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The demographic divide: inequalities in ageing across the European Union

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Executive summary

THE EUROPEAN UNION is projected to enter a period of population decline after 2026, with implications for economic development and labour markets, though these will vary because of different trends in different EU countries. Between 2023 and 2050, Eastern and Southern EU countries will face the sharpest declines because of both natural population decrease and limited net inward migration. In contrast, Northern and Western countries could see population growth driven by higher migration.

BY 2050, WORKING-AGE populations are projected to decline in 22 out of 27 EU countries, while the share of those aged 85+ in the EU as whole will more than double. This shift will strain healthcare, pension and long-term care systems across the continent. Eastern and Southern EU countries will face more severe ageing and workforce shrinkages, undermining their competitiveness and potentially contributing to increasing inequality. Western and Northern countries will also age, but slower natural population decline and larger migration inflows will give them more time to adjust. However, regional disparities within countries will likely widen as migrants concentrate in urban areas, leaving rural regions even more vulnerable to depopulation.

POLICIES MUST BE adapted to these different demographic trends. Eastern EU countries should focus on retaining talent, attracting migrants in sectors with labour shortages and increasing labour-force participation by women and older workers. Southern countries should strengthen family-friendly and youth-employment policies, while improving migrant integration and regional infrastructure. Western and Northern countries must prioritise migrant integration, rural development and gradual labour-market reforms for ageing populations.

A COORDINATED EU plan for these different trends would support EU countries in addressing the challenges they will face. Integration of migrants into labour markets and societies will be especially important, though relying on sustained high migration may not be a viable long-term solution and will not be a substitute for maximising the participation of residents in labour markets.

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1 Introduction

The European Union has an ageing population and faces a decline in both its total and working-age populations. These trends are set to transform the EU economy significantly. However, there are notable differences in the projected demographic trends in different EU countries. This Policy Brief explores these projected trends, and how their implications for EU countries differ, providing insights into the challenges ahead.

In particular, identifying countries that are particularly vulnerable in the demographic transition will be crucial to combating deepening inequalities effectively. Reducing inequality through upward convergence – EU countries achieving economic progress while reducing disparities between countries and regions – has long been a basic EU goal[1]. The convergence of economic conditions and opportunities across regions and countries is considered vital for EU functionality and legitimacy.

The twelve mainly Central and Eastern European countries that joined the EU during the landmark enlargements in the 2000s have pursued a spectacular convergence process towards the income levels of richer Western European nations (Darvas, 2024). However, demographic change could deepen the significant disparities that remain and/or bring about to new inequalities. These shifts pose challenges to EU cohesion, which policymakers must address to prevent further fragmentation. Ensuring regional competitiveness and mitigating inequality will require proactive strategies to adapt to demographic pressures.

Ensuring regional competitiveness and mitigating inequality will require proactive strategies to adapt to demographic pressures

In this paper, we make the general assumption that population decline would be undesirable. This view aligns with most national governments and the European Commission, which regard population decline as problematic and which actively develop policies aimed either at reversing the trend or mitigating its effects (European Commission, 2024a). This is because population decline will make it harder to maintain the current structures of European economies, production models and social security systems – with fewer workers in the labour force, payroll tax revenues drop and contributions to pensions and insurance system dwindle, while ageing populations also intensify demand for healthcare, long-term care and pension benefits. Population growth has also been identified as a major driver of technological innovation and entrepreneurial activity (Van Dalen and Henkens, 2011).

In general, the assumption that population decline is undesirable applies at the national level, but the implications of population decline can differ regionally or for sub-national areas. A key distinction in government policies is whether they aim to support individuals or specific geographical areas. If the aim is to help individuals, depopulation of certain areas may benefit the residents. This might introduce tension between what is best for residents and what is best for a geographical location.

There are also arguments highlighting potential benefits of population reduction (Rees *et al*, 2012). These include a lower environmental impact with reduced greenhouse gas emissions, better biodiversity preservation, less traffic congestion and increased availability of housing, which could improve living standards (Van Dalen and Henkens, 2011). Nonetheless, longer lives are a significant achievement of advancements in policy and science.

We also examine the drivers of population growth: natural population growth and net migration. We highlight the crucial role of migration in sustaining populations, particularly in countries experiencing natural population decline. We classify EU countries into four groups: Northern Europe (Denmark, Finland and Sweden), Western Europe (Austria, Belgium,

1 Article 174 of the Treaty on the Functioning of the EU: promoting *"overall harmonious development"* should involve *"reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions"* and strengthening *"economic, social and territorial cohesion"*.

Germany, France, Luxembourg, Ireland[2] and the Netherlands), Southern Europe (Cyprus, Italy, Malta, Portugal, Spain and Greece) and Eastern Europe (Bulgaria, Czechia, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia). In this paper, the term *area* refers to one of these groups, while the term *region* refers to regions within an EU country.

We have constructed these country groups based on shared migration histories and contemporary migration patterns shaped by economic shifts, political developments and national policies that have significantly influenced demographic trends (Potančoková *et al*, 2021). Western and Northern Europe transitioned during the 1950s from regions with net emigration to regions with net immigration. These countries attracted migrants primarily from Southern Europe, Turkey, former colonies and, since the 1990s, Eastern Europe (van Mol and de Valk, 2016). Southern Europe, historically a region of emigration, began to experience substantial immigration only in the 1990s (Castles, 2000).

Emigration from Spain and Greece surged again during the economic crisis of the early 2010s, but immigration also grew, particularly related to large inflows of asylum seekers in 2015–2016. Eastern Europe remained largely closed to migration until the fall of the Iron Curtain. Emigration accelerated after Eastern European countries joined the EU, though some of this intra-EU migration has proved temporary or circular in nature (Black *et al*, 2010). This trend has been driven by the right of all EU citizens and their family members to move and reside anywhere in the EU. Between 2004 and 2009, approximately 1.8 percent of the population of the eight eastern countries that joined the EU in 2004 migrated to the 15 pre-2004 members. For Bulgaria and Romania, which joined in 2007, this figure was as high as 4.1 percent between 2007 and 2009 (Holland *et al*, 2011).

These different histories make straightforward comparison of EU countries difficult. Therefore, we start by analysing area-level trends then look at country-level differences within the Northern, Eastern, Southern and Western European areas.

2 The elderly population is growing while other age groups are shrinking

2.1 Demographic trends in EU country groups

The decline in the EU's population masks significant differences in the trends for different age groups. By 2050, 22 out of 27 EU countries are expected to experience declines in their working-age populations (20 to 64). Simultaneously, the EU will witness a sharp increase in the share of its population aged 85 and older relative to the total population (Pinkus and Ruer, 2024). Currently at 3 percent, this share is projected to double to 6 percent by 2050 and reach nearly 8 percent by 2070[3].

However, these demographic shifts vary significantly in different countries, and therefore in the different EU country groups. Eastern and Southern European countries are projected to face the most severe trends. The very-old-age dependency ratio – the proportion of people aged 85+ relative to the working-age population – is already highest in Southern Europe and

2 Ireland is a notable exception within the Western Europe group because of its unique demographic dynamics. Unlike other countries in this group, Ireland has experienced particularly pronounced fluctuations in its native population, influenced by historical patterns of fertility rates and emigration. For instance, between 1960 and 2000, Ireland had the highest fertility rate in the EU.

3 Population projections from Eurostat should not be considered as forecasts but as 'what-if' scenarios that indicate how the population will change in the future depending on a set of assumptions on fertility, mortality and migration. The baseline scenario is used in this analysis.

is projected to increase dramatically, from 6 percent to approximately 18.3 percent by 2070 (Figure 1). Similarly, Eastern Europe could see a significant rise, with the ratio increasing from 3.5 percent to 15.3 percent.

While Northern and Western EU countries will also experience growth in their very-old-age dependency ratios, the increases in these country groups are anticipated to be less pronounced compared to those in the East and South. In the latter two country groups, the strong increase in the projected ratio is driven not only by a surge in the share of the very old in the population, but also by declines in working-age populations that are projected to be starker than in the other country-groups (Figure 2).

