.2	88.1	87.9	87.9
young (20-24y)	1.0	64.3	64.5	65.4	65.4	65.1	65.3	65.3
prime-age (25-54y)	0.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0
older (55-64y)	16.8	63.0	66.7	79.8	80.0	80.0	80.3	79.8
oldest (65-69y)	15.9	15.1	15.8	23.1	31.0	30.9	31.1	31.0
Average labour market exit age[1]	3.1	62.5	63.5	65.4	65.6	65.6	65.6	65.6
women	3.3	62.3	63.3	65.4	65.6	65.6	65.6	65.6
men	2.8	62.8	63.6	65.4	65.6	65.6	65.6	65.6
Employment rate (20-64y)	3.4	79.0	78.2	81.4	82.7	82.3	82.1	82.4
Employment rate (15-74y)	2.9	62.6	61.5	64.8	65.3	65.5	66.3	65.5
Unemployment rate (20-64y)	1.3	3.6	5.2	5.2	4.7	5.1	5.1	4.9
Unemployment rate (15-74y)	1.5	3.9	5.7	5.6	5.2	5.7	5.7	5.4
Employment (20-64y; millions)	-0.2	1.0	1.0	1.0	0.9	0.9	0.9	0.8
Employment (15-74y; millions)	-0.1	1.0	1.0	1.0	1.0	0.9	0.9	0.9
share of young (20-24y)	0.0	5.4	5.9	5.9	5.2	5.6	5.6	5.4
share of prime-age (25-54y)	-7.2	74.7	72.5	66.8	68.1	69.0	67.0	67.5
share of older (55-64y)	4.4	17.0	18.4	23.3	21.1	20.2	22.3	21.4
share of oldest (65-74y)	2.9	1.9	2.1	3.1	4.8	4.3	4.2	4.8
Dependency ratios	**change 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Share of older population in working-age population[2]	0.7	23.9	24.1	26.3	24.3	23.1	25.2	24.6
Old-age dependency ratio[3]	23.3	38.5	42.8	49.6	57.9	59.9	58.5	61.7
Total dependency ratio[4]	22.7	72.1	75.2	79.6	90.9	93.2	90.3	94.8
Total economic dependency ratio (20-64)[5]	13.5	110.7	114.4	110.2	118.9	122.7	120.1	124.2
Total economic dependency ratio (15-74)[6]	9.7	107.5	110.8	105.7	112.1	116.2	113.9	117.1
Old-age economic dependency ratio (20-64y)[7]	22.6	46.6	52.3	57.3	64.3	67.6	66.2	69.2
Old-age economic dependency ratio (15-74y)[8]	20.0	45.2	50.6	55.0	60.7	64.0	62.8	65.2