Figure 1: Evolution of very-old-age dependency ratios, EU country groups (projected)

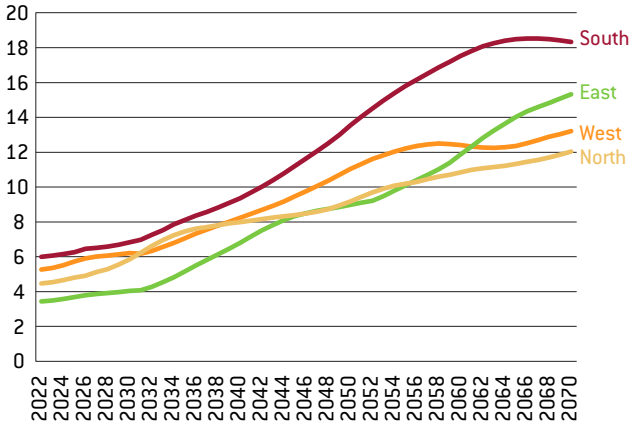
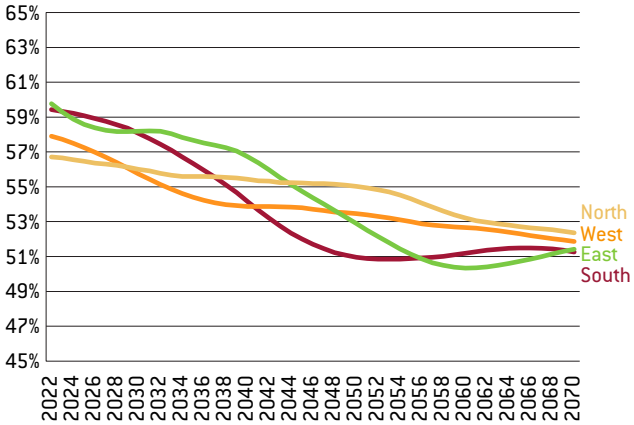


Figure 2: Evolution of working-age population shares (projected)



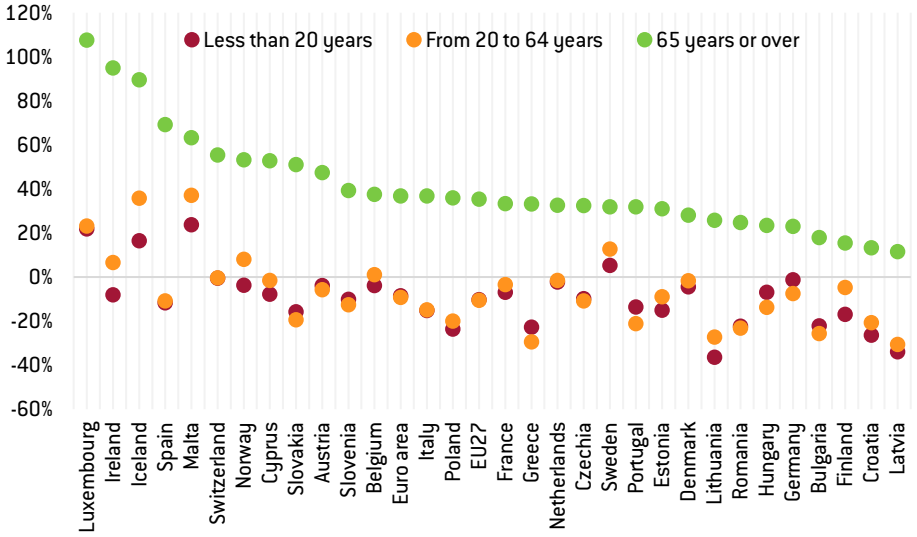
Source: Bruegel based on Eurostat projections. Note: both figures are population-weighted; the very-old-age dependency ratio measures the number of people aged 85 and older relative to the working-age population (aged 20-64).

2.2 Varying trends within country groups

Age 0-19: relatively fewer young people

The demographic changes in our four EU country groups mask significant differences in trends in different countries. For instance, between 2023 and 2050, the under-20 age group will shrink the most in Latvia, Lithuania, Greece, Bulgaria, Romania, Portugal, Croatia and Poland. This age group will decline everywhere between 2023 and 2050 except in Malta, Luxembourg and Sweden. Such pronounced and persistent declines in the under-20 population could result in school closures or mergers, particularly affecting rural regions where students already face longer travel distances (European Commission, 2024a). Countries facing large decreases in school-aged inhabitants therefore need to take steps to prepare their educational systems.

Figure 3: Projected change in population by age group in European countries, 2023–2050



Source: Bruegel based on Eurostat projections. Note: the change in each age group between 2023 and 2050 is calculated as the percentage change in population, determined by the difference in population between these years relative to the 2023 population of the corresponding age group

Age 20-64: Decline in and ageing of working-age populations

In the same set of countries where the young population is set to shrink most, the working-age population is projected to decrease by more than 20 percent: Latvia, Lithuania, Greece, Bulgaria, Romania, Portugal, Croatia and Poland. The reduction in the working-age population will come with a decline in the labour force. A smaller labour force means fewer workers are available to produce goods and services, potentially slowing GDP growth. It also puts pressure on public finances as fewer workers contribute to payroll taxes, reducing government revenues, while increased dependency ratios strain healthcare, long-term care and pension systems (Darvas *et al*, 2024).

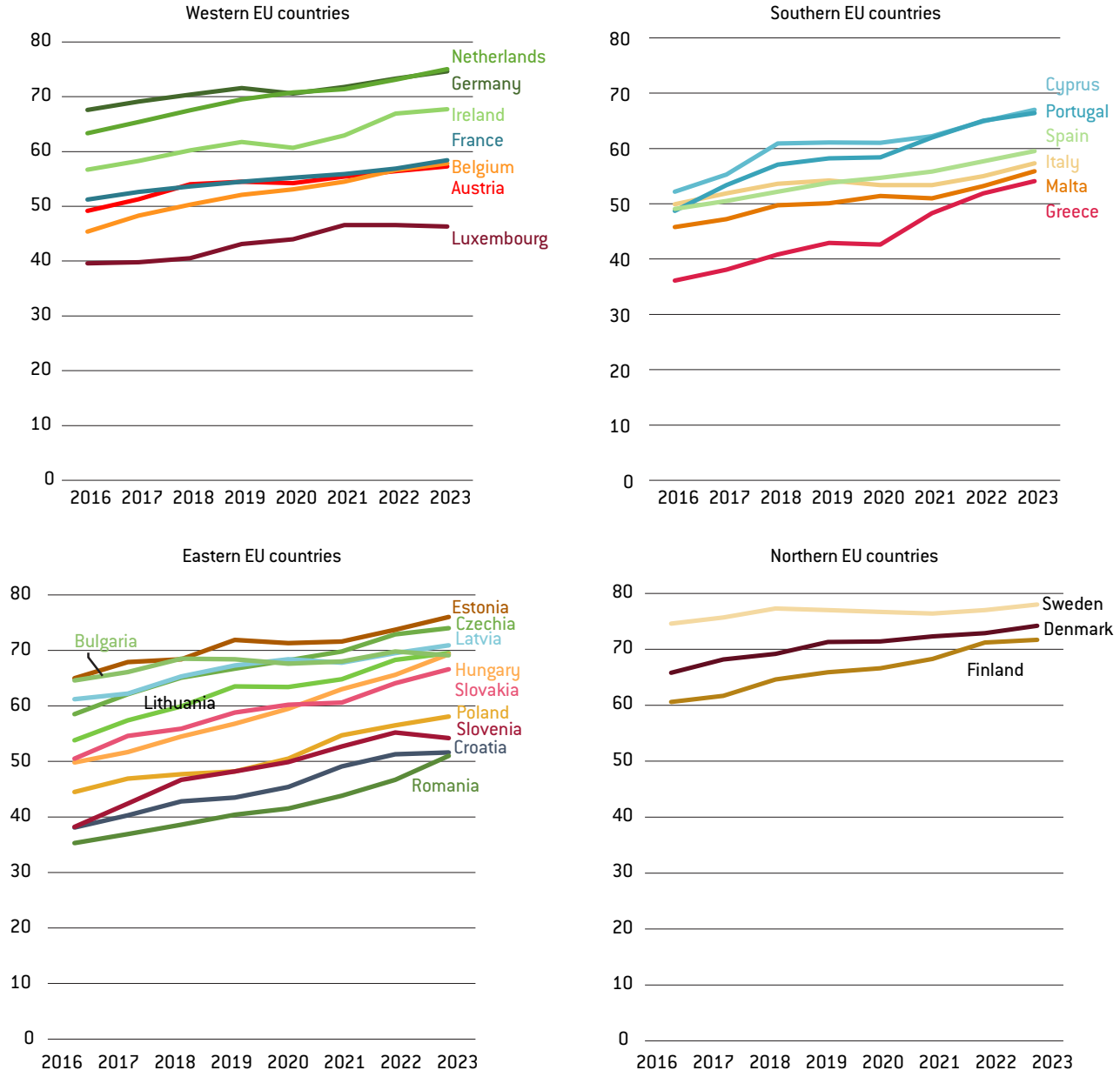
While a decline in the EU working-age population appears inevitable, this would not necessarily translate into a proportional reduction in the labour force. First, current and future cohorts are expected to be more educated than previous ones and higher education levels are associated with longer labour-market participation. This suggests that future older workers are likely to remain economically active for longer, compared to current older workers (Hasselhorn and Apt, 2015; Loichinger, 2015; Marois *et al*, 2019).