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

25. SLOVAKIA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.25	1.33	1.40	1.55	1.56	1.57	1.58	1.58
Life expectancy at birth								
women	6.9	81.8	82.4	83.6	84.8	86.1	87.4	88.7
men	8.7	75.3	76.1	77.5	79.1	80.7	82.3	84.0
Life expectancy at 65 (years)								
women	5.4	20.0	20.4	21.3	22.2	23.2	24.3	25.4
men	6.0	16.2	16.7	17.7	18.7	19.8	21.0	22.2
Net migration (thousands)	7.1	2.4	-0.8	7.5	7.7	6.4	7.5	9.5
Net migration as % of population in t-1	0.2	0.0	0.0	0.1	0.2	0.1	0.2	0.2
Population (million)	-1.2	5.5	5.5	5.3	5.1	4.8	4.6	4.3
share of prime-age population (25-54y)	-10.0	42.9	40.7	36.4	34.6	34.1	33.8	33.0
share of working-age population (20-64y)	-9.0	60.3	59.3	58.2	53.2	50.3	51.8	51.2
share of elderly population (65+)	12.8	18.7	20.9	24.5	29.2	32.0	31.2	31.5
share of very elderly population (80+)	10.0	3.7	4.8	7.5	8.6	11.6	13.9	13.7
share of very elderly population (80+) in elderly population (65+)	23.6	19.8	22.9	30.6	29.7	36.3	44.6	43.4
Macroeconomic assumptions	**average 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Potential GDP (growth rate)	1.1	1.6	1.3	1.5	0.8	0.9	1.2	0.9
Labour input: hours worked (growth rate)	-0.6	-0.1	-0.9	-0.6	-1.1	-0.5	-0.1	-0.4
Labour productivity per hour (growth rate)	1.7	1.7	2.2	2.1	1.9	1.4	1.3	1.3
TFP growth	1.0	0.7	1.1	1.3	1.1	0.9	0.9	0.8
Capital deepening contribution	0.7	1.0	1.1	0.8	0.8	0.5	0.4	0.5
Potential GDP per capita (growth rate)	1.6	0.5	1.6	1.9	1.2	1.5	1.8	1.4
Potential GDP per worker (growth rate)	1.7	1.7	2.0	2.1	1.9	1.4	1.3	1.3
HICP (growth rate)	2.1	4.2	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.3	3.4	4.5	5.0	4.3	4.0	4.0	4.0
Labour force assumptions	**change 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Working-age population (20-64y; thousands)	-1,126	3,342	3,234	3,062	2,701	2,431	2,357	2,215
Working-age population (growth rate)	-1.4	0.6	-0.6	-0.8	-1.4	-0.6	-0.3	-0.8
Labour force (20-64y; thousands)	-848	2,755	2,678	2,515	2,269	2,067	2,012	1,907
Participation rate (20-64y)	3.6	82.5	82.8	82.1	84.0	85.0	85.3	86.1
young (20-24y)	3.4	47.5	50.3	50.7	50.7	50.6	50.8	50.8
prime-age (25-54y)	1.5	90.3	91.3	91.5	91.8	92.1	91.8	91.8
older (55-64y)	15.4	69.0	69.7	72.3	74.9	78.4	82.0	84.4
oldest (65-69y)	31.5	13.5	13.1	17.3	21.9	27.7	36.2	45.0
Participation rate (20-64y) - women	5.9	78.0	79.1	79.0	81.4	82.8	83.1	84.0
young (20-24y)	1.9	37.3	38.6	39.0	39.0	38.9	39.1	39.2
prime-age (25-54y)	3.1	86.7	88.6	89.4	89.8	90.4	89.9	89.8
older (55-64y)	20.5	64.8	66.8	70.2	73.9	78.5	82.6	85.3
oldest (65-69y)	28.1	11.4	10.7	14.7	18.5	23.8	31.6	39.5
Participation rate (20-64y) - men	1.3	86.8	86.4	85.2	86.5	87.2	87.5	88.1
young (20-24y)	4.6	57.3	61.5	61.9	61.8	61.8	61.9	62.0
prime-age (25-54y)	0.0	93.8	93.9	93.6	93.8	93.7	93.6	93.8
older (55-64y)	9.9	73.5	72.9	74.5	75.9	78.2	81.4	83.5
oldest (65-69y)	34.4	16.1	15.9	20.2	25.5	31.8	40.8	50.5
Average labour market exit age[1]	4.4	62.8	63.5	64.1	64.8	65.5	66.3	67.2
women	4.5	62.4	63.2	63.8	64.5	65.2	66.0	66.9
men	4.4	63.1	63.9	64.4	65.0	65.8	66.6	67.6
Employment rate (20-64y)	2.8	78.0	78.4	76.6	78.9	79.7	80.0	80.9
Employment rate (15-74y)	3.1	62.8	62.4	61.1	61.0	61.6	65.0	65.9
Unemployment rate (20-64y)	0.7	5.4	5.4	6.7	6.0	6.3	6.2	6.1
Unemployment rate (15-74y)	0.5	5.5	5.5	6.9	6.1	6.4	6.3	6.0
Employment (20-64y; millions)	-0.8	2.6	2.5	2.3	2.1	1.9	1.9	1.8
Employment (15-74y; millions)	-0.7	2.7	2.6	2.4	2.2	2.1	2.0	1.9
share of young (20-24y)	0.4	4.1	4.9	5.5	4.1	4.9	5.0	4.5
share of prime-age (25-54y)	-13.0	76.1	74.1	67.5	67.7	69.5	66.3	63.1
share of older (55-64y)	7.2	17.1	18.6	23.7	23.4	19.9	22.9	24.3
share of oldest (65-74y)	5.5	2.2	1.9	2.9	4.4	5.2	5.3	7.7
Dependency ratios	**change 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Share of older population in working-age population[2]	5.7	20.8	22.4	27.3	27.1	22.5	24.9	26.5
Old-age dependency ratio[3]	30.4	31.0	35.3	42.1	54.8	63.6	60.2	61.5
Total dependency ratio[4]	29.3	66.0	68.7	71.9	88.1	98.9	93.2	95.3
Total economic dependency ratio (20-64)[5]	21.7	104.0	106.9	113.4	126.5	136.5	128.2	125.7
Total economic dependency ratio (15-74)[6]	14.3	101.3	104.3	109.6	120.4	128.8	120.9	115.6
Old-age economic dependency ratio (20-64y)[7]	30.0	37.5	43.1	52.0	64.7	74.1	69.5	67.4
Old-age economic dependency ratio (15-74y)[8]	25.5	36.5	42.1	50.2	61.6	69.9	65.5	62.0

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

26. FINLAND

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.15	1.31	1.32	1.35	1.37	1.40	1.43	1.45
Life expectancy at birth								
women	5.5	84.9	85.4	86.4	87.4	88.4	89.4	90.4
men	6.7	79.7	80.3	81.5	82.7	83.9	85.2	86.4
Life expectancy at 65 (years)								
women	4.5	22.3	22.6	23.4	24.2	25.1	25.9	26.8
men	4.9	18.8	19.2	20.0	20.9	21.8	22.8	23.7
Net migration (thousands)	-15.6	34.1	20.4	19.1	19.5	19.3	19.0	18.5
Net migration as % of population in t-1	-0.3	0.6	0.4	0.3	0.3	0.4	0.3	0.3
Population (million)	-0.3	5.6	5.7	5.7	5.6	5.5	5.4	5.3
share of prime-age population (25-54y)	-4.7	38.1	38.8	39.6	37.6	36.0	34.0	33.4
share of working-age population (20-64y)	-6.0	56.2	56.2	57.4	56.2	54.1	52.5	50.2
share of elderly population (65+)	10.4	23.7	24.9	25.5	26.8	29.5	31.8	34.1
share of very elderly population (80+)	8.4	6.2	8.0	9.6	10.2	10.7	12.7	14.6
share of very elderly population (80+) in elderly population (65+)	16.6	26.3	32.2	37.8	38.2	36.1	40.1	42.8
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.0	0.4	0.9	1.3	1.0	0.9	0.9	0.8
Labour input: hours worked (growth rate)	-0.2	0.2	0.0	0.2	-0.3	-0.4	-0.3	-0.5
Labour productivity per hour (growth rate)	1.1	0.2	0.8	1.1	1.3	1.3	1.3	1.3
TFP growth	0.7	0.1	0.4	0.7	0.8	0.8	0.8	0.8
Capital deepening contribution	0.4	0.1	0.4	0.4	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.1	-0.1	0.8	1.4	1.1	1.0	1.1	1.1
Potential GDP per worker (growth rate)	1.1	0.9	0.3	1.1	1.3	1.3	1.3	1.3
HICP (growth rate)	2.0	1.8	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.0	3.0	3.9	4.3	4.1	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-505	3,171	3,206	3,249	3,144	2,980	2,850	2,667
Working-age population (growth rate)	-1.1	0.5	0.2	-0.1	-0.4	-0.5	-0.5	-0.6
Labour force (20-64y; thousands)	-364	2,658	2,672	2,725	2,653	2,530	2,432	2,294
Participation rate (20-64y)	2.2	83.8	83.3	83.9	84.4	84.9	85.3	86.0
young (20-24y)	1.8	70.3	72.0	72.2	72.1	72.0	72.1	72.1
prime-age (25-54y)	1.6	87.4	87.9	88.3	88.8	88.9	88.8	88.9
older (55-64y)	4.1	79.1	73.9	74.6	76.5	78.6	81.1	83.1
oldest (65-69y)	15.4	21.5	15.8	18.6	23.5	27.3	32.1	36.9
Participation rate (20-64y) - women	3.0	82.3	81.9	82.6	83.6	84.3	84.6	85.3
young (20-24y)	1.3	67.6	68.7	69.0	68.8	68.8	68.8	68.8
prime-age (25-54y)	2.7	85.4	86.3	87.4	88.1	88.2	88.0	88.1
older (55-64y)	4.0	79.8	74.0	73.4	76.6	79.4	81.7	83.8
oldest (65-69y)	19.5	17.7	15.9	18.2	23.1	27.5	32.4	37.2
Participation rate (20-64y) - men	1.4	85.2	84.7	85.1	85.1	85.5	86.0	86.7
young (20-24y)	2.2	72.9	75.0	75.3	75.1	75.1	75.1	75.1
prime-age (25-54y)	0.5	89.3	89.3	89.3	89.5	89.6	89.6	89.7
older (55-64y)	4.2	78.3	73.9	75.8	76.4	77.8	80.5	82.5
oldest (65-69y)	11.0	25.7	15.8	19.0	23.8	27.0	31.9	36.7
Average labour market exit age[1]	2.8	64.0	64.0	64.5	65.0	65.5	66.1	66.7
women	2.8	64.0	64.0	64.5	65.0	65.5	66.1	66.7
men	2.7	64.0	64.0	64.5	65.0	65.5	66.1	66.7
Employment rate (20-64y)	5.0	76.3	77.0	78.8	79.7	80.1	80.5	81.3
Employment rate (15-74y)	3.6	62.5	62.6	65.7	65.8	65.1	66.0	66.1
Unemployment rate (20-64y)	-3.5	9.0	7.6	6.0	5.5	5.6	5.6	5.5
Unemployment rate (15-74y)	-3.9	9.7	8.3	6.5	5.9	6.0	5.9	5.8
Employment (20-64y; millions)	-0.3	2.4	2.5	2.6	2.5	2.4	2.3	2.2
Employment (15-74y; millions)	-0.2	2.6	2.6	2.7	2.7	2.6	2.5	2.4
share of young (20-24y)	-0.7	7.0	7.9	6.9	6.3	6.5	6.5	6.3
share of prime-age (25-54y)	-3.3	66.2	69.1	69.3	66.5	65.1	62.6	62.9
share of older (55-64y)	2.1	19.6	17.1	18.6	21.0	21.1	23.2	21.7
share of oldest (65-74y)	2.3	3.7	2.2	2.1	3.2	4.1	4.7	6.0
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	2.4	22.3	20.4	22.1	24.6	24.6	26.4	24.7
Old-age dependency ratio[3]	25.7	42.2	44.3	44.4	47.7	54.6	60.5	67.9
Total dependency ratio[4]	21.3	78.1	77.8	74.3	78.0	85.0	90.3	99.4
Total economic dependency ratio (20-64)[5]	14.5	114.0	114.9	108.4	109.9	116.0	121.1	128.5
Total economic dependency ratio (15-74)[6]	11.0	105.9	108.0	102.8	103.0	107.5	111.7	116.9
Old-age economic dependency ratio (20-64y)[7]	25.6	51.1	55.0	54.1	56.3	63.6	69.8	76.7
Old-age economic dependency ratio (15-74y)[8]	22.3	47.5	51.7	51.3	52.8	58.9	64.3	69.8