Second, many countries are experiencing rising labour-force participation rates among individuals aged 55 and older. Participation rates in the 55-64 age group increased in all EU countries between 2014 and 2023 (Figure 4). Changes to pension policies, including the scaling back of early retirement options, the extension of contribution periods and increases in statutory retirement ages, are a major factor behind this trend.

Third, women are participating in the labour force at unprecedented levels. Although a substantial gender gap persists in many EU countries, it is gradually narrowing, particularly among the better educated (Gotti *et al*, 2024).

These factors collectively contributed to an increase in the labour force between 2006 and 2020, despite an ageing population. However, it is important to note that labour productivity tends to decline with age (Lallemand and Rycx, 2009; Maestas *et al*, 2023). Thus, even if more individuals remain in the workforce for longer, a larger share of the labour force is likely to be less productive than younger workers, who are projected to decline in numbers compared to today.

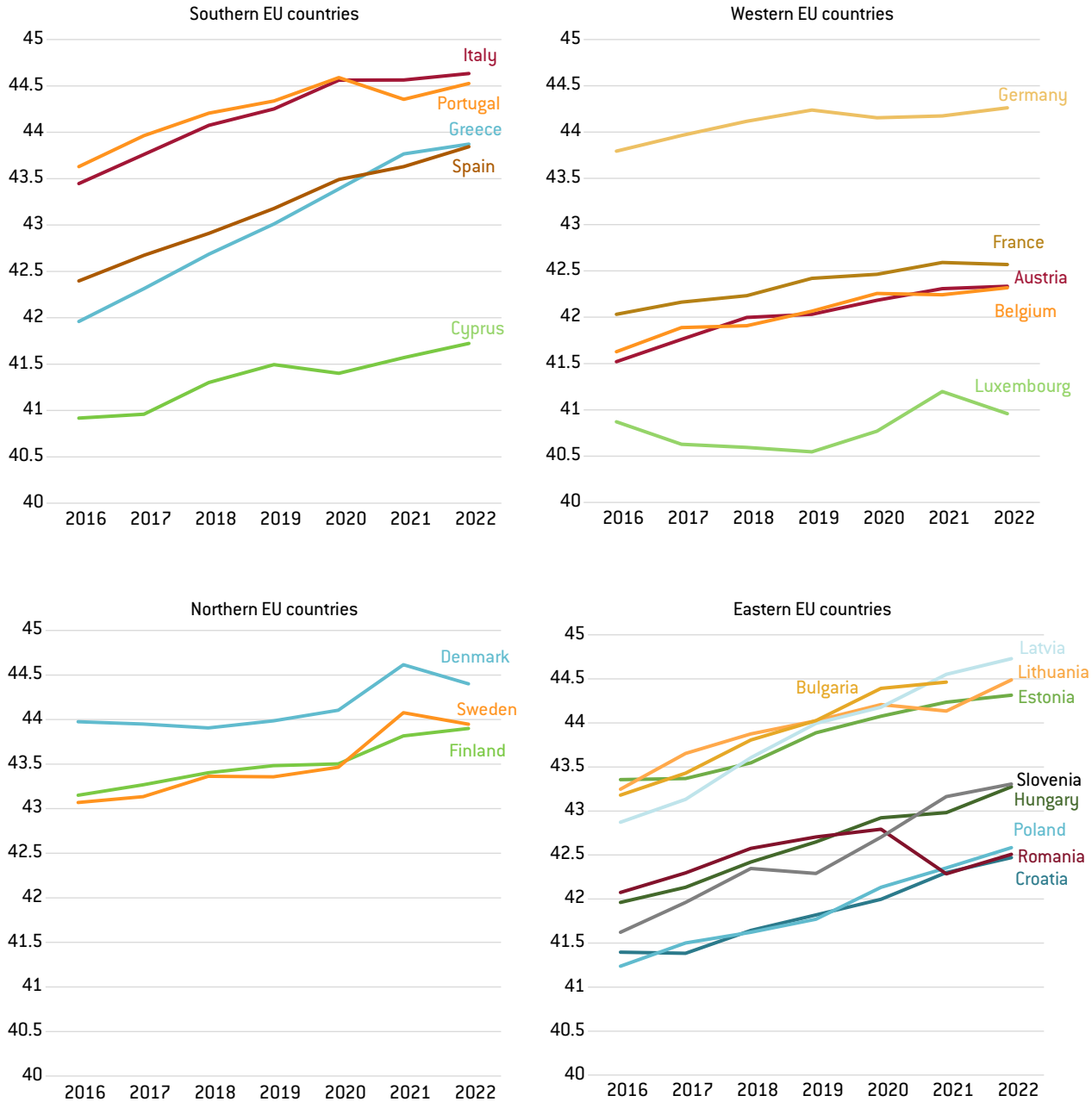
Figure 4: Labour force participation rates, ages 55-64, %



Source: Bruegel based on Eurostat. Note: the labour force represents the sum of those employed and unemployed.

The EU faces therefore not only a shrinking workforce but also an ageing one. The average age of the labour force gradually increased in all countries between 2016 and 2022 (Figure 5). An ageing labour force brings its own challenges. For example, older workers are less mobile in the labour market – they do not easily change jobs from one occupation or sector to another (Fritzsche and Marcus, 2013; Martin, 2018). Yet, the changing labour-market structure requires just that. Additionally, an ageing workforce faces a greater risk of skill obsolescence, as rapid innovations may outpace existing competences. As older workers tend to participate less in on-the-job training compared to younger workers, the skills they already possess tend to lose their relevance for the labour market (Allen and De Grip, 2012). As a result, the EU labour market will need to prioritise upskilling and reskilling of the current workforce, rather than relying solely on new entrants from the education system (Desjardins and Warnke, 2012).

Figure 5: Average age of the labour force, aged 20 and over



Source: Bruegel based on Eurostat LFS microdata. Note: the Netherlands, Malta, Ireland, Czechia and Slovakia are missing because of data limitations. The labour force represents the sum of those employed and unemployed, and only includes the labour force aged 20 and older.

Patterns across the defined country-groups are evident in the ageing of the labour force, with Eastern and Southern EU countries broadly experiencing more rapid increases in the average ages of their labour forces than other country groups (Figure 5). While countries started from different values in 2016, the increases in most countries in the Eastern and Southern groups have outpaced those of most countries in other groups.

The relatively modest increase in the average age of the labour force in some Western EU countries can be attributed, in part, to the relatively low labour-force participation rates among individuals aged 55-64. For example, Luxembourg, Belgium, Austria and France have significantly lower labour-force participation rates for the 55-64 age group than Germany, the Netherlands and the Northern European countries. In Eastern Europe, a similar divide exists – countries including Romania, Croatia, Slovenia and Poland lag behind the Baltic countries and Bulgaria. In Southern and Eastern Europe, the more pronounced increases in the average age of the labour force are also influenced by fewer young people entering the workforce.