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

27. SWEDEN

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.16	1.42	1.48	1.56	1.56	1.57	1.58	1.59
Life expectancy at birth								
women	5.3	85.4	85.9	86.8	87.7	88.7	89.7	90.7
men	5.4	82.4	82.9	83.8	84.8	85.8	86.8	87.8
Life expectancy at 65 (years)								
women	4.5	22.4	22.8	23.6	24.4	25.2	26.0	26.9
men	4.4	20.3	20.7	21.4	22.2	23.0	23.8	24.7
Net migration (thousands)	20.2	12.5	44.7	46.2	40.6	37.1	34.7	32.7
Net migration as % of population in t-1	0.2	0.1	0.4	0.4	0.4	0.3	0.3	0.3
Population (million)	1.2	10.6	10.7	11.1	11.5	11.7	11.8	11.8
share of prime-age population (25-54y)	-4.5	38.7	38.1	39.1	37.4	36.5	35.1	34.2
share of working-age population (20-64y)	-5.0	56.5	56.5	56.7	55.7	53.5	53.3	51.5
share of elderly population (65+)	9.6	21.0	22.3	24.0	24.9	27.5	28.6	30.5
share of very elderly population (80+)	6.7	6.3	7.6	8.3	9.4	10.2	11.7	13.0
share of very elderly population (80+) in elderly population (65+)	12.6	30.0	34.1	34.4	37.8	37.3	40.9	42.6
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.4	1.4	1.7	1.6	1.4	1.2	1.3	1.3
Labour input: hours worked (growth rate)	0.2	0.5	0.8	0.4	0.1	-0.1	0.0	0.0
Labour productivity per hour (growth rate)	1.2	0.9	0.9	1.2	1.3	1.3	1.3	1.3
TFP growth	0.8	0.4	0.7	0.8	0.8	0.8	0.8	0.8
Capital deepening contribution	0.4	0.5	0.2	0.4	0.4	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.3	4.5	1.4	1.3	1.1	1.1	1.2	1.3
Potential GDP per worker (growth rate)	1.3	4.9	0.6	1.2	1.3	1.3	1.3	1.3
HICP (growth rate)	2.0	2.6	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.7	2.5	3.1	3.5	3.8	4.0	4.0	4.0
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	97	5,984	6,054	6,310	6,387	6,243	6,269	6,080
Working-age population (growth rate)	-0.6	0.2	0.3	0.3	-0.1	-0.1	-0.1	-0.4
Labour force (20-64y; thousands)	198	5,297	5,359	5,610	5,737	5,612	5,653	5,495
Participation rate (20-64y)	1.8	88.5	88.5	88.9	89.8	89.9	90.2	90.4
young (20-24y)	3.5	74.0	77.4	77.5	77.5	77.4	77.4	77.4
prime-age (25-54y)	0.7	92.1	92.4	92.6	92.7	92.9	92.8	92.8
older (55-64y)	4.8	84.0	82.1	82.6	86.2	86.3	88.3	88.9
oldest (65-69y)	19.5	33.1	33.3	31.5	38.7	38.7	47.8	52.6
Participation rate (20-64y) - women	2.3	86.3	86.2	86.7	88.0	88.1	88.4	88.6
young (20-24y)	2.2	71.8	73.9	74.0	74.0	73.9	74.0	74.0
prime-age (25-54y)	1.1	89.9	90.4	90.8	90.9	91.1	91.0	91.0
older (55-64y)	6.2	81.5	79.2	79.8	85.2	85.0	87.2	87.7
oldest (65-69y)	23.0	28.8	34.9	32.6	37.5	38.3	47.2	51.8
Participation rate (20-64y) - men	1.4	90.7	90.7	91.0	91.5	91.6	91.9	92.1
young (20-24y)	4.7	76.0	80.6	80.7	80.7	80.6	80.7	80.7
prime-age (25-54y)	0.3	94.1	94.2	94.2	94.5	94.5	94.4	94.5
older (55-64y)	3.4	86.6	85.0	85.3	87.3	87.5	89.5	90.0
oldest (65-69y)	15.9	37.4	31.7	30.4	39.9	39.2	48.4	53.3
Average labour market exit age[1]	2.7	65.7	65.8	65.8	66.8	66.8	67.6	68.5
women	2.8	65.7	65.8	65.8	66.8	66.8	67.6	68.5
men	2.7	65.8	65.8	65.8	66.8	66.8	67.6	68.5
Employment rate (20-64y)	3.8	81.8	83.4	83.5	85.0	85.0	85.3	85.6
Employment rate (15-74y)	3.3	69.1	70.1	70.0	72.3	70.6	72.6	72.4
Unemployment rate (20-64y)	-2.3	7.6	5.8	6.0	5.4	5.4	5.4	5.2
Unemployment rate (15-74y)	-3.0	8.9	6.8	6.9	6.1	6.2	6.1	5.9
Employment (20-64y; millions)	0.3	4.9	5.0	5.3	5.4	5.3	5.3	5.2
Employment (15-74y; millions)	0.5	5.3	5.5	5.7	5.9	5.8	5.9	5.8
share of young (20-24y)	-0.2	7.0	8.1	8.1	6.7	7.2	7.3	6.8
share of prime-age (25-54y)	-5.3	66.2	65.3	66.9	64.2	64.2	61.5	61.0
share of older (55-64y)	2.1	19.1	18.8	17.8	21.2	19.3	21.6	21.2
share of oldest (65-74y)	3.5	4.4	4.1	4.0	4.9	6.0	6.5	7.9
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	2.5	21.5	21.7	20.4	23.8	22.0	24.2	24.0
Old-age dependency ratio[3]	22.2	37.1	39.5	42.4	44.7	51.3	53.6	59.3
Total dependency ratio[4]	17.2	77.1	77.1	76.3	79.6	87.0	87.6	94.3
Total economic dependency ratio (20-64)[5]	9.8	97.7	96.0	95.2	95.5	102.4	101.9	107.5
Total economic dependency ratio (15-74)[6]	5.4	90.2	88.5	88.3	87.9	92.9	92.1	95.7
Old-age economic dependency ratio (20-64y)[7]	19.7	40.3	42.7	46.2	47.0	53.6	55.4	60.1
Old-age economic dependency ratio (15-74y)[8]	16.2	37.3	39.4	42.8	43.3	48.6	50.0	53.5

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

28. NORWAY

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.05	1.48	1.44	1.47	1.48	1.50	1.51	1.53
Life expectancy at birth								
women	5.5	84.9	85.4	86.3	87.3	88.3	89.3	90.4
men	5.7	81.7	82.2	83.2	84.2	85.3	86.3	87.4
Life expectancy at 65 (years)								
women	4.6	22.0	22.4	23.2	24.0	24.9	25.7	26.6
men	4.5	19.8	20.2	21.0	21.8	22.6	23.5	24.3
Net migration (thousands)	-1.2	22.7	23.9	25.7	24.5	23.9	22.8	21.6
Net migration as % of population in t-1	-0.1	0.4	0.4	0.4	0.4	0.4	0.4	0.3
Population (million)	0.7	5.6	5.8	6.0	6.2	6.3	6.3	6.3
share of prime-age population (25-54y)	-5.9	40.3	39.5	39.7	38.0	36.6	35.2	34.4
share of working-age population (20-64y)	-7.4	58.8	58.6	57.2	56.1	54.4	53.2	51.4
share of elderly population (65+)	12.1	19.1	20.7	23.7	25.2	27.5	29.3	31.2
share of very elderly population (80+)	8.3	5.0	6.2	7.6	9.2	10.2	11.6	13.2
share of very elderly population (80+) in elderly population (65+)	16.3	25.9	29.7	32.1	36.5	37.2	39.4	42.3
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.2	1.8	1.3	1.2	1.3	1.2	1.1	1.0
Labour input: hours worked (growth rate)	0.1	0.8	0.3	0.2	0.2	0.0	-0.1	-0.2
Labour productivity per hour (growth rate)	1.1	1.0	1.0	1.0	1.2	1.2	1.2	1.2
TFP growth	0.8	0.7	0.7	0.7	0.9	0.9	0.9	0.9
Capital deepening contribution	0.4	0.2	0.6	0.3	0.3	0.3	0.3	0.4
Potential GDP per capita (growth rate)	0.9	0.3	0.8	0.5	0.7	0.7	1.0	1.0
Potential GDP per worker (growth rate)	1.1	0.6	0.4	0.7	0.8	0.9	1.2	1.2
HICP (growth rate)	2.1	2.8	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	:	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-40	3,298	3,368	3,431	3,465	3,412	3,359	3,258
Working-age population (growth rate)	-0.8	0.5	0.4	0.1	0.0	-0.2	-0.2	-0.3
Labour force (20-64y; thousands)	63	2,714	2,774	2,856	2,908	2,890	2,855	2,776
Participation rate (20-64y)	2.9	82.3	82.4	83.2	83.9	84.7	85.0	85.2
young (20-24y)	4.5	74.7	79.1	79.3	79.2	79.2	79.2	79.2
prime-age (25-54y)	2.4	86.0	86.3	87.1	88.1	88.3	88.4	88.5
older (55-64y)	4.5	73.9	71.8	72.1	73.5	76.6	78.1	78.5
oldest (65-69y)	13.7	34.3	32.9	33.3	36.2	40.4	45.4	48.0
Participation rate (20-64y) - women	3.9	79.4	79.7	81.0	81.8	82.7	83.1	83.3
young (20-24y)	4.2	73.0	77.1	77.3	77.2	77.2	77.2	77.2
prime-age (25-54y)	3.2	83.5	84.0	85.0	86.2	86.5	86.6	86.7
older (55-64y)	7.2	69.1	67.9	69.7	71.0	74.1	75.9	76.2
oldest (65-69y)	19.6	27.0	25.0	29.1	34.8	38.9	44.0	46.6
Participation rate (20-64y) - men	2.0	85.1	84.9	85.4	86.0	86.6	86.8	87.0
young (20-24y)	4.8	76.3	81.0	81.1	81.0	81.0	81.0	81.0
prime-age (25-54y)	1.8	88.4	88.5	89.2	90.0	90.0	90.1	90.1
older (55-64y)	2.0	78.6	75.6	74.5	76.1	79.1	80.2	80.6
oldest (65-69y)	7.8	41.5	40.8	37.6	37.6	42.0	46.8	49.3
Average labour market exit age[1]	2.4	65.5	65.7	66.2	66.8	67.2	67.5	68.0
women	2.9	65.1	65.3	66.0	66.8	67.2	67.5	68.0
men	1.8	66.1	66.1	66.5	66.8	67.2	67.5	68.0
Employment rate (20-64y)	3.3	79.4	80.1	80.9	81.5	82.3	82.6	82.8
Employment rate (15-74y)	1.6	69.3	69.6	69.4	70.3	70.2	70.8	70.9
Unemployment rate (20-64y)	-0.6	3.4	2.8	2.8	2.8	2.8	2.9	2.9
Unemployment rate (15-74y)	-1.0	4.6	3.7	3.7	3.7	3.7	3.7	3.7
Employment (20-64y; millions)	0.1	2.6	2.7	2.8	2.8	2.8	2.8	2.7
Employment (15-74y; millions)	0.2	2.9	3.0	3.1	3.1	3.1	3.1	3.1
share of young (20-24y)	-0.6	7.8	8.8	8.0	7.4	7.4	7.4	7.2
share of prime-age (25-54y)	-3.6	64.6	63.9	65.9	64.3	62.6	61.1	61.0
share of older (55-64y)	2.0	17.5	17.4	16.6	18.7	19.2	20.3	19.5
share of oldest (65-74y)	3.2	4.5	4.3	4.7	4.8	6.0	6.7	7.7
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	2.5	21.3	21.9	20.9	23.3	23.5	24.5	23.8
Old-age dependency ratio[3]	28.3	32.5	35.4	41.4	44.8	50.5	55.2	60.8
Total dependency ratio[4]	24.5	70.1	70.8	74.8	78.1	83.7	88.1	94.6
Total economic dependency ratio (20-64)[5]	19.1	97.6	98.1	101.5	103.7	106.8	110.8	116.7
Total economic dependency ratio (15-74)[6]	14.5	87.8	88.4	91.8	93.8	95.3	98.3	102.3
Old-age economic dependency ratio (20-64y)[7]	28.7	35.7	39.3	45.9	49.5	54.5	59.1	64.4
Old-age economic dependency ratio (15-74y)[8]	24.3	32.2	35.4	41.5	44.8	48.6	52.4	56.5