There is significant potential in many EU countries to implement targeted policies aimed at supporting older workers, which could better address the challenges posed by demographic shifts.

Age 65+: booming everywhere

All EU countries will experience substantial increases in their 65+ populations between 2023 and 2050

Figure 3 also shows that all EU countries will experience substantial increases in their 65+ populations between 2023 and 2050, with some differences between countries. This is particularly the case for Luxembourg, Ireland, Spain, Malta and Cyprus. As life expectancy increases and workforces are projected to become smaller, countries grapple with rising pension expenditures, particularly in pay-as-you-go (PAYG) systems, with fewer workers having to support growing numbers of retirees. PAYG systems are still the dominant source of funding for pensions in most EU countries. The main levers to alleviate the financial pressure on PAYG systems without changing the fundamental way of financing retirement are changing retirement ages, contribution rates or benefit levels.

Raising the statutory retirement age would extend contribution periods but may benefit higher-income groups more, as people in these groups tend to live longer. Reforms that would counteract this financial pressure, such as raising contributions or reducing benefits, would reduce disposable income during working life or old age, respectively. One of the main challenges for pension reform is striking the right balance between making the systems more sustainable and ensuring adequate income levels at all stages of life. Furthermore, all three types of reform are often politically difficult.

The surge in the elderly will also increase pressure on long-term care (LTC) systems, as more people require long-term support for age-related conditions and chronic illnesses (Belmonte *et al*, 2023). This demographic trend is thus expected to lead to increased demand for healthcare and LTC, and a consequent need for an increase in the supply of care and, accordingly, in expenditure. To reduce the gap between care demand and supply, several EU countries, including Germany and Denmark, have already taken measures to attract prospective care workers from non-EU countries, making it more appealing for these individuals to emigrate and work in the care sector (Hougaard-Jensen *et al*, 2024).

3 Drivers of population growth: natural population change and net migration

Aggregate population growth or decline has two main drivers: natural population growth, defined as the difference between births and deaths, and net migration.

In country groups with higher fertility rates and significant migrant inflows, the impact of ageing on the total population size is mitigated. However, in country groups experiencing high outflows of young migrants, the ageing effects may be exacerbated. Typically, affluent countries experience positive net migration flows, while poorer countries face negative net migration flows, likely amplifying existing disparities.

The EU is projected to enter a period of steady population decline from 2026

European Commission (2024a) showed that, after decades of population growth, the EU population declined in 2020, driven by unusually high COVID-19-related mortality and net migration no longer offsetting negative natural growth. While total population change turned positive again in 2022, the EU is projected to enter a period of steady population decline from 2026. Both natural population change and net migration show significant variation in different regions within countries (European Commission, 2024a).

Natural change and net migration are both highest in urban regions and lowest in rural regions. Remote regions within countries often tend to experience overall negative net migration, primarily because of limited economic and employment opportunities and inadequate access to essential services such as education, childcare and healthcare. These challenges reduce the attractiveness of such regions, and may cause outmigration (European Commission, 2024a).

For our analysis in the next subsections, we break down total population growth into projected natural population growth and adjusted projected net migration[4], computing the average annual change per thousand residents. When interpreting these figures, it should be noted that net migration projections are significantly less reliable than those for natural population change (which are also subject to uncertainty). Natural population change is primarily influenced by demographic factors such as fertility rates and the mortality structure across various age cohorts. Historical trends in these indicators provide a reliable foundation for future projections. In contrast, net migration levels are shaped by external factors and domestic policy decisions, making migration projections inherently less predictable[5].

3.1 Long-term assumptions

Our baseline projections assume the following:

- **Fertility rates**. The total fertility rate in the EU is projected to rise modestly from an average of around 1.5 live births per woman in 2022 to 1.6 by 2070. This limited increase reflects an assumption that fertility rates will converge to the highest current levels observed among EU countries. Fertility rates will remain below the natural replacement rate of 2.1 in all countries, sustaining demographic challenges over the long term.

4 Migration figures also include movements between EU countries. Net migration is defined as the difference between the numbers of immigrants and emigrants. Eurostat employs a related concept, *net migration plus statistical adjustment*, which derives net migration figures by subtracting natural change from total population change. Our analysis is based on this concept. It is therefore important to note that the *net migration plus statistical adjustment* metric incorporates all statistical inaccuracies inherent in its components, particularly those related to measuring population change. In different countries, this measure may capture additional variations in population figures between 1 January of two consecutive years that cannot be attributed solely to births, deaths, immigration or emigration. For instance, the legalisation of illegal migrant populations can change population figures significantly. These discrepancies might reflect unmeasured population shifts or adjustments in statistical methodologies, adding an additional layer of complexity to interpreting migration data.

5 We take into account the uncertainty in projections of natural population growth and net migration by carrying out our analysis using the various projection scenarios outlined in European Commission (2024b).

- **Life expectancy.** Average male life expectancy at birth is expected to increase by 7.7 years, from 78.4 in 2022 to 86.1 in 2070, while average female life expectancy will rise by 6.4 years, from 84.0 to 90.4. This reflects a partial upward convergence in longevity in EU countries, narrowing the gender gap in life expectancy.
- **Net migration.** Net migration is assumed to stabilise at around 1 million people annually (0.2 percent of the EU population), down from the 2022 peak of 1 percent caused by Russia's invasion of Ukraine. Long-term migration patterns are based on partial convergence to historical EU trends, with positive net migration in nearly all countries averaging 0.3 percent of the population annually.
- **Employment rates.** The EU employment rate is projected to increase from 75 percent in 2022 to 79 percent in 2070, with a six-percentage-point rise for women and a two-percentage-point rise for men. Employment rates for older workers (55 to 64) are expected to grow significantly, but total hours worked will decline by 9 percent because of population ageing.
- **Macroeconomic indicators.** EU annual GDP growth is forecast at 1.3 percent on average from 2022 to 2070. The baseline for total factor productivity (TFP) growth corresponds to an initial rise in TFP from its current average level of about 0.8 percent to 1.2 percent per year by 2040, before falling again to 0.8 percent by 2070[6].

We then analyse the sensitivity of these baseline projections to a set of adverse demographic scenarios, some of which may reflect potential policy impacts. Scenarios include higher life expectancy, lower and higher immigration and lower fertility (Table 1).

Table 1: Overview of the sensitivity tests around the baseline

Higher life expectancy	Lower/higher migration	Lower fertility
Additional gain in life expectancy at birth of two years by 2070.	33% less/more non-EU immigration over the entire projection period.	20% lower fertility rate over the entire projection period.

Source: European Commission (2024b).

3.2 Baseline results

In the baseline scenario (Figure 6), between 2023 and 2050, the aggregate EU population is projected to decline at an average rate of 0.3 residents per thousand residents annually. This is driven by a significant natural decrease of three per thousand annually, which is projected to be not fully compensated for by net inward migration[7], projected at 2.6 per thousand annually. This marks a stark contrast to the 2010 to 2021 period, during which the EU population grew at an average rate of 1.5 per thousand annually. In that period, a smaller natural decrease of 0.7 per thousand a year was offset by net inward migration of 2.2 per thousand annually.

However, significant differences emerge within the EU. Eastern Europe is expected to see a sharp population decline of 3.2 per thousand annually, driven by a substantial negative natural population change of 4.1 per thousand annually and very low net inward migration of only 0.9 per thousand annually. Southern Europe is also projected to experience a population decrease of 0.4 per thousand annually, with an even larger natural reduction of 4.5 per thousand annually, though partially mitigated by higher net inward migration of 4.1 per thousand annually.

6 This reflects the use of different methods and assumptions at various horizons of the projection. See European Commission (2024b) for more details.

7 It should be noted that our data does not allow for differentiation between skilled and non-skilled immigration. While this distinction could have significant implications for demographic and economic outcomes, it falls outside the scope of this paper.

In contrast, both Northern and Western Europe are projected to see population growth, which will be entirely attributable to net inward migration compensating for their natural population declines. Net migration in these countries is projected to be significantly higher than in Eastern countries, and natural population growth significantly less negative (see the appendix for details per EU country).