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

29. EURO AREA

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.20	1.32	1.37	1.44	1.46	1.48	1.50	1.52
Life expectancy at birth								
women	5.6	84.8	85.3	86.3	87.3	88.3	89.4	90.4
men	6.6	80.0	80.6	81.7	82.9	84.1	85.4	86.6
Life expectancy at 65 (years)								
women	4.5	22.3	22.7	23.5	24.3	25.2	26.0	26.8
men	4.9	19.0	19.4	20.3	21.2	22.1	23.0	24.0
Net migration (thousands)	-793.0	1893.7	1315.3	1240.2	1181.4	1133.9	1130.6	1100.8
Net migration as % of population in t-1	-0.2	0.5	0.4	0.3	0.3	0.3	0.3	0.3
Population (million)	-22.9	358.7	361.0	361.2	357.8	349.8	341.8	335.8
share of prime-age population (25-54y)	-4.9	38.4	37.6	36.8	35.8	34.8	33.9	33.5
share of working-age population (20-64y)	-7.7	58.1	57.1	55.1	53.2	52.4	51.9	50.4
share of elderly population (65+)	10.3	22.4	24.5	27.8	29.5	30.5	31.4	32.8
share of very elderly population (80+)	7.5	6.6	7.3	9.2	11.5	12.5	13.3	14.1
share of very elderly population (80+) in elderly population (65+)	13.8	29.2	29.9	33.0	38.9	41.0	42.4	43.0
Macroeconomic assumptions	**average 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Potential GDP (growth rate)	1.0	1.3	1.0	1.1	1.0	1.1	1.0	0.9
Labour input: hours worked (growth rate)	-0.2	0.9	0.2	-0.1	-0.4	-0.3	-0.3	-0.4
Labour productivity per hour (growth rate)	1.2	0.4	0.9	1.2	1.3	1.3	1.3	1.3
TFP growth	0.8	0.4	0.5	0.8	0.9	0.9	0.9	0.9
Capital deepening contribution	0.4	0.0	0.3	0.4	0.5	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.2	0.9	1.0	1.2	1.2	1.3	1.2	1.1
Potential GDP per worker (growth rate)	1.2	0.5	0.8	1.2	1.4	1.3	1.3	1.3
HICP (growth rate)	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.1	3.2	4.1	4.5	4.2	4.0	4.0	4.0
Labour force assumptions	**change 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Working-age population (20-64y; thousands)	-39,167	208,534	206,219	198,931	190,235	183,367	177,457	169,367
Working-age population (growth rate)	-0.5	0.0	-0.3	-0.3	-0.4	-0.3	-0.4	-0.5
Labour force (20-64y; thousands)	-25,399	168,149	167,652	165,273	159,519	154,118	149,201	142,750
Participation rate (20-64y)	3.5	80.9	81.5	83.3	84.0	84.2	84.2	84.4
young (20-24y)	1.9	66.3	66.9	67.9	68.0	68.0	68.1	68.3
prime-age (25-54y)	2.0	87.3	88.0	88.6	89.1	89.2	89.2	89.3
older (55-64y)	8.0	70.3	71.0	75.3	76.2	77.6	78.2	78.3
oldest (65-69y)	17.6	20.3	21.3	26.0	28.7	31.2	34.8	37.9
Participation rate (20-64y) - women	5.1	76.5	77.6	79.9	80.9	81.3	81.4	81.6
young (20-24y)	1.7	63.8	64.1	65.2	65.2	65.2	65.4	65.6
prime-age (25-54y)	3.3	83.0	84.0	85.2	86.0	86.2	86.2	86.3
older (55-64y)	10.6	65.4	66.8	72.0	73.5	75.3	75.9	76.0
oldest (65-69y)	19.5	17.0	19.4	24.6	27.6	30.0	33.6	36.5
Participation rate (20-64y) - men	1.9	85.4	85.6	86.7	87.1	87.1	87.1	87.3
young (20-24y)	2.1	69.0	69.8	70.8	70.8	70.8	70.9	71.1
prime-age (25-54y)	0.6	91.7	92.0	92.0	92.3	92.3	92.2	92.3
older (55-64y)	5.0	75.7	75.5	78.9	79.1	80.1	80.6	80.7
oldest (65-69y)	15.1	24.3	23.7	27.6	30.0	32.4	36.1	39.4
Average labour market exit age[1]	1.8	64.4	64.9	65.4	65.6	65.8	66.0	66.2
women	1.8	64.3	64.9	65.4	65.6	65.8	66.0	66.1
men	1.7	64.5	64.9	65.4	65.6	65.8	66.0	66.2
Employment rate (20-64y)	4.2	75.9	76.5	78.2	79.4	79.6	79.7	80.1
Employment rate (15-74y)	2.7	62.2	61.8	63.3	64.6	64.6	65.0	65.0
Unemployment rate (20-64y)	-1.0	6.2	6.3	6.2	5.6	5.5	5.4	5.2
Unemployment rate (15-74y)	-1.2	6.4	6.4	6.3	5.7	5.7	5.5	5.2
Employment (20-64y; millions)	-22.4	157.8	157.1	155.0	150.6	145.6	141.2	135.4
Employment (15-74y; millions)	-19.3	166.2	166.2	165.1	161.0	156.2	152.2	146.9
share of young (20-24y)	-0.2	6.4	6.7	6.5	5.8	6.3	6.3	6.2
share of prime-age (25-54y)	-3.1	68.0	67.5	67.1	67.1	65.8	64.4	64.8
share of older (55-64y)	0.6	20.6	20.4	20.3	20.6	21.1	22.0	21.2
share of oldest (65-74y)	2.8	3.0	3.3	4.1	4.5	4.8	5.3	5.8
Dependency ratios	**change 25-80**	**2025**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Share of older population in working-age population[2]	-0.2	24.7	24.5	23.7	24.0	24.3	25.3	24.5
Old-age dependency ratio[3]	26.4	38.6	42.9	50.6	55.5	58.2	60.5	65.0
Total dependency ratio[4]	26.3	72.0	75.1	81.6	88.1	90.8	92.6	98.2
Total economic dependency ratio (20-64)[5]	18.7	114.8	116.7	119.3	124.2	126.5	128.0	133.5
Total economic dependency ratio (15-74)[6]	14.1	109.0	110.4	112.1	116.2	117.9	118.7	123.1
Old-age economic dependency ratio (20-64y)[7]	27.0	47.8	52.7	60.3	65.1	68.0	70.2	74.8
Old-age economic dependency ratio (15-74y)[8]	23.6	45.3	49.8	56.7	60.9	63.4	65.1	68.9

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total inactive population as a % of the employed population 20-64.
(6) Total economic dependency ratio = Total inactive population as a % of the employed population 15-74.
(7) Old-age economic dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(8) Old-age economic dependency ratio (15-74) = Inactive population aged 65+ as a % of the employed population 15-74.

30. EUROPEAN UNION

Demographic projections - EUROPOP2025 (Eurostat)	change 25-80	2025	2030	2040	2050	2060	2070	2080
Fertility rate	0.22	1.30	1.36	1.45	1.47	1.49	1.51	1.52
Life expectancy at birth								
women	5.8	84.3	84.8	85.8	86.9	88.0	89.0	90.1
men	7.0	79.1	79.7	81.0	82.2	83.5	84.8	86.1
Life expectancy at 65 (years)								
women	4.7	21.9	22.3	23.2	24.0	24.9	25.7	26.6
men	5.2	18.5	19.0	19.9	20.8	21.7	22.7	23.7
Net migration (thousands)	-794.9	2147.6	1408.9	1441.1	1395.5	1355.2	1368.4	1352.7
Net migration as % of population in t-1	-0.1	0.5	0.3	0.3	0.3	0.3	0.3	0.3
Population (million)	-38.2	452.2	453.3	450.5	444.6	433.6	422.4	413.9
share of prime-age population (25-54y)	-5.4	38.9	38.0	37.0	35.9	34.9	34.0	33.5
share of working-age population (20-64y)	-7.6	58.2	57.5	55.7	53.4	52.4	52.1	50.6
share of elderly population (65+)	10.5	22.1	24.0	27.2	29.2	30.5	31.3	32.6
share of very elderly population (80+)	7.8	6.2	7.1	9.0	11.0	12.3	13.2	14.0
share of very elderly population (80+) in elderly population (65+)	14.8	28.0	29.4	33.0	37.6	40.2	42.3	42.8
Macroeconomic assumptions	average 25-80	2025	2030	2040	2050	2060	2070	2080
Potential GDP (growth rate)	1.0	1.4	1.1	1.2	1.0	1.1	1.0	0.9
Labour input: hours worked (growth rate)	-0.2	0.7	0.0	-0.2	-0.5	-0.3	-0.3	-0.4
Labour productivity per hour (growth rate)	1.3	0.7	1.1	1.3	1.4	1.4	1.3	1.3
TFP growth	0.8	0.5	0.6	0.9	0.9	0.9	0.9	0.9
Capital deepening contribution	0.5	0.2	0.4	0.5	0.5	0.5	0.5	0.5
Potential GDP per capita (growth rate)	1.3	1.2	1.2	1.3	1.2	1.4	1.3	1.1
Potential GDP per worker (growth rate)	1.3	1.0	1.0	1.4	1.5	1.4	1.3	1.3
HICP (growth rate)	2.0	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.2	3.5	4.3	4.7	4.3	4.1	4.1	4.1
Labour force assumptions	change 25-80	2025	2030	2040	2050	2060	2070	2080
Working-age population (20-64y; thousands)	-53,729	263,106	260,447	250,904	237,555	227,296	219,939	209,377
Working-age population (growth rate)	-0.6	0.1	-0.3	-0.4	-0.5	-0.3	-0.4	-0.5
Labour force (20-64y; thousands)	-36,452	212,627	211,869	207,715	198,796	190,792	184,616	176,175
Participation rate (20-64y)	3.3	81.1	81.6	83.0	83.9	84.1	84.1	84.3