Figure 6: Natural population change, net migration and total population change within the EU, baseline projections, 2023-2050

	Total population change	Natural population change	Net migration
Average annual change per 1000 residents			
EU	-0.3	-3.0	2.6
East	-3.2	-4.1	0.9
North	2.6	-0.6	3.2
South	-0.4	-4.5	4.1
West	1.1	-1.6	2.6

Source: Bruegel based on Eurostat. Notes: we compute the annual population growth rate per thousand inhabitants using the formula = $\frac{P_{t+1}-P_t}{P_t} x\ 1000$. We then sum the annual growth rates and divide by the number of years. Differences between total population change and the sum of its parts are due to rounding.

Projections at the country-group level mask a certain degree of variation between countries. The appendix provides the average annual projected changes for each country. While all country groups face projected declines in natural populations at group level, a few countries – including Ireland, Sweden, Luxembourg and Cyprus – are still projected to experience natural population growth. In France, the change will be near zero. Similarly, although all groups are expected to experience inward net migration, the projections are negative or near zero in Latvia, Lithuania, Romania, Greece, Poland and Croatia.

Total population change is expected to be positive in the West and North but negative in the South and East. However, Germany's near-zero growth makes it stand out among Western European countries. Luxembourg is projected to experience the second-highest growth of net migration among EU countries with an average annual growth of 8.9 per thousand residents. Likewise, Cyprus and Malta show population increases, unlike the other Southern countries, and Finland faces total population decline, unlike the other countries in the Northern country group. It is also worth pointing out that Latvia and Lithuania will experience particularly severe overall population losses.

3.3 Results from alternative scenarios

We assess the sensitivity of the baseline projections to a set of adverse demographic scenarios relating to life expectancy, fertility and migration (Table 1 and Figure 7).

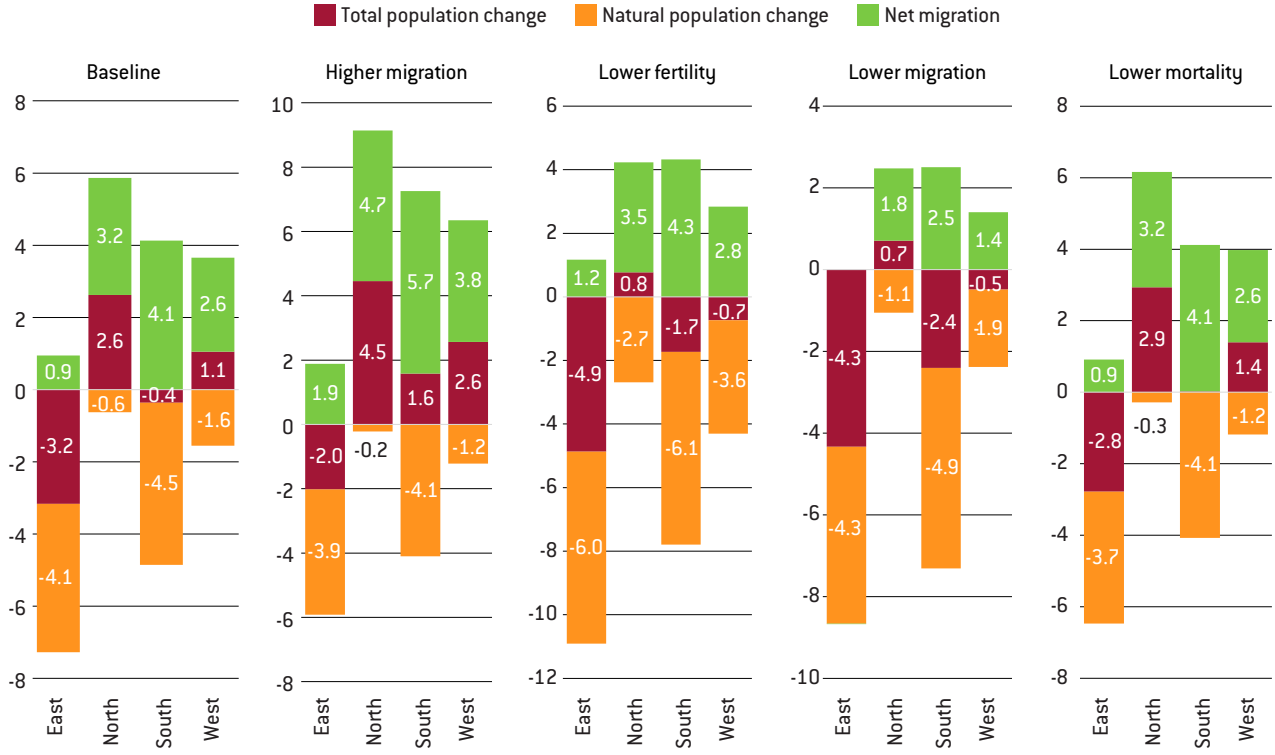
Figure 7 shows that two scenarios would result in more negative total population change than the baseline (lower fertility and lower migration), while two scenarios would result in more positive population change (longer life expectancy and higher migration):

- *Longer life expectancy* would reduce the negative natural population change across all country groups. It would mitigate total population decline in the East and South and foster population growth in the North and West. However, compared to the other alternative scenarios, the impacts on total population projections in this scenario are relatively minor.
- *Lower fertility* would intensify total population decline in the East and South and reduce population growth in the North. In the West, total population change would turn negative in this scenario, from positive in the baseline.
- *Lower migration* would have a more significant negative impact than lower fertility. By reducing inflows of migrants, especially young migrants – who contribute to natural pop-

ulation growth – lower migration would further accelerate population decline in the East and South and sharply reduce growth in the North. In the West, total population change would again shift from positive to negative.

- *Higher migration* would have the most substantial positive effect, offsetting natural population declines and boosting net migration. In the South, it would reverse negative population trends, while in the East, it would reduce the pace of decline significantly.

Figure 7: EU country groups, changes in natural population, net migration and total population (average annual change/1,000 residents), different scenarios, 2023-2050



Source: Bruegel based on Eurostat. Note: average annual change per thousand residents; for more detail see note to Figure 6.

In terms of the effect of different assumptions on projected total population change, the projection to 2050 would remain negative in the East, even in the two scenarios favouring population growth. The scenario of 33 percent higher migration than in the baseline is the only scenario that would result in projected population growth in the South.

Both of the scenarios in which population growth would be reduced – lower fertility and lower migration – result in negative total population change in the West, unlike the baseline. However, these results are driven only by France and Germany. The remaining countries in the West grouping – Austria, Belgium, Luxembourg, Netherlands and Ireland – are robust to the different projection scenarios (see the appendix). Finally, the direction of projected population change appears the most robust for the North grouping, remaining positive in all scenarios. This aggregate trend is largely driven by Sweden. Though the population of Denmark would grow in the baseline scenario, it would decline under lower-migration and lower-fertility assumptions. In contrast, Finland, projected to see population decline in the baseline scenario, would experience population growth in a higher-migration scenario.

These alternative projections highlight the critical role of migration in sustaining population levels and economic growth in areas experiencing natural population declines. Darvas *et al* (2024) explored how demographic change affects public debt sustainability and found that lower immigration requires more fiscal adjustment because of lower GDP. Lower fertility, while initially reducing healthcare and education costs, leads to greater fiscal pressures in

later decades. Longer life expectancy has mixed fiscal effects. It raises pension costs related to ageing populations, but marginally increases GDP through larger labour forces in countries that adjust retirement ages. In most cases, the rising pension burden outweighs the GDP gains, necessitating greater fiscal consolidation, though some countries benefit from a reduced fiscal adjustment requirement under this scenario.

Although migration helps offset declining populations, it also contributes to regional disparities within countries and between countries.

4 Policy implications

The population trends projected from 2023 to 2050 highlight stark differences within the EU, with implications for development, labour markets, public services and social cohesion.

4.1 Eastern Europe

Challenges

The demographic outlook for Eastern Europe is concerning, with projections indicating rapid population decline resulting from both high levels of natural population decrease and low net inward migration. For countries including Latvia, Lithuania, Romania, Greece, Poland and Croatia, net-migration projections are even negative or near zero. Slovenia meanwhile stands out with projected net-migration levels as high as for Western EU countries. Latvia and Lithuania seem to be set for particularly severe overall population losses.

Rapid population decline will most likely cause workforce shortages and economic stagnation. Furthermore, these countries face brain drain and high outmigration of young and skilled individuals. Many Eastern countries already have among the oldest workforces in the EU and are projected to face the largest relative declines in working-age populations.

Policy implications

Eastern countries will need to retain and attract talent and should thus encourage local employment opportunities and develop incentives for skilled workers to stay or return. Governments should implement targeted immigration policies to attract young migrants from other EU regions, or from non-EU countries, to offset shrinking natural populations. Working-age population decline is projected to be more pronounced in this area, likely leading to more worker shortages in the future. Attracting future workers will thus be important.

An example of a targeted immigration policy is Germany's 2023 Skilled Immigration Act, which introduced measures including broadening the scope of the EU Blue Card[8] to include IT specialists without formal degrees but with relevant professional experience, and broadening the list of recognised shortage occupations[9]. Such policies would have to be adapted to local employment needs: Czechia, Latvia and Slovenia have higher job vacancy rates than Bulgaria or Romania, for instance[10].

In the Migrant Integration Policy Index (MIPEX; Huddleston *et al*, 2015; Solano and Hud-

8 An EU Blue Card gives highly-qualified workers from outside the EU the right to live and work in an EU country, provided they have higher professional qualifications, such as a university degree, and an employment contract or a binding job offer for at least one year. See https://immigration-portal.ec.europa.eu/eu-blue-card_en.

9 See German Federal Government, 'The new Skilled Immigration Act at a glance', undated, https://www.make-it-in-germany.com/en/visa-residence/skilled-immigration-act.

10 Eurostat, 'Job vacancy statistics by NACE Rev. 2 activity', https://ec.europa.eu/eurostat/databrowser/view/jvs_q_nace2/default/table?lang=en.

dleston 2020), which measures national-level integration policies[11] of 56 countries including all EU countries, most Eastern EU countries score significantly lower than their Western and Northern counterparts. This suggests that Eastern EU countries have scope to improve such policies. One main conclusion from MIPEX is that immigrants face greater obstacles in most areas of integration policy in countries with smaller immigrant populations and higher levels of anti-immigration sentiment, such as the Baltic, Balkan and Central and Eastern European countries.

Better work-life balance policies can help increase labour force participation among underrepresented groups

To mitigate the decline of working-age populations, governments will also have to focus on increasing labour-force participation rates among underrepresented groups such as women – gender gaps in labour-force participation are particularly pronounced in Eastern EU countries (Gotti *et al*, 2024). Better work-life balance policies can help achieve this goal[12].

Gotti *et al* (2024) also highlighted that gender disparities in eastern EU countries such as Croatia, Hungary, Estonia, Lithuania, Slovakia and Poland are particularly significant among individuals unable to work because they have caregiving responsibilities. To address this, policies should aim to improve the availability and affordability of childcare. The literature in general shows that the lack of available and unaffordable childcare affects female labour-force participation rates. For instance, Chevalier and Viitanen (2002) showed that in the UK, female labour-force participation is constrained by a lack of childcare facilities. Policies promoting work-life balance will also be critical for retaining female workers and encouraging longer working hours. It should be noted that different policies will have different effects on the likelihood to work part-time or full-time.

In most of Eastern Europe there is also scope to increase the labour force by integrating older populations into the workforce. This is especially critical for countries such as Romania, Croatia and Poland, which have comparatively low participation rates for individuals aged 55 to 64. Other countries, such as Estonia, Latvia, Lithuania and Czechia have relatively higher participation rates for this age group, outperforming several Western/Northern EU countries. Governments should make it easier to work part-time while benefitting from pension savings. These measures can help older workers remain active in the labour market while gradually reducing work hours. Raising the retirement age could also be an effective policy option, because in many Eastern EU countries the effective age of labour-market withdrawal is low (OECD, 2021).

Finally, governments might prioritise cost-efficient, technology-driven LTC solutions to address the care gap, as increasing the supply of care workers will be particularly difficult. Furthermore, as informal care is very important in many Eastern countries, respite care services should be offered to alleviate the burden on informal carers, reducing the likelihood that they leave the labour market. Governments could introduce pension-contribution credits for time spent caring for others, helping reduce the long-term financial disadvantages often faced by carers, especially women.

4.2 Southern Europe

Challenges

Southern European countries face high natural population declines, offset partially by net inward migration. This area in the EU will experience both the highest natural population declines and the highest net inward migration (Figure 6). Among these countries, only Cyprus

11 MIPEX assesses integration policies in the following areas: labour market mobility, family reunification, education, political participation, permanent residence, access to nationality, anti-discrimination and health. Each response is assigned a value ranging from 0 to 100 (eg 0-50-100), with a score of 100 indicating policies that adhere to the highest standards of equal treatment.

12 The EU's 2019 Work-Life Balance Directive (Directive (EU) 2019/1158) sets minimum standards for parental leave (including paternity leave), carer's leave, flexible working arrangements for parents and carers, and protections against unfair dismissals. It will be important to study the impact of this policy initiative. For a comprehensive review of the impact of paid parental leave on female labour supply, see Kalb (2018).

is not undergoing a natural population decline. Malta stands out for its exceptionally high net inward migration, while Greece has relatively low levels compared to others in the group.

These countries have ageing populations combined with uneven economic recovery in rural regions, as migrants tend to move to the most urban/affluent regions in these countries (European Commission, 2024a). This concentration of migration flows could place additional pressure on urban infrastructure.

Policy implications

In this set of countries, governments face increasing regional disparities. It may become more important to enhance rural and semi-urban attractiveness by, for example, investing in infrastructure (transport, broadband) to connect remote regions with urban centres and by improving access to healthcare, childcare and education.

Governments will also need to focus more on upgrading urban infrastructure to accommodate growing populations related to migration. Decentralising immigration policymaking could also play a role in mitigating regional disparities, as has been done for example in Canada and Australia. In Canada, significant control over immigrant recruitment has shifted from the national level to provinces and municipal governments (Schmidtke, 2014), while Australia has introduced special entry visas for immigrants willing to settle in economically disadvantaged towns and regions (Kühn, 2021).

It will also be important for these countries to efficiently integrate the high number of migrants into the labour force and productive jobs. Failing to do so will not counteract the significant consequences for labour markets of negative natural population change.

The significant natural negative population change can be attributed not only to the higher outmigration of young workers – particularly young women – but also to lower birth rates of those who do not migrate. These low birth rates might be influenced by shortcomings in family policies, which are less developed than in Western and Northern countries, and by the availability and affordability of early-childhood education and care services (European Commission, 2024a).

To address these challenges, governments should implement more family-friendly policies, including extended parental leave, childcare subsidies and flexible work arrangements. In France, it has been shown that the entire set of complementary family policy instruments (eg financial support for large families, parental leave schemes and the provision of childcare) creates a secure climate for childbearing decisions and contributes to explaining France's high fertility rates (Thévenon, 2009)[13].

Southern countries should also focus on improving labour-market opportunities for young people and raising employment rates among those aged 15-29, which in Spain, Italy and Greece remain among the lowest in the EU[14]. Although all three countries reduced considerably between 2013 and 2023 their shares of 15-29-year-olds who are neither in employment nor in education or training, the metric remains above the 9 percent EU 2030 target in all three countries[15].

The European Youth Guarantee, introduced in 2014 for young people up to age 25, and extended in 2020 to those aged up to 29, is an example of an innovative labour market policy that Southern countries should continue to implement and enhance. The European Youth Guarantee is a commitment by all EU countries to ensure that every young European receives

13 For a more detailed overview of the impact on family policies on fertility behaviour see Thévenon and Gauthier (2011).

14 See Eurostat, 'Employment and activity by sex and age - annual data,' https://ec.europa.eu/eurostat/databrowser/view/lfsi_emp_a__custom_15892924/default/table?lang=en. Note that these countries also experience the highest overall unemployment rates in the EU, indicating that improving employment opportunities for the young will also depend on general labour-market reforms.