young (20-24y)	2.3	65.2	65.9	66.8	67.2	67.1	67.3	67.5
prime-age (25-54y)	1.9	87.6	88.2	88.8	89.3	89.5	89.4	89.5
older (55-64y)	7.7	70.1	70.7	74.4	75.6	77.1	77.8	77.8
oldest (65-69y)	17.7	20.3	21.3	25.6	28.4	31.1	35.0	38.1
Participation rate (20-64y) - women	4.7	76.5	77.4	79.3	80.5	81.0	81.0	81.2
young (20-24y)	2.1	62.4	62.8	63.7	64.2	64.0	64.2	64.5
prime-age (25-54y)	3.1	83.2	84.2	85.3	86.1	86.3	86.3	86.3
older (55-64y)	10.3	64.9	66.1	70.5	72.5	74.4	75.1	75.2
oldest (65-69y)	20.1	16.9	19.4	24.1	27.2	30.0	34.1	36.9
Participation rate (20-64y) - men	1.7	85.8	85.9	86.8	87.3	87.3	87.3	87.5
young (20-24y)	2.5	68.1	69.2	70.1	70.3	70.2	70.4	70.6
prime-age (25-54y)	0.6	92.1	92.3	92.3	92.6	92.6	92.6	92.7
older (55-64y)	4.8	76.0	75.9	78.7	79.1	80.1	80.7	80.8
oldest (65-69y)	14.8	24.5	23.8	27.4	30.0	32.4	36.2	39.4
Average labour market exit age[1]	1.8	64.3	64.7	65.2	65.4	65.6	65.8	66.0
women	1.9	64.1	64.6	65.1	65.4	65.6	65.8	66.0
men	1.7	64.5	64.9	65.3	65.5	65.7	65.9	66.2
Employment rate (20-64y)	3.8	76.4	76.9	78.2	79.6	79.8	79.9	80.2
Employment rate (15-74y)	2.5	62.4	62.2	63.4	64.5	64.4	65.0	64.9
Unemployment rate (20-64y)	-0.9	5.8	5.8	5.8	5.2	5.3	5.1	4.9
Unemployment rate (15-74y)	-1.0	6.0	6.0	6.0	5.3	5.4	5.3	5.0
Employment (20-64y; millions)	-32.8	200.3	199.6	195.7	188.5	180.8	175.1	167.5
Employment (15-74y; millions)	-29.2	210.5	210.3	207.6	200.9	193.5	188.3	181.3
share of young (20-24y)	-0.1	6.2	6.6	6.5	5.7	6.2	6.2	6.1
share of prime-age (25-54y)	-4.0	69.1	68.3	67.3	67.4	66.3	64.7	65.1
share of older (55-64y)	1.4	19.8	20.0	20.5	20.7	20.9	22.0	21.3
share of oldest (65-74y)	2.8	3.0	3.2	3.9	4.4	4.7	5.1	5.7
Dependency ratios	change 25-80	2025	2030	2040	2050	2060	2070	2080
Share of older population in working-age population[2]	0.8	23.9	24.1	24.0	24.3	24.2	25.4	24.7
Old-age dependency ratio[3]	26.5	38.0	41.7	48.9	54.7	58.1	60.1	64.5
Total dependency ratio[4]	25.8	71.9	74.0	79.6	87.2	90.8	92.1	97.7
Total economic dependency ratio (20-64)[5]	19.3	113.9	115.0	117.4	123.3	126.7	127.7	133.2
Total economic dependency ratio (15-74)[6]	14.7	108.4	109.1	110.7	115.7	118.4	118.8	123.1
Old-age economic dependency ratio (20-64y)[7]	27.6	46.7	51.0	58.4	64.1	68.0	69.9	74.3
Old-age economic dependency ratio (15-74y)[8]	24.2	44.4	48.4	55.1	60.1	63.5	65.0	68.7

(1) Based on the average probabilities of labour force exit. The table reports 2026 instead of 2025.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
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