15 Eurostat, 'Young people (aged 15-29) neither in employment nor in education and training, 2013 and 2023 (%)', https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Young_people_(aged_15-29)_neither_in_employment_nor_in_education_and_training,_2013_and_2023_(%25).png.

a quality offer of employment, continued education, an apprenticeship or a traineeship within four months of becoming unemployed or leaving formal education.

4.3 Western and Northern Europe

Challenges

Northern and Western European countries are in stronger relative positions, as their natural population declines are compensated for fully by net inward migration. Within this group, Ireland, Luxembourg and Sweden are the only countries expected to experience natural population growth, while France is projected close to zero. Luxembourg and Sweden also stand out for their particularly high net inward migration compared to the others in the country groups.

These countries will face pressures on integration systems because of higher migrant inflows and urban concentration, leading to inequality between urban and rural regions. Those remaining in regions with continuously decreasing populations are at risk of being left behind, including in terms of infrastructure and services.

Policy implications

The attractiveness of this group of countries for migrants gives them the opportunity to 'choose' if they want to mitigate natural population decline through migration. For countries with higher migrant inflows, a focus on migrant integration will be crucial. Policies for successful integration of migrants into society and labour markets are essential to leverage the benefits of migration – many immigrants remaining outside the labour force undermines the potential of immigration to counterbalance negative natural population growth. Policies to strengthen education and training systems to integrate migrants into the labour market quickly, and to promote social cohesion through community programmes and anti-discrimination initiatives, will become even more important than they already are today. Labour-market integration of immigrants is important for social integration and cohesion and there may be long-term effects through integration of the children of immigrants.

Lochmann *et al* (2019) showed the positive impact of language training on the economic integration of immigrants in France. They showed that the number of assigned hours of training significantly increased the labour-force participation of the trained individuals. In Finland, a reform that introduced 'integration plans' for unemployed immigrants increased their cumulative earnings by 47 percent over a 10-year follow-up period (Sarvimäki and Hämäläinen, 2016). The plans consist of tailored language courses, job-seeking courses and vocational training based on what a caseworker believes to be the most appropriate for each immigrant.

Like Southern countries, Northern and Western EU countries will most likely experience higher regional inequality and greater demographic imbalances between rural and urban regions because of the unequal concentration of migrants. Policies to channel investment to underdeveloped rural regions to balance growth and prevent urban overcrowding, and to manage housing affordability, will become more urgent. In addition to the urban-rural divide, concentration of migration into a subset of urban areas might also lead to stronger inequality between urban regions within countries.

Finally, as these countries are in a better position than Eastern and Southern EU countries to prepare for ageing societies, they have more time to implement effective policies and cultivate the necessary mindset that counters ageism in the labour market. This provides, for example, an opportunity to promote long-term labour-market reforms aimed at retaining older workers and to invest in reskilling and upskilling programmes for older workers.

In countries such as Luxembourg, Belgium, France and Austria, there is significant potential to boost labour-force participation rates among individuals aged 55-65, especially when compared to higher-performing Western and Northern EU countries including Sweden, Germany and the Netherlands. Raising the eligibility age for pension benefits should be considered. The average age of first receipt of pension benefits in France, Luxembourg and

Austria is below the EU-average[16]. By acting now, these countries can mitigate the impact of demographic shifts and also set a foundation for a more adaptive and inclusive future labour market.

5 Conclusion

Demographic changes will pose challenges to all EU countries, but not in a uniform way. Eastern and Southern EU countries will face more intensive population ageing than Northern and Western countries. The South and East will experience higher natural population declines, and some Eastern countries also face projected negative net migration. In contrast, Northern and Western EU countries are projected to maintain positive overall population growth. Although these country groups also face negative natural population trends, they are entirely offset by substantial net inward migration. If migration or fertility are lower than expected, however, Germany and France would also start experiencing total population declines.

In response, Eastern countries should focus on making themselves more attractive for residents to stay (Letta, 2024) and also for prospective migrants, while increasing labour-force participation, particularly of women and older cohorts. They should also seek to make labour more productive, as it will become a more and more limited resource.

Southern countries should focus on integrating migrants into labour markets and society while avoiding that rural regions become left behind by population movements. Young people should be better integrated into the labour market and more attention should be given to policy good practices from other countries under the EU Youth Guarantee.

Western and Northern European countries should focus on the integration of migrants, while undertaking long-term programmes to increase labour-force participation by older workers. Relatively slower ageing of the workforce in this country group creates an opportunity for the gradual implementation of programmes addressing ageing.

Not all countries follow the group-level patterns. Germany's population is projected to grow only marginally up to 2050, unlike other Western countries. Luxembourg and Ireland on the other hand are projected to experience relatively high population growth because of both positive natural population change and net migration. Contrary to the aggregate Southern country group, Spain, Cyprus and Malta are expected to see increases in their total populations. In the North, Sweden has particularly high net inward migration. Finland is the only country in this group experiencing a total population decline.

Finally, in the East, Latvia and Lithuania are expected to experience particularly severe overall population losses, while Latvia, Lithuania, Romania, Greece, Poland and Croatia are projected to experience negative or near-zero net migration. But Slovenia stands out with net migration levels as high as Western EU countries.

Cohesion policy should ensure that demographic developments do not widen existing disparities

EU cohesion policy is often regarded as crucial for addressing challenges including climate change, competitiveness and digital transitions. Given significantly different trends in population ageing, and differences in the drivers behind it, cohesion policy should also ensure that demographic developments do not widen existing disparities.

Critical issues in the debate about population growth and decline are the compositional effects of change and the political discourse around it. Concerns about population decline are widespread, but there is resistance to allowing more international migration to counteract demographic shifts.

From an economic point of view of course, international migration provides employers with a valuable labour supply, helping to alleviate labour-market frictions. But many Euro-

16 See Eurostat, 'Age at which the person started receiving an old-age pension', https://ec.europa.eu/eurostat/databrowser/view/lfso_23pens03/default/table?lang=en.

pean countries struggle with adapting to the reality of being a destination for immigration. The integration and assimilation of non-Western immigrants has often proved more challenging and slower than anticipated, contributing to the rise of political anti-immigration movements across Europe (Lucassen, 2005).

Therefore, EU countries must utilise several policy levers to address the effects of demographic change. Older people should be kept in the labour market and re-skilled/upskilled. Economic opportunities for younger people must be created to prevent emigration. Family-friendly and other policies to increase labour-market participation by underrepresented groups, infrastructure investment and labour-market integration policies all need to be put in place.

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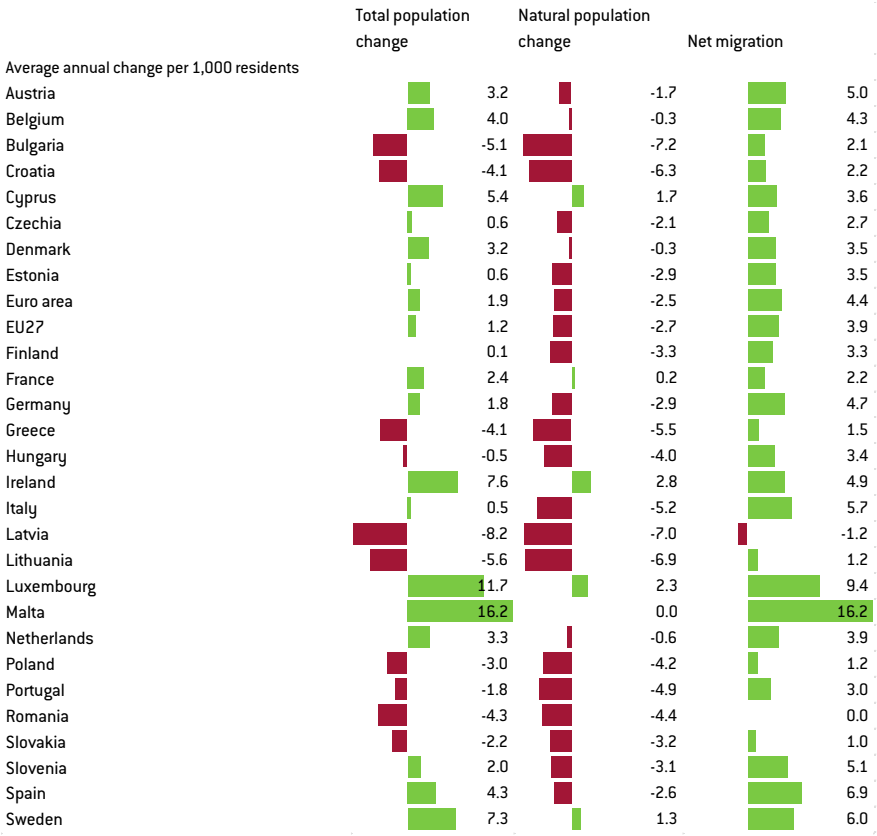
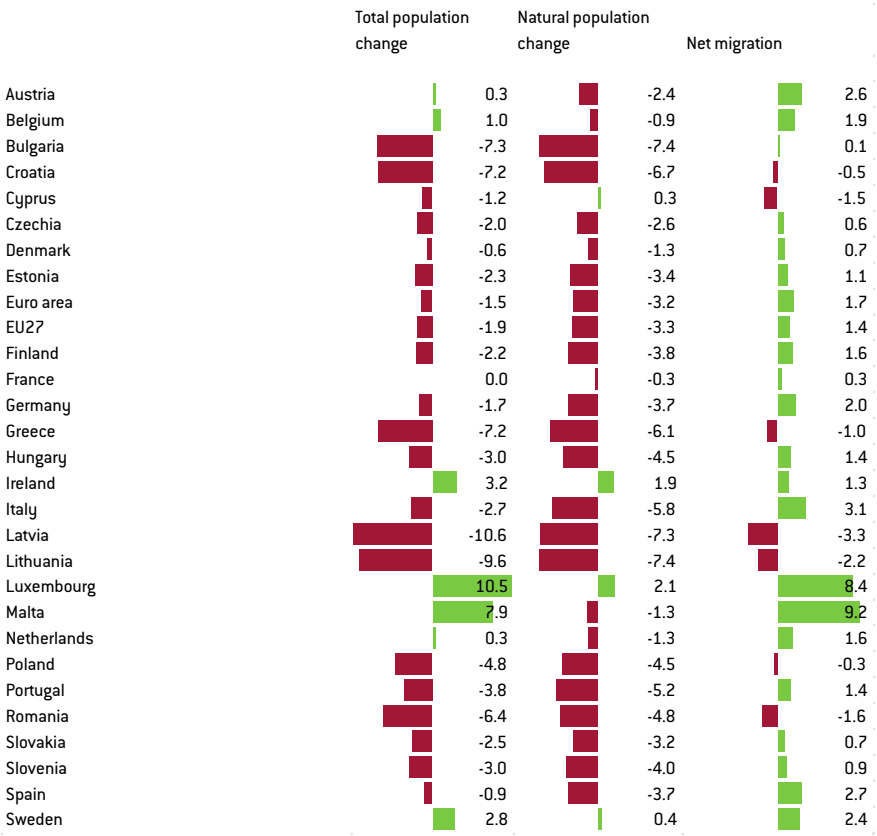
Appendix: Natural population change, net migration and total population change, 2023-2050

Baseline

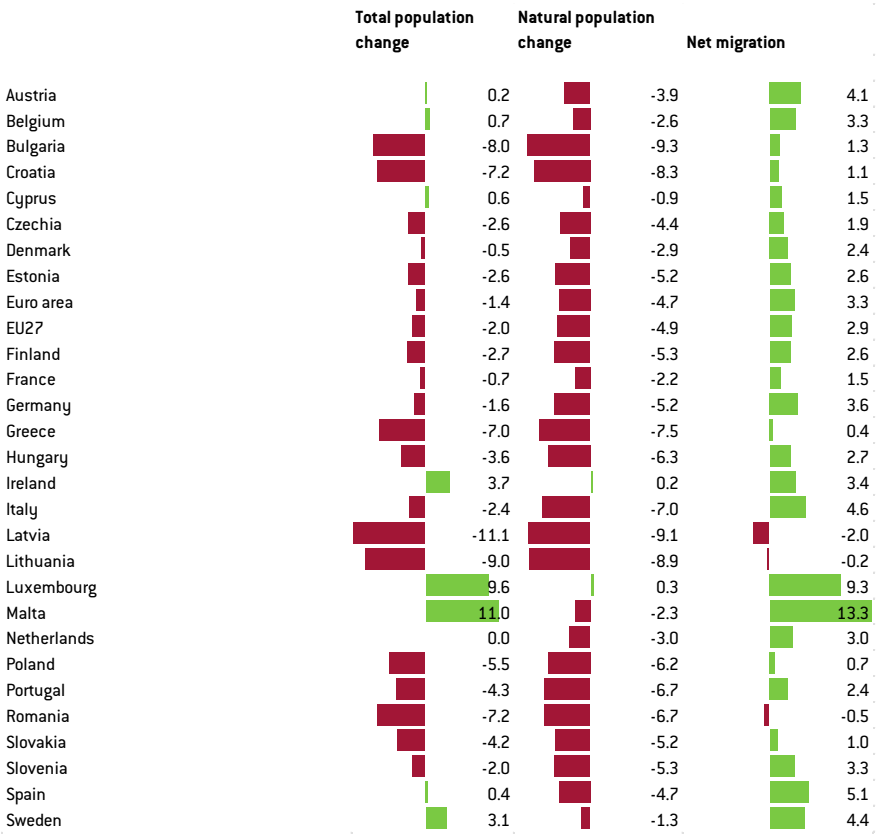
B. Higher migration



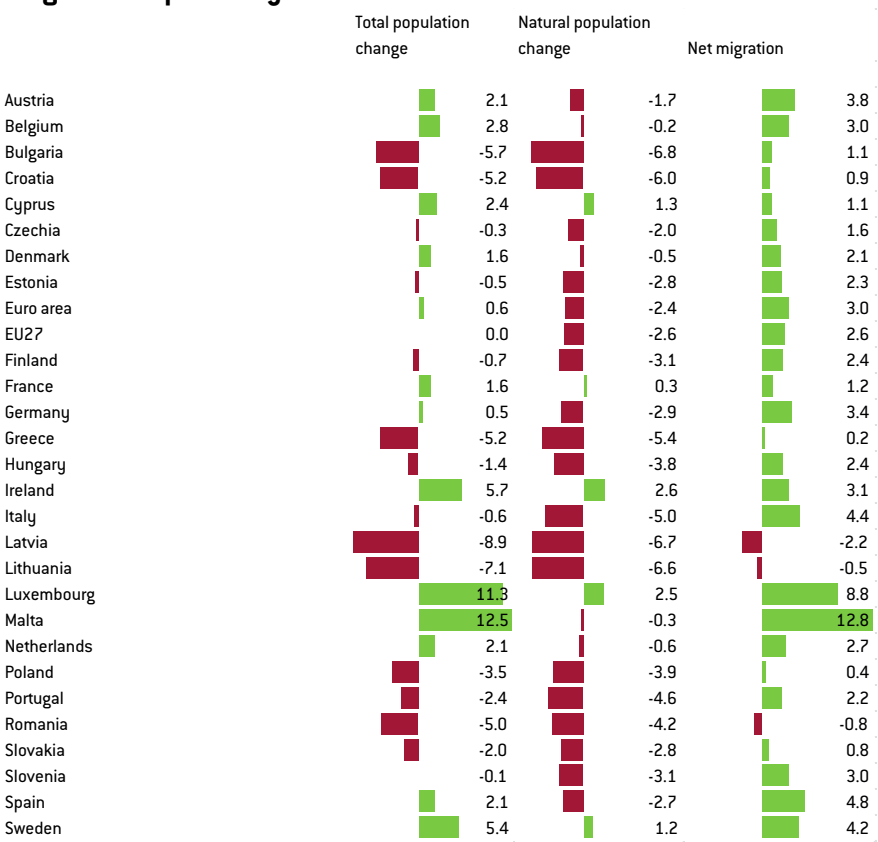
C. Lower migration



D. Lower fertility



E. Longer life expectancy



Source: Bruegel based on Eurostat